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Circular Economy Policies in China and the EU

A Comparative Analysis with the Extended Policy Mix Concept

Master's thesis in Circular Economy

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SUMMARY

This study compares a set of Circular Economy (CE) policies from China and the EU using qualitative text analysis. Therefore, the study adopts the Extended Policy Mix Concept (EPMC) by Rogge and Reichardt (2016) and develops an EPMC for CE based on a literature review of CE concepts. With this framework, 13 policy documents i.a., the European Green Deal, the 2015 and 2020 EU CE Action Plan, the Chinese National 12th to 14th Five Year-Plans and the Circular Economy Promotion Law, are selected, coded, and compared regarding the policy strategy objectives, limitations, and the policy instrument goals, types, and purposes.

I find that both regions share most of the strategic objectives in their CE ambitions, first and foremost the objective of green economic growth, but also improvement of environmental quality and resource efficiency. In their policy instruments, China and the EU both define reduction, re-utilisation, recycling, and recovery as goals. Differences occur in the importance of certain policy fields: the EU focuses on product-level action and critical raw materials, while China is more concerned with agriculture, land use, and water issues. Also, the two regions differ in their approach towards recovery. Both utilise similar economic, regulatory, and informative policy instruments, which include among others: public procurement for environmentally-friendly products, labelling of products, investment and financing of CE-related projects and enterprises, establishment of product standards, extended producer responsibility schemes, value-added tax, and subsidy schemes. However, Chinese policies employ a unique instrument of demonstration and experimentation. The EU differs in its approach towards consumers, in that consumption reduction is not addressed, while China incorporates a more holistic approach towards an “ecological society”, that aims for frugality, including in its citizens’ lifestyles.

Keywords: Circular Economy, Policy, China, EU, Extended Policy Mix Concept, Qualitative Text Analysis, Green Deal, Circular Economy Action Plan, Circular Economy Promotion Law, Five-Year Plan for Economic and Social Development of the People’s Republic of China

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Lists of Abbreviations

CCUS	Carbon Capture, Utilisation and Storage
CE	Circular Economy
CE AP	Circular Economy Action Plan
CEBM	Circular Economy Business Model
CEPL	Circular Economy Promotion Law
CO2	Carbon Dioxide
CRM	Critical Raw Materials
C2C	Cradle-to-Cradle
DETR	Department of the Environment, Transport and the Regions (former department of the government of the United Kingdom)
EC	European Commission
EMF	Ellen MacArthur Foundation
EPMC	Extended Policy Mix Concept
EU	European Union
GDP	Gross Domestic Product
IP	Green Deal Industrial Plan
LIFE	L'Instrument Financier pour l'Environnement
NDRC	National Development and Reform Commission
NID(S)	Nature-inspired Design (Strategy)
PM2.5	Particulate Matter smaller than 2.5 micrometres
PRC	People’s Republic of China
SC	State Council
SME	Small and Medium Enterprises
SOE	State-owned Enterprise
VAT	Value-added Tax
5YP	Five-Year Plan

1 Introduction

Today, the throughput of material and energy through the human societal metabolism i.e., the global economy, has reached a scale in that it changes the Earth's bio-geo-chemical system to an extent that threatens the existence of living organisms including human beings. As part of the ambition to solve those problems, two of the world's biggest economies, the European Union (EU) and the People's Republic of China (PRC), both adopted the concept of Circular Economy (CE). China first introduced CE in its 11th Five-Year Plan in 2006, followed by the Circular Economy Promotion Law (CEPL) in 2008 (Murray et al., 2015; Skene and Murray, 2015). It is seen as a tool to reach the long-term goal of a "harmonious" and "ecological society" (Bleischwitz et al., 2022). Meanwhile, the EU only recently adopted CE on a supra-national level, with its first EU Circular Economy Action Plan (CE AP) in 2015 (EC, 2015). However, under the von-der-Leyen Commission, the efforts for a shift to CE have picked up pace, with the CE being a focal element of the EU Green Deal (Friant, 2021; EC, 2020b). Nevertheless, the EU repeatedly emphasises the important role of CE as a measure to secure critical minerals and raw materials and reduce dependence on global supply chains, especially concerning China as the single most important player in the global rare Earth minerals market (EC, 2018). With the adoption of CE in the EU and China, research on policymaking for the CE has gained attention among scholars.

In scientific literature, there is a wide variety of studies researching the CE in China, as well as in the EU, or its Member States individually. Dodick and Kauffman (2017) review the EU's CE policy mix, finding that policies preceding the 2015 CE AP are one-sided focusing on waste and are not connected to climate change. Domenech and Bahn-Walkowiak (2019) review policies on resource efficiency in the EU and its Member States. They conclude that policies are mostly focused on the output side i.e., waste and emission flows, while

measures for the input side i.e., for resource efficiency, are more challenging and have not led to direct reduction effects yet. Furthermore, they find that absolute decoupling is an objective of EU policies, but lacks decisive instruments and actions. Domenech and Bahn-Walkowiak suggest that lifestyles and economies need to be more modest and tax measures need to incentivise absolute reductions in resource input. Friant et al. (2021) find a dichotomy between the CE narrative and the policies and actions in the EU, stating that the policies are, in comparison to the narrative, not holistic and fall short of broader socio-ecological implications of the CE transition. Hartley et al. (2020) research expectations from CE experts towards CE policies in the EU, who advocate for better standards in production, more public procurement and tax incentives for CE products, a liberalisation of waste treatment, support of eco-industrial parks, and awareness campaigns.

On the Chinese side, Li and Lin (2016) present industrial and economic CE policies, including statistics and relevant CE indicators in China. Bleischwitz et al. (2022) find that Chinese policies include successful upscaling approaches for niches using demonstration projects, substantiated by the establishment of industrial parks, which are in turn embedded in broader industrial strategies. Also, Chinese CE policies generally promote technological innovation and energy efficiency. However, compared to the EU they find less focus on public procurement and the waste hierarchy. Li and Yu (2011) analyse policy tools for the development of the waste management system in China, finding that education of the public on CE practices and key technology for waste treatment is needed in China. Ma et al. (2022) review the Chinese CE policies from 2006 until 2021, asserting a shift from market and innovation-based instruments to more regulatory, hierarchical approaches.

Besides those studies on either one of the regions, various aspects of the CE are also subject to comparative research of China and the EU which appears relevant due to the

difference in political, economic, and cultural aspects. Ranta et al. (2018) compare institutional barriers and drivers in China and the EU, stating an overwhelming focus on recycling compared to other CE strategies, suggesting a need for more support for reduction and reuse initiatives on both sides. Ghisellini et al. (2016) undertake a literature review on CE, finding that Chinese CE is characterised by a top-down approach in contrary to an EU bottom-up strategy, while finding decoupling of economic growth and environmental impacts as a common goal. Yuan et al. (2020) analyse Chinese policies on the CE transition in the remanufacturing industry, also comparing them with Europe and suggesting improvements, such as enhanced standards, tax incentives, and public promotion of remanufactured products, and more consumer awareness. Sakai et al. (2011) conduct an international comparative study on policies on principles of reduce, reuse, and recycle (3R) and waste management, including the EU and China. They find that 3R policies are developed to prevent landfilling, protect natural resources, and reduce GHG emissions. Also, hazardous waste is found to be a policy concern, especially in developing countries such as China.

However, so far, only one study by McDowall et al. (2017) conducted a direct comparison of CE policies in the two regions. The paper uses quantitative analyses by counting keywords related to CE in media publications, academic literature, and policy documents. The latter are also analysed qualitatively. Since policies are the fundament for political decision-making and action i.e., objectives and strategies to reach those objectives are defined, they deserve attention. Since the publication of the study by McDowall et al. (2017) the policy landscape further developed, especially on the EU side, with a second CE AP (EC, 2020a) and the issuance of the European Green Deal (EC, 2020b). Also, the geopolitical landscape was changed by global crises including the COVID-19 pandemic and the Russian invasion of Ukraine, causing global supply chain disruptions, resource scarcity, and inflation, leading to a more prominent North-South divide, that involves the struggle over

resources, technological leadership, and thus, economic power. Hence, an updated policy comparison is needed. Furthermore, the use of a framework for policy analysis paying respect to the elements and dimensions of policies can substantiate such a comparison.

For these reasons, this study aims to analyse and identify the differences and similarities between Chinese and European (EU) macro-level CE policies. Therewith, policymaking in the two regions and international cooperation on CE shall be informed. Therefore, this study seeks to answer the following main research question:

How do Circular Economy Policies in China and the EU compare?

Furthermore, the following sub-research questions are defined:

How do the policy strategies regarding their policy objectives and limitations compare?

How does the use of policy instruments compare regarding instrument goal, type and purpose?

For that purpose, a set of relevant CE policies is selected and the Extended Policy Mix Concept (EPMC) by Rogge and Reichardt (2016) is utilised and adjusted for the qualitative analysis and comparison of a set of CE policies.

This study analyses the macro-level policymaking in the respective jurisdictions i.e., on the one hand, policies issued on the national level of the PRC and on the other hand on supra-national level within the EU. The reason for choosing to compare the EU as a supra-national band of countries with the PRC as a nation-state is, that the relevant entities of analysis are single markets since the CE as a tool or set of tools for economic practices considers the flow of material and energy and its equivalents in monetary forms, which takes place within a single market.

First, the methodology is developed by introducing the EPMC and combining it with CE concepts from a literature review to establish an EPMC for CE, which then serves as the basis for the qualitative policy document text analysis. Second, the policies for analysis are selected. Third, the policy mixes are analysed with a coding framework based on the EPMC for CE. Subsequently, the results of the analysis are presented and discussed in the following.

2 Methodology

I utilise the EPMC by Rogge and Reichardt (2016) as a framework for policy comparison (Section 2.1). The EPMC offers a structure to classify constituent traits of policies and allows analysing the relationship and interaction of a multitude of policies i.e., a policy mix.

First, a literature review is undertaken to identify relevant CE concepts (Section 2.2). Those CE concepts are then connected to the EPMC i.e., the category of the EPMC to which the concepts relate are determined and the CE concepts are allocated to one or more specific categories of the EPMC. Thus, an EPMC for CE is established (Section 2.3). Then, the individual elements of this framework are refined and translated into codes, to be used in a qualitative text analysis. The coding framework is refined throughout the later coding process. The selection of policies for this analysis is based on a literature review and through consultation of experts in the field (Section 2.4). The selected policies are then coded (Section 2.5) and thus a set of text excerpts with code tags results, whereby these text excerpts belong to a specific category of the EPMC for CE (Section 3, Appendix B). Subsequently, the coding results are refined i.e., the categories of *policy strategy - objectives*, *policy instrument – goals*, *policy instrument - type* and *policy instrument - purpose* are structured and classified using the *policy dimensions* of the EPMC for CE. Hence, for each jurisdiction, China and the EU, a canvas of the EPMC for CE is created (Section 3, Appendix C) and the individual parts are compared to each other and presented in Section 4. Subsequently, the results are discussed and a conclusion is made.

This study uses a qualitative approach i.e., codes are not quantified and compared based on the number of occurrences.

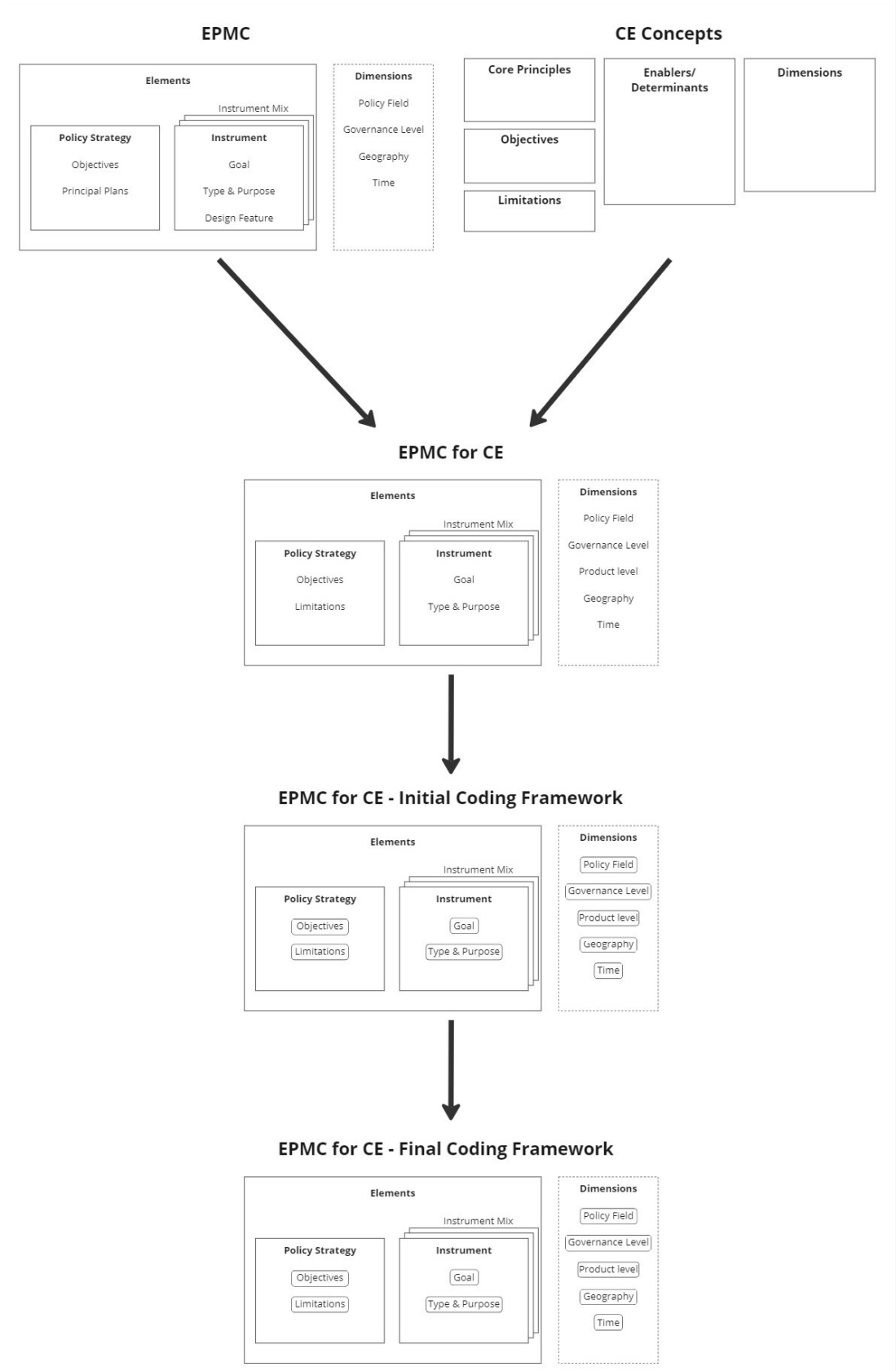


Figure 1: Methodological process

2.1 Extended Policy Mix Concept

The EPMC by Rogge and Reichardt (2016) encompasses three relevant categories for a policy analysis, which are *policy processes*, *policy elements*, and *policy characteristics* (Fig. 2).

Policy processes are defined as the processes to solve societal problems by deliberation amongst different actors. It analyses the change over time and involves the perspectives of different societal actors e.g., the government, non-governmental organisations, lobbying groups, etc. and their power and interest relationships regarding the policy process. *Policy processes* encompass *policy-making* i.e., actions of the creation of a policy, including the political deliberation, learning, and formal aspects of entering into force, as well as the *policy implementation* i.e., the actions taken by the executive authorities to guarantee the actual execution of and compliance with the policy.

The second category comprises the ***policy elements***, consisting of *policy strategies* and *policy instruments*. The *policy strategy* describes the ends of policies i.e., what are the policy *objectives* and visions and the *principal plans* i.e., a set of general actions, roadmaps, guidelines, and measures to achieve them. *Policy instruments* are the specific tools to implement the strategy. Rogge and Reichardt differentiate three primary types of *policy instruments*: (1) *economic instruments*, such as grants, loans, taxes, subsidies, etc.; (2) *regulation*, including property rights, patent laws, technological and environmental standards, prohibitions, etc.; (3) *information* i.e., training, qualification, workshops, labelling, campaigns, education system. The *policy instruments* are then clustered by their primary purpose, being *technology push*, *demand pull* and *systemic instruments*. The *policy instruments* can be further categorised as either mandatory or voluntary. The interrelation of

different *policy instruments* is referred to as the *instrument mix*, meaning the alignment of various policies.

The third category of ***policy characteristics*** describes the policies regarding their (1) consistency of elements, describing the alignment of strategies and possible contradictions that might exist i.e., are *policy instruments* mutually supporting or hindering; (2) coherence of the process i.e., the existence of a rational connection between the various steps in the policy process; (3) credibility i.e., if *policy elements* and *policy processes* are believable and reliable for the citizens and (4) comprehensiveness i.e., are policies made for effective and efficient operationalisation.

The EPMC considers four *policy dimensions* in which the *policy processes*, *policy elements* and *policy characteristics* exist: (1) the *policy field* e.g., energy, environmental, labour, industry, etc.; (2) *governance level* i.e., vertical (local, regional/provincial, national, supra-national) and horizontal (departments by responsibility) separation; (3) *geography* and (4) *time*.

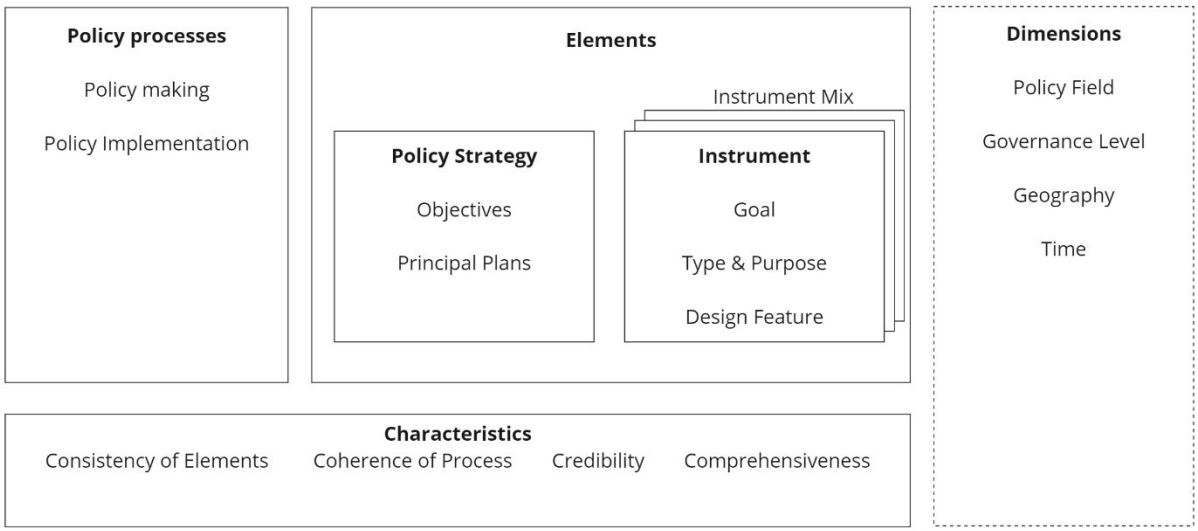


Figure 2: Extended Policy Mix Concept (Rogge and Reichardt, 2016)

In political science, a differentiation is made between three spheres: (1) politics, describing the conflictual process over power and thus shaping the outcome; (2) polity i.e., the institutions, constitutional laws, and political culture, being the generally accepted habits and procedures; (3) policies, which are the content and the outcome of the political process (Fischer et al., 2006). Policy comprises the formulation of the deliberated objectives and the instruments and their implementation in the form of laws, regulations, rules, guidelines, plans, executive orders, etc. (von Prittwitz, 2007; Treib et al., 2007; Lange et al., 2013). Since this study researches policies, the policy processes, which constitute politics, according to the above definition, are not part of this analysis. Furthermore, the policy characteristics are also outside of the scope of this study. Hence, I adjust the EPMC framework to fit the purpose of this study (Fig. 3), focusing on *policy elements* and their *policy dimensions*.

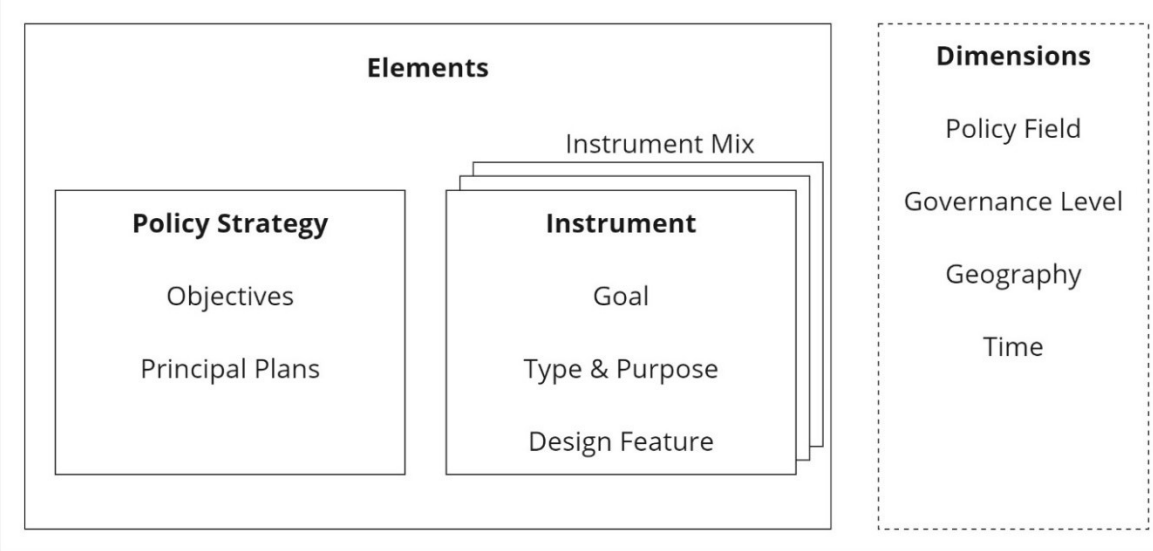


Figure 3: Extended Policy Mix Concept, Elements and Dimensions (adapted from Rogge & Reichardt, 2016)

2.2 Circular Economy Concepts

In this section, I present frameworks and concepts of CE based on a literature review. Rather than proposing a decisive definition of CE, this section accounts for the variety and ambiguity of CE and its manifold dimensions, as well as criticism. This serves as the basis to

derive an EPMC for CE and thereof an initial coding framework for the qualitative content analysis of CE policies.

In recent years the topic of CE has found increasing interest among scholars, private organisations - most prominently represented by the Ellen MacArthur Foundation (EMF) - and companies, especially the consulting sector (EMF, 2013; Geissdoerfer et al., 2017; Kirchherr et al., 2017). However, so far there is no consensus among the various authors for a common definition of what CE is. The bandwidth of defining terms is large, ranging from an "approach towards sustainable development" (Xue et al., 2010, p. 1296), to a "mode of economic development that aims to protect the environment" (Ma et al., 2014, p. 506), or "a system that is designed to be restorative and regenerative" (Ghisellini et al., 2016, p.16; Charonis, 2021; Ellen MacArthur Foundation, 2013) to even define it as an entire "economic system" (Kirchherr et al., 2017).

Blomsma and Brennan (2017) describe CE as an umbrella concept, which is defined by Hirsch and Levin (1999, p. 200) as "a broad concept or idea used loosely to encompass and account for a set of diverse phenomena". In that sense, rather than being a decisive entity, CE acts as a referential term, that includes various associations that were previously loosely related e.g., Industrial Ecology, Sustainability, Waste hierarchy, Eco-Innovations, Recycling, Resource Life Extensions etc. Hence, CE acts as a catalyst by "creating a new encompassing cognitive unit as well as a new discursive space" (Blomsma & Brennan, 2017, p.4).

The concepts associated with CE originated in the environmental movement and the onset of new ecological thinking in academia beginning in the 1960s (Prieto-Sandoval et al., 2018), prominently represented by works, such as Boulding's "Spaceship Earth" (2011), Carson's "Silent Spring" (1962) and "The limits to growth" (Meadows et al., 1972), unequivocally questioning the paradigm of an ever-growing economy considering a limited

resource endowment and increasing deterioration of the natural environment. Boulding is often referred to as a pioneer in CE thinking, being the first to describe a "cyclical ecological system" as the opposite of a linear "open" economic system (2011, p.9):

> *"I am tempted to call the open economy the 'cowboy economy,' the cowboy being symbolic of the illimitable plains and also associated with reckless, exploitative, romantic, and violent behavior, which is characteristic of open societies. The closed economy of the future might similarly be called the 'spaceman' economy, in which the earth has become a single spaceship, without unlimited reservoirs of anything, either for extraction or for pollution, and in which, therefore, man must find his place in a cyclical ecological system which is capable of continuous reproduction of material form even though it cannot escape having inputs of energy."* (Boulding, 2011, p. 9)

As Prieto-Sandoval et al. (2018) acknowledge, CE stems from a multidisciplinary background. Thereby, it is closely related to Industrial Ecology, a research field founded by Ayres and Kneese (2012), which deals with a society's metabolism i.e., the energy and material flows through a production-consumption system with its environmental effects (Fischer-Kowalski, 1998). The term "Circular Economy" itself, is ascribed to Pearce and Turner (1989), who first used it to describe the closing of industrial flows to reduce detrimental environmental effects. Hence, CE is often considered a solution to minimise or even eradicate negative externalities of economic operations (Kirchherr et al., 2023). However, this assumption has always been contested by various scholars (Georgescu-Roegen, 1986; Andersen 2006; Daly & Townsend, 1992), arguing that the basic laws of thermodynamics prohibit a fully circular, waste-free economy. In essence, the creation of entropy in every physical-economic process does not allow for an infinite regeneration of materials.

While policymakers had issued legislation on various aspects of resource extraction, waste disposal, product life cycles, etc. it was not until the early 2000s that CE as a holistic concept found its way into policies, first in China, where it is claimed to be part of economic planning by 2002 and was officially introduced in the 11th Five-Year-Plan of China in 2006, followed by the CEPL in 2008 (Murray et al., 2015; Skene and Murray, 2015). China is widely acknowledged as the frontrunner in CE policymaking and academic research, having the highest number of publications on the topic by country of origin and country of research concern (Ghisellini et al., 2016; Kirchherr et al., 2017; Merli et al., 2018). Europe takes second place in that statistic, seeing rising interest in scientific research after 2015 when the EU CE AP (EC, 2015).

Despite the great variety of CE definitions, the EMF's is the most cited one (Geissdoerfer et al., 2017; Schut et al., 2016; Kirchherr et al., 2017):

> "[CE is] an industrial system that is restorative or regenerative by intention and design. It replaces the 'end-of-life' concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models."
>
> (EMF, 2013, p.7)

Based on the literature, I present the most relevant concepts that are associated with CE in the following subsections. Fig. 4 shows an overview of the extracted concepts from the literature review. I stick with the notion of CE as an umbrella concept. Hence, the figure does not represent any particular structure or relationship of the concepts. Those are briefly discussed under each of the following subsections. The clusters in Fig. 4 are based on the

classification of concepts for the coding framework in Kirchherr et al. (2017) and Ghisellini et al. (2016).

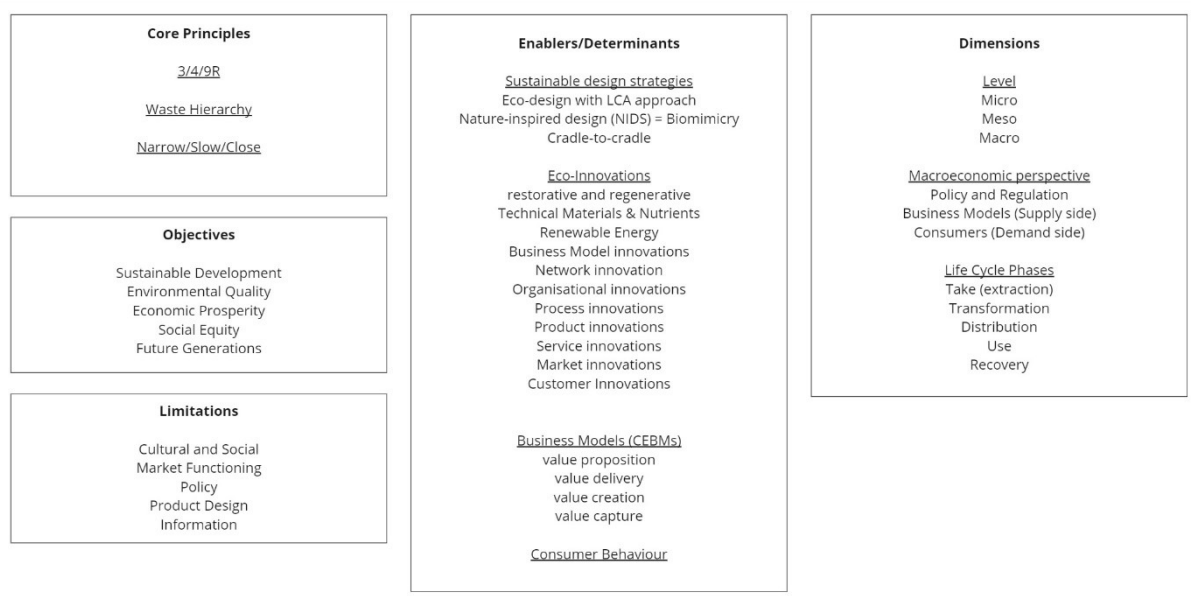


Figure 4: CE Concepts

2.2.1 Objectives

Kirchherr et al. (2023) identify environmental quality and economic development as the most frequently claimed objectives in the CE literature. Also, the maintenance of value in the economy and the reduction of waste are prominent aims. Furthermore, there is a significant increase in CE literature considering issues of social equity, sustainable development, and future generations as CE aims. Also, CE is increasingly understood as a transition that involves systemic change, with a rising emphasis on actions on the macro level. For instance, Pietro-Sandoval et al., (2017, p.610) define CE as “an economic system that represents a change of paradigm in the way that human society is interrelated with nature”. Nevertheless, the consideration of a triple-bottom-line approach – environment, economy, society - in CE literature is rare (Kirchherr et al, 2017; Kirchherr et al., 2023) and Murray et al. (2015) assert an overall missing focus on the social dimension of CE.

2.2.2 Core Principles

The core principles of CE are general guidelines of how to proceed with materials, parts, or products throughout their life cycle, respectively along the value chain. Those principles include the "R"-frameworks, the Waste Hierarchy, and the Narrow-Slow-Close framework. The former two involve a hierarchy from most to least preferred approach, respectively from actions contributing to more circularity to actions with less circularity.

The "R"-frameworks refer to a series of strategies, set up as an alliteration of words with the prefix "re". While the use of R-frameworks cannot be assigned to a specific author (Kirchherr et al., 2017), the origins lie in waste management strategies e.g., as described in the UK Governments Waste Strategy for England and Wales (DETR, 2000) in the year 2000, as an order of reduction, re-use and recovery for preferred waste treatment (King et al., 2005). Kirchherr et al. (2017) point out, that the 3R-framework of reduce, reuse, and recycle is the most prominent one. 3R-frameworks were incorporated in various waste management policies in the USA, China, the EU, Korea, and Vietnam in the 2000s, but with an expanded scope of objectives including "landfill prevention, procurement of resources, and reduction of GHG emissions" (Sakai et al., 2011, p.100). China established the 3R-framework as the core of its 2008 CEPL (PRC, 2008), while the EU included "recover" as a fourth strategy in its Waste Framework Directive (Fig. 5) (EU, 2008). The concept was later extended to 9Rs by Potting et al. (2017) (Fig. 6). It also lists the primary strategies of refuse and rethink, thereby including the avoidance of virgin production by not using it at all or fulfilling the demand by other means. Furthermore, it elaborates on more distinct steps between reuse and recycling, being repair, refurbishment, remanufacturing and repurposing of products and materials compared to the 3R- or 4R-frameworks. Eventually, it differentiates between the generation of

new input materials (recycling) and the energetic use through incineration (recovery) as the last steps before a product is considered waste.

Figure 5: Waste hierarchy (EU, 2008)

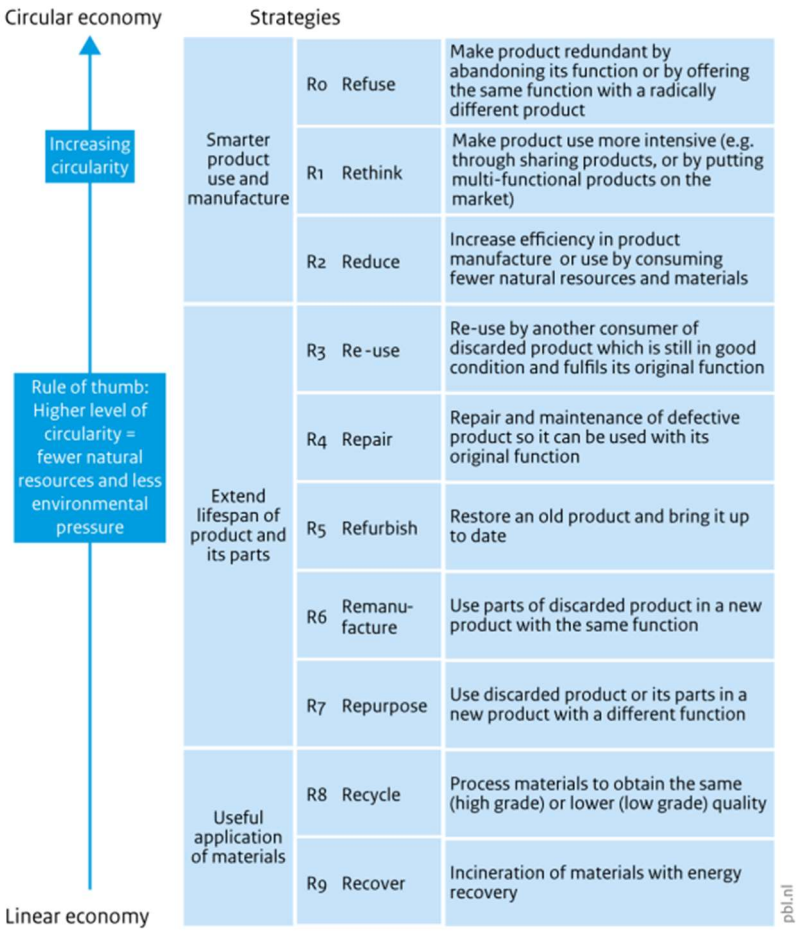


Figure 6: 9R Framework (Potting et al., 2017)

Recycling and energetic recovery list last in all hierarchical frameworks, suggesting to be the least-preferred strategies. Nevertheless, recycling is found to be the single most-referred strategy in reviews on CE (Kirchherr et al. 2017; Kirchherr et al. 2023; Ghisellini et al., 2016). This is emphasised by Merli et al. (2018) who argue that scholars focus more on closing loops than slowing loops.

Another popular concept was established by Bocken et al. (2016), which is shortly described as Narrow-Slow-Close. Referring to a metaphor of a physical resource flow, the CE strategy aims to: (1) narrow the flow's cross-section, thereby reducing the throughput; (2) slow the flow velocity i.e., keeping the resource longer within the economic system; and (3) closing the loop, meaning utilising an output that would usually be considered waste as a new input for another process i.e., connecting the end of one straight line of a linear economic resource flow to another's beginning, thus creating a closed cycle.

2.2.3 Enablers & Determinants

Establishing a CE needs enablers that help to overcome the current linear economy of "take-make-dispose", in essence, catalysers which relieve existing barriers and lock-ins and propel a transition to CE-conform behaviour. Manifold strategies are proposed among scholars, whereas four major clusters are frequently referred to: (1) design strategies, (2) Eco-Innovations, (3) business models and (4) consumer behaviour (EMF, 2013; Böckin et al., 2020; Prieto-Sandoval et al., 2017; Kirchherr et al., 2017; Kirchherr et al., 2023; Ghisellini et al., 2016; Bocken et al., 2016).

Design Strategies & Eco-Innovations

Design strategies seek to overcome issues of planned obsolescence, single-use products, non-reparability, etc. by including the CE principles in the development and design process for new products. Such design strategies include inter alia eco-design, nature-inspired

design (NID) or cradle-to-cradle. Eco-design is a strategy for product design manifested in ISO/TR 14006 (ISO, 2020), which aims to minimise the environmental impacts of products by making design decisions based on environmental assessments, such as Life Cycle Analyses (LCA) (Vallet et al., 2013). NID strategies strive to implement concepts which are to be found in the natural environment and adopt them for man-made processes and products. One of those strategies is the concept of Cradle-to-cradle established by McDonough and Braungart (2010). It involves three central tenets of: (1) waste equals food, (2) using the current solar income and (3) celebrating diversity and is buttressed by 12 green engineering principles, which in large part reflect the CE core principles (ref. chapter 2.2.2) (McDonough et al., 2003).

Bocken et al. (2016) propose design strategies to slow the loop, by designing for (1) long life via attachment, trust, reliability, and durability, and (2) life extension through ease of maintenance and repair, upgradability, adaptability, standardisation, compatibility, dis- and reassembly. To close the loop, Bocken et al. (2016) also use a concept that was introduced by the EMF (2013) of a technical and a biological cycle, whereas the latter allows to reintegrate the biological waste into the natural cycle via composting or anaerobic digestion. Hence, the system is regenerative i.e., the "processes themselves renew or regenerate the sources of energy and materials that they consume" (EMF, 2013, p.26) and restorative, meaning it helps to recover previously deteriorated ecosystems (Davis & Slobodkin, 2004).

Prieto-Sandoval et al. (2017) propose a set of eight eco-innovations which encompasses innovation in business models, networks, organisational structures, processes, products, services, markets and customer engagement. Hence, eco-innovations can be considered as designs as well if the term is not understood as limited to a physical product.

Business Models

A great variety of CE scholars and private organisations (Lewandowski, 2016; Bocken et al., 2016; Lüdeke-Freund et al., 2018; EMF, 2015; Accenture, 2014) published frameworks and methodologies on CE business models (CEBM). The EMF developed the ReSOLVE framework, which encompasses the strategies of Regenerate, Share, Optimise, Loop, Virtualise, and Exchange for CEBMs (EMF, 2015). Bocken et al. (2016) propose a set of CEBM strategies to slow the loop, including access and performance models, extended product value, long-life models, and sufficiency strategies. Extended resource value and Industrial Symbiosis are strategies introduced to close the loop. Bocken et al. (2016) include those CEBMs as the counterpart to the above-mentioned design strategies. Due to the ambiguous nature of CE as a concept, business models referred to as "sustainable" provide feasible strategies for CEBMs as well, since the concepts are intertwined on various levels (Geissdoerfer et al., 2017). For instance, Bocken et al. (2014) depict a methodology of sustainable business model archetypes that comprises inter alia, material and energy efficiency, value from waste, substitution with renewables and natural processes, functionality over ownership, stewardship and sufficiency.

Lüdeke-Freund et al., (2018) present a compilation of 26 CEBMs found in literature. Based on the perception of the CE as an approach to maintaining the value of resources in the economy (Kirchherr et al., 2013), the authors present a set of design options for CEBMs that they stratify into four dimensions of

- **value proposition** i.e., what kind of utility does a consumer gain from a product or service;
- **value delivery** i.e., who are the target customers and how do consumers receive or access the value;

- **value creation** i.e., actions a company endeavours to be able to offer the respective value, including the involved actors;
- **value capture** i.e., the costs, how the company gains revenue from its enterprise and how monetary value (profit) is accrued.

The presented morphology allows manifold combinations of design options for various CEBMs. Lüdeke-Freund et al. extracted six patterns of business models, that were most frequently used: closing of resource flows, repair and maintenance, reuse and redistribution, refurbishment and remanufacturing, recycling, cascading and repurposing, and organic feedstock business model patterns. Those patterns clearly reflect the core principles of CE presented in the previous section.

Lewandowski et al. (2016) use similar value categories of CEBMs to propose a circular business model canvas, which is based on the framework for a business model canvas by Osterwalder and Pigneur (2013). Generally, the usage of value dimensions based on Richardson (2008) is widely shared by other scholars (Bocken et al., 2016; Geissdoerfer et al., 2020; Woldeyes et al., 2023).

As Woldeyes et al. (2023) point out, manifold classifications for CEBMs and strategies exist in the literature. However, studies agree on particular CEBMs and strategies. While covering an extensive set of CEBMs is beyond the scope of this study, subsequently I present the four most researched (Woldeyes et al, 2023) CEBMs, which are:

- product life extension i.e., keeping a product and its parts longer in the economy by maintaining or enhancing its functionality through reuse, remanufacturing, refurbishing, repair, upgrading, hybrid modelling or the gap-exploiter model (Den Hollander & Bakker, 2016)

- resource recovery i.e., reclaiming materials from waste through recycling or the energetic use of waste (Accenture, 2014)
- circular supplies i.e., making use of inputs that are renewable, recyclable, or based on natural nutrients (Woldeyes et al, 2023)
- and product service systems i.e., a company providing access for customers to a product while maintaining the ownership (Tukker, 2004)

Consumer behaviour

Kirchherr et al. (2023) determine rising acknowledgement of consumers in CE definitions, concluding an increasingly important role of consumers in the CE transition. In a study on CE barriers, Kirchherr & Van Santen (2019, p.268) find that "lacking consumer interest and awareness" is the single most-mentioned barrier for CE among CE businessmen and policymakers. Ranta et al. (2018, p.79) emphasise, that "customers generally prefer new products". Therefore, consumer behaviour is an important part of enabling the CE transition. Hartley et al. (2021) argue that consumers are mostly hesitant towards circular products due to their high prices since they are not aware of their broader benefits, implicating a typical effect that occurs when companies are internalising costs that were previously externalised.

2.2.4 Dimensions

The dimensions of CE refer to different approaches to structuring or classifying the field of CE into levels or subdomains. Ghisellini et al. (2016) as well as Kirchherr et al. (2017, 2023) use the division of three vertical levels:

- Macro-level: national or global perspective concerning whole cities, provinces, nations and supranational activities

- Meso-level: regional perspective concerning inter-company relationships e.g., in (eco-)industrial parks where industrial symbiosis is used as a strategy
- Micro-level: perspective involving product-level issues, as well as individual consumers and companies with their behaviour or preferences

Other scholars (EMF, 2013; Böckin et al., 2020; Prieto-Sandoval et al., 2017) take the perspective of the life cycle of materials, parts, or products, defining the dimensions as the phases of:

- extraction of materials including mining, harvesting, etc.
- transformation of materials or production of parts and products
- distribution or service provision
- use or consumption
- recovery
- landfill

Furthermore, various classifications which can be considered dimensions of CE are sometimes specified as determinants. A clear distinction of what constitutes determinants and dimensions often remains missing. For instance, Prieto-Sandoval et al. (2017) propose the CE determinants of (1) regulation and policy; (2) the supply side: Circular business models; and (3) the demand side: consumer behaviour, which could be considered dimensions of CE as well.

2.2.5 Limitations

Meta-studies on CE barriers identify four categories of inhibitors. (1) Cultural and social barriers concern consumer behaviour as mentioned above, as well as companies not willing to approach change internally and in their supply chains, remaining stuck in a linear

operational mode. (2) Market barriers are constituted by the relative price conundrum i.e., virgin materials are low-priced compared to high investment, materials, and operational costs for CE businesses. Additionally, missing access to capital for CE businesses and lacking standardisation are found to limit the CE transition. (3) Regulatory and institutional barriers encompass laws and regulations that obstruct CE practices. Finally, technological barriers (4) comprise the absence of product and process design for CE, the lack of circular input resources, and difficulties in producing high-quality circular products. (Hartley et al., 2021; Kirchherr et al., 2018; de Jesus & Mendonca, 2018).

Regarding scientific research on CE, Kirchherr & van Santen (2019) observe five focal points, stating there is a neglect of empirical research in relation to conceptual research and that the sample sizes of empirical studies are generally small, entailing low external validity. Furthermore, they criticise that CE research is too narrow in its focus, finding on the one hand that 95% of studies concerning industry focus on manufacturing and on the other hand also 95% of studies limit their geographical scope to developed countries. Additionally, Kirchherr & van Santen (2019) state a lack of advice for CE practitioners, being businessmen and policymakers.

2.3 Establishing an EPMC for CE

In this section, the CE concepts (Fig. 4) are translated and adjusted to match the EPMC (Fig. 3), thus an EPMC for CE is created (Fig. 7).

The CE objectives are assumed to be the *policy strategy - objectives* since they resemble long-term targets of future visions. Principal plans constitute a roadmap or guideline of actions that the issuing bodies seek to undertake to achieve the objectives. Hence, CE concepts are not principal plans themselves, but the analysed policy documents, together with other policies and actions and their timely implementation and execution constitute principal

plans of the respective governments. Hence, the principal plans cannot be compared by analysing the policy texts themselves and are therefore not part of this study. Limitations of CE are added to the category of *policy strategy* under *policy strategy* – limitations, since those concepts define the general environment of policymaking and are the nexus between the status quo and the desired future pursued by the policies.

I define the core principles of CE as the *policy instruments - goals* since they can be considered to be means to achieve the broader objectives e.g., recycling can be a means to increase environmental quality by reducing the amount of waste discarded, yet the CE core principles are not specific enough to constitute a *policy instrument* or *design feature* and do not fit the definition of those categories according to the EPMC either. The definition of the *policy instrument - type and purpose* remains as described in the EPMC. The *policy instruments - design features* are the specific and detailed components that define how the *policy instruments* work and are applied. Thus, the sustainable design strategies and eco-innovations are listed here, since they depict practical applications.

For *policy dimensions*, the *governance level dimensions* of the CE and the EPMC are identical. The *life cycle phases* and the *macroeconomic perspective* are included as separate categories under *policy dimensions*. *Geography*, *time*, and *policy fields* remain as described in the EPMC.

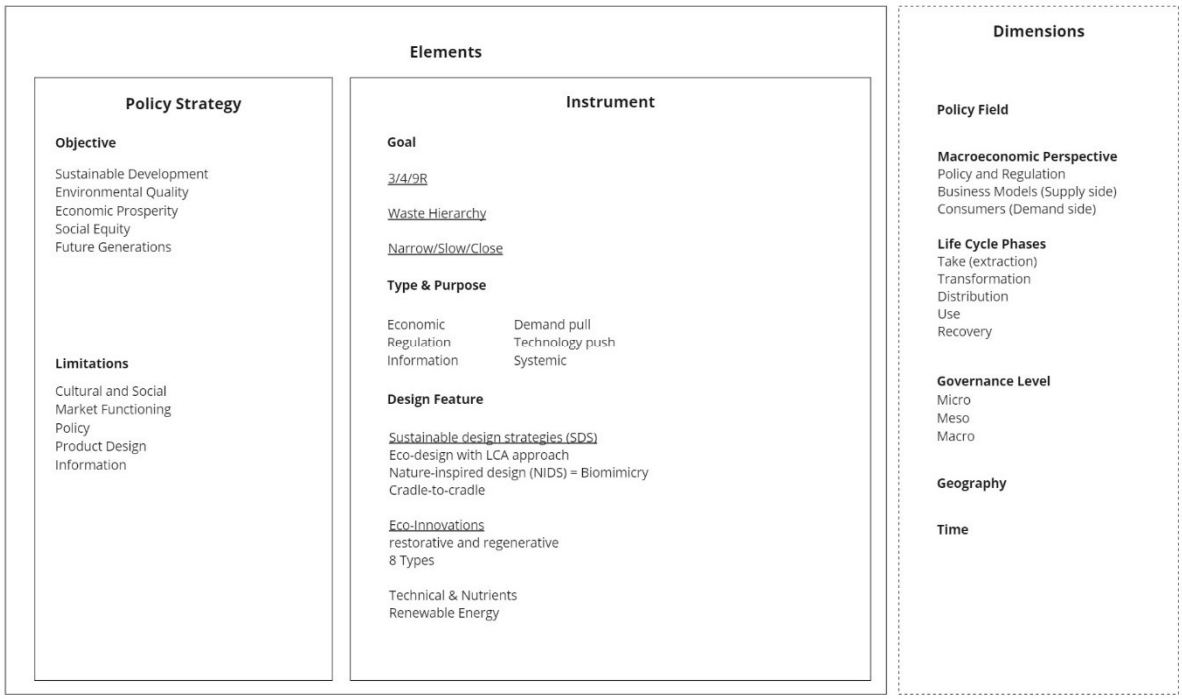


Figure 7: EPMC for CE

2.4 Selection of Policies

The selection of policies for this analysis is based on a literature review and consultation of experts in the field, which are Prof. Bing Zhu from Tsinghua University, Beijing for Chinese policies and Prof. Maria Ljunggren from Chalmers University, Gothenburg for policies in the EU. Furthermore, policies themselves serve as a source for relevant other policies since they frequently reference related policies. The list of selected policies is given in Table 1. The analysis focuses on macro-level policies i.e., policies issued on EU level and on national level in China. In both regions, relevant policies on lower governmental levels (country-level within the EU or provincial level in China) are considered as far as they allow a comparison of the two regions. While the study considers the current policy mixes, there is no specific temporal limit for the consideration of certain policies. As long as the policies are still in force, or – if not – are of significant relevance for the development of the current policy mix, they are included in the analysis. Generally, a policy is

considered relevant if it refers to “circular economy”, “circularity”, any kind of cyclical or cascaded system of substance or energy flows, or at least one of the core principles of the CE (ref. Section 2.2.2). Policies that manifest the current regime, meaning the linear economy, are not part of this study.

Table 1: List of analysed CE policies in China and the EU. EN-O = Official English Version

Policy	Abbreviation	Date of Publishment	Language	Reference
Closing the loop - An EU action plan for the Circular Economy	2015 CE AP	02.12.2015	EN-O	EC, 2015
A new Circular Economy Action Plan For a cleaner and more competitive Europe	2020 CE AP	11.3.2020	EN-O	EC, 2020a
A Green Deal Industrial Plan for the Net-Zero Age	IP	01.02.2023	EN-O	EC, 2023a
Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a framework for ensuring a secure and sustainable supply of critical raw materials and amending Regulations (EU) 168/2013, (EU) 2018/858, 2018/1724 and (EU) 2019/1020	CRM Regulation	16.03.2023	EN-O	EC, 2023b
Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing a framework for setting ecodesign requirements for	Ecodesign Regulation	30.03.2022	EN-O	EC, 2022

sustainable products and repealing Directive 2009/125/EC				
The European Green Deal	Green Deal	11.12.2019	EN-O	EC, 2020b
The Outline of the 12th Five-Year Program for National Economic and Social Development of the People's Republic of China	12th 5YP	03.2011	Translation from the British Chamber of Commerce in China	NDRC, 2011
The 13th Five-Year Plan for Economic and Social Development of the PRC (2016–2020)	13th 5YP	07.12.2016	EN-O	NDRC, 2016
The Outline of the 14th Five-Year Plan for Economic and Social Development and Long Range Objectives through the year 2035 of the PRC	14th 5YP	10.03.2022 – 22.03.2024	EN-O	NDRC, 2021
Opinions of the General Office of the State Council on Accelerating the Construction of a Waste Recycling System	-	06.02.2024	Translated with Google Translator	SC of the PRC, 2024
Notice of the State Council on Issuing the circular economy development strategy and recent action plan	-	05.02.2013	Translated with Google	SC of the PRC, 2013

			Translator	
The 14th Five-Year Plan for the Development of Circular Economy	14th 5YP for CE	07.07.2021	Translated with Google Translator	NDRC, 2024
Circular Economy Promotion Law	CEPL	29.08.2008	EN-O	PRC, 2008

The Green Deal is selected as it is the overarching strategy of the EU to fight climate change and environmental degradation. Furthermore, the two CE APs of the EU, released in 2015 and 2020 are chosen since they are the core strategic policies for CE. Although the circular economy and its principles are present in earlier policies, such as policies on waste management or policies on sustainable consumption and production, starting in 2015 the CE AP is the first comprehensive CE strategy paper, encompassing a broad set of CE ambitions and actions and not only focussing on a specific aspect of CE. The Critical Raw Materials (CRM) Regulation and the Ecodesign Regulation are two of the core policies to achieve the CE transition as listed in the 2015 CE AP and described by the European Parliament (EP, 2021). Although various policies e.g., on textiles, plastics, consumers, or construction are listed under the CE APs, the CRM Regulation is chosen since it cross-cuts several materials that are of special interest to the EU and it specifically addresses the aspect of economic scarcity (criticality) as a crucial part of the EU's CE action. The IP was published together with the 2020 CE AP and those are viewed as the two main strategies of the Green Deal (EC, 2022), therefore the IP is included in the analysis to complement the CE APs.

Although the REPowerEU Plan is closely connected to the IP, it focuses on the energy transition and the acceleration of renewable energy, which - although it is related to CE – does not have CE at its core.

On the Chinese side, there is no equivalent to the Green Deal. Environmental strategies are included in the continuous five-year plans (5YPs) for economic and social development issued by the National Development and Reform Commission (NDRC). The 12th, 13th, and 14th 5YP are included in the analysis covering the national planning from 2011 – 2026. Although previous 5YPs contain sections addressing CE, the plans are not included after a screening of the policies, since they contain less information on CE than the 12th 5YP. Thus, to avoid redundant work and delimit the scope reasonably, they are excluded.

The CEPL of the PRC is included as the only holistic and detailed law for CE in China. Furthermore, the 14th 5YP for CE is included as an equivalent to the CE-specific action plans on the EU side. Although this CE plan has no predecessor in the logic of 5YPs, the "*Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan"* fulfils the same purpose and covers the time after the CEPL. Finally, the most recent announcement by "*Opinions of the General Office of the State Council on Accelerating the Construction of a Waste Recycling System*" is included to encompass the most recent review of CE actions in the analysis.

2.5 Coding

2.5.1 Initial Coding Framework

The EPMC for CE is transferred into a coding framework. In essence, all the terms and concepts listed are used as a code, with adjustments explained subsequently. The objectives "Sustainable Development" and "Future Generations" are combined as the code

"Objective: Sustainability", since sustainability encompasses the needs of future generations in its basic definition (Brundtland, 1987).

For the R-frameworks, a code is created for each of the 9R principles. Additionally, codes for the identification of the 3R, 4R/waste hierarchy and 9R framework are generated to distinguish the combined use of R-principles as separate frameworks. Since the literature review shows that the 3R and 4R frameworks are used in Chinese and EU policies, the codes for the R-principles are applied to identify the *policy instruments - goals*. The Narrow-Slow-Close principles are also coded, but only if the framework or keyword is explicitly mentioned, otherwise the inherent concepts are also covered by the R-principles. For the three types and three purposes of *policy instruments – type and purpose*, the respective codes are established.

Cradle-to-Cradle (C2C) is not coded, since it is a combination of other concepts, already included in other codes. The same is true for the eight Eco-Innovations and the technical and nutrient cycles, since their concepts overlap with other codes.

The category of "Policy and Regulation" as a *macroeconomic perspective* is eliminated due to its generic nature. The code "business models/supply side" serves to tag text with reference to a specific CEBM, while concrete details about the business model regarding its value system is listed under *design features*.

Some categories cannot be coded, since they are not part of policy documents but are a trait of them e.g., *instrument mix* and the *principal plans* as explained above.

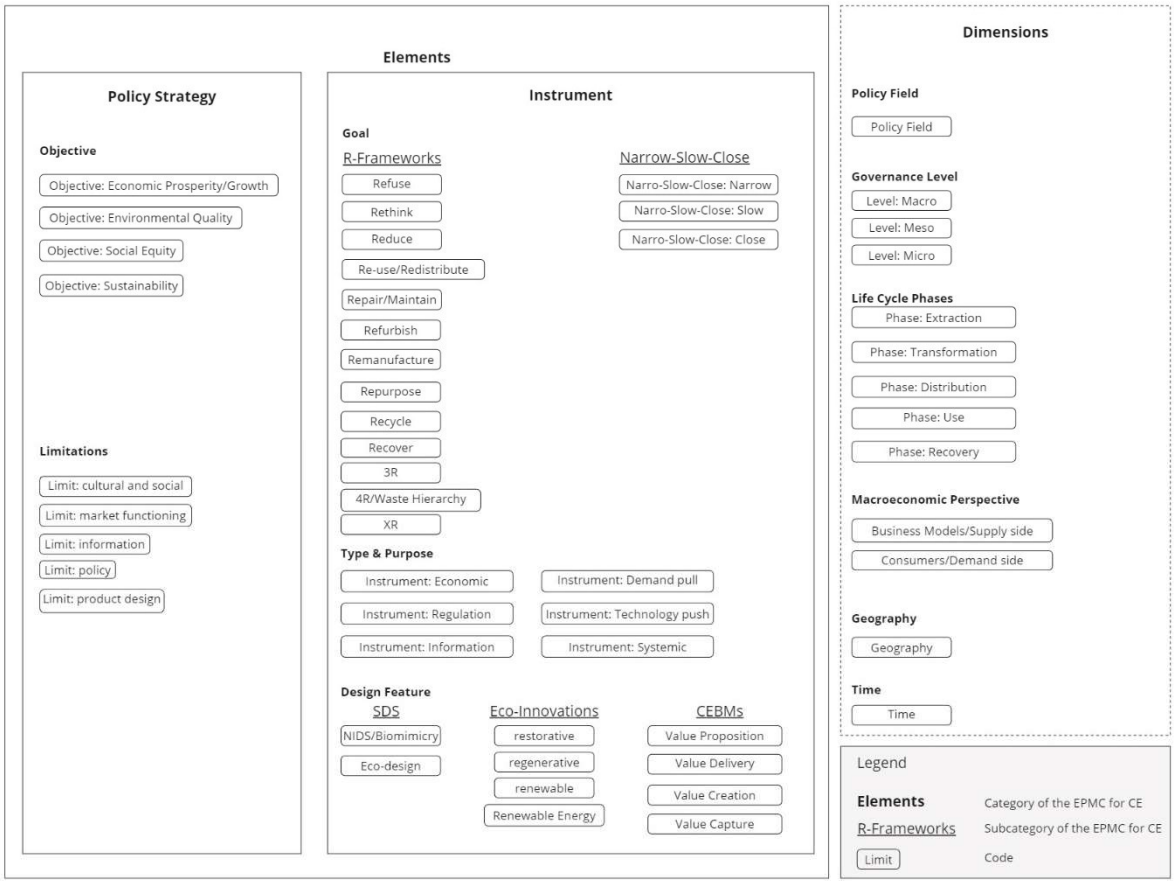


Figure 8: Initial Coding Framework

2.5.2 Final Coding Framework

Throughout the coding process, the coding framework is extended, and new codes are added if certain themes or concepts reoccur in the policies (Appendix A, Table 2). All policies are then reiterated with the new codes. Frequently, the coding framework is checked for redundancy of codes and codes are combined if suitable. Hence, a mixed deductive and inductive approach is used in this study.

The list of *policy strategy - objectives* is extended to biodiversity, innovation, carbon reduction, employment, pollution, resource efficiency/scarcity, waste reduction, and security/dependency. The existing codes for limits of CE are changed into subcodes under a general code for "limit". The code "XR" is eliminated since it was not used. The codes for

refurbishment and remanufacturing are combined since the policies do not adequately distinguish between the two. The code “limit: cultural and social” is eliminated since it was not used. As subcodes, “Public Procurement” and “Investment” are added as *economic policy instruments* and “labelling” as a specific *informational policy instrument*. “Demonstration/Experimentation” is included as a new code separate from the other *policy instrument - types*.

The category of design features is erased since the selected set of policies does not provide for specific and detailed policy aspects. The category is hence omitted and the CE concepts are transferred to *policy dimensions*, where “Product Level” is established as a new subcategory. It encompasses the newly introduced codes “Product Guarantee”, “Product Safety”, and “Product Design”, which subsumes the initial codes of “Eco-Design” and “NIDS/Biomimicry”. Furthermore, the codes “regenerative”, “restorative”, “biobased” and “renewable” are shifted to this category and the new code “dismantle/reassemble” is added.

Small and medium enterprises (“SME”) are included as a subcode for “Business Models/Supply Side”. Furthermore, the codes for CEBMs are eliminated since those concepts are not mentioned in any policy document analysed. If specific business models are mentioned, they are tagged with the code “Business Models/Supply Side” instead. Lastly, a set of 21 product categories, respectively policy areas are coded as policy fields and the general code is removed. Apart from the codes, important text passages and citations are excerpted if they show high relevance. I use the software ATLAS.ti 24 provided by the TU Delft software platform for coding (ATLAS.ti, 2024).

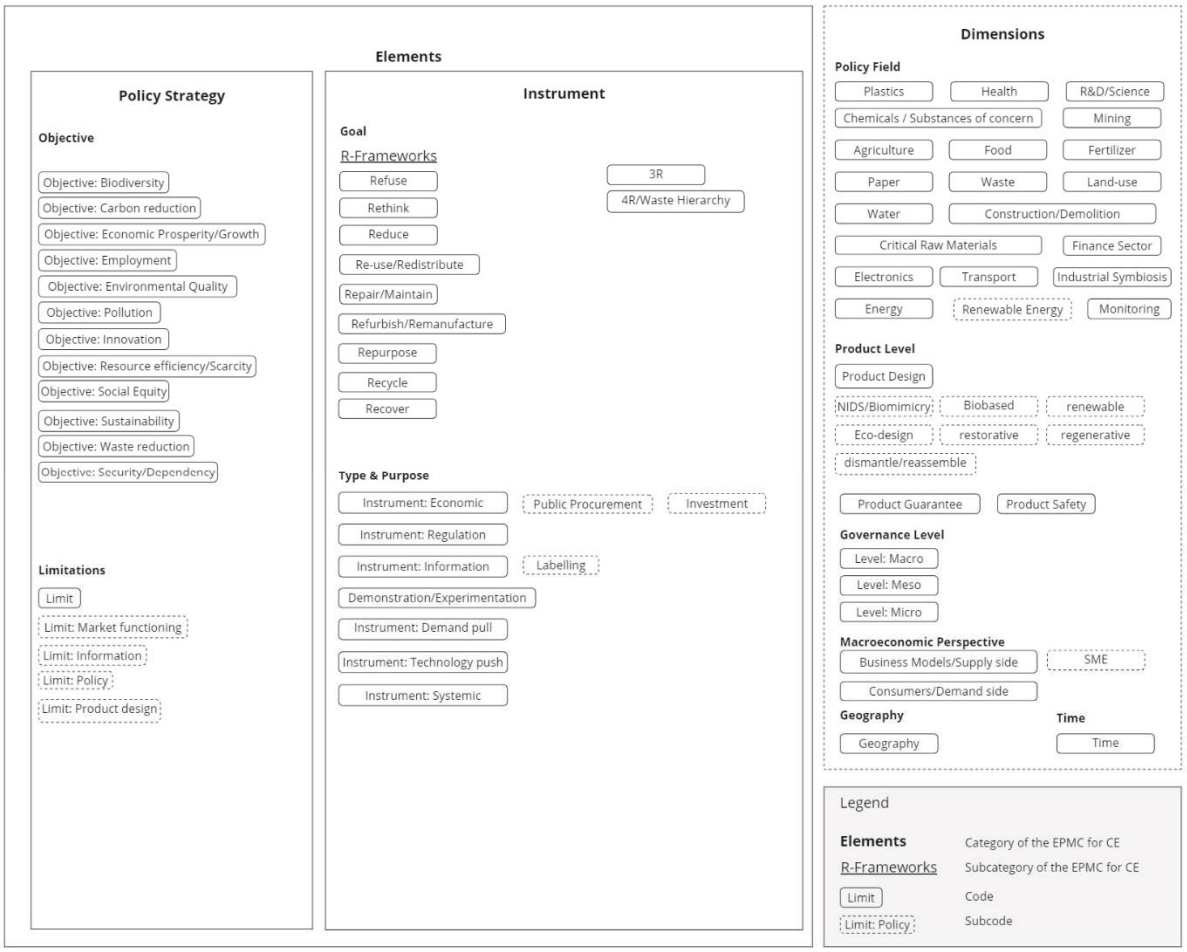


Figure 9: Final Coding Framework

2.5.3 Coding Process

I analyse the set of selected policies by manually scanning the policy documents and applying the codes to the respective text passages (Fig. 10). The text passages can be parts of sentences, whole sentences or paragraphs. The piece of the text that is marked with a code is chosen by context. Not every piece of text in the documents must be tagged. Any amount of codes can be applied to a text passage, none of them are mutually exclusive. If a code is applicable for a piece of text is decided based on the definition given in Table 2, Appendix A. The codes are applied based on the definition i.e., the meaning of the concept that lies underneath the code, not the specific word or phrase. For instance, in a document referring to "recover precious materials from waste", not the code "Recover" is applied, since its

definition according to the R-framework only involves energy recovery from waste, but the code “recycling” is applied if the context of the excerpt refers to the extraction of materials from discarded products or substances. Apart from the manual coding, the query function in atlas.ti is used to find relevant text passages. The automated coding tool in atlas.ti was tested but did not deliver useful results. The coding results in a set of text excerpts with various codes assigned to them, which is provided in Appendix B.

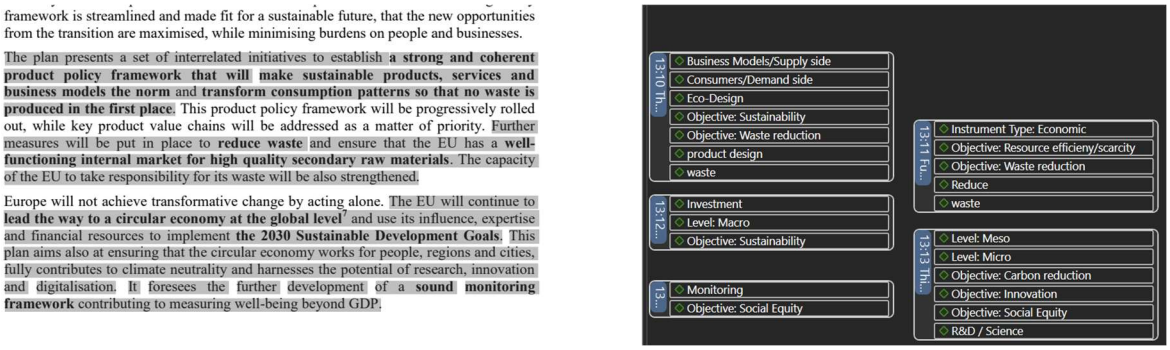


Figure 10: Coding in ATLAS.ti (Screenshot)

3 Analysis

In total, 13 documents are coded, using 77 codes. This results in a list of 1258 quotations i.e., text passages, each connected to a set of codes. The results are exported from ATLAS.ti as a spreadsheet listing all quotations marked with a respective code per tab (Appendix B). In a second step, this list is further refined (Appendix C). While Appendix B lists all quotations clustered by all 77 codes, the refined spreadsheet in Appendix C only contains tables for the codes in the EPMC for CE categories *policy strategy - objectives, policy strategy - limitations*, *policy instrument – goals*, and *policy instrument - type*. This means, text excerpts without a code from the mentioned categories are removed in that step. Within each group of quotations, common themes are identified to further cluster the quotations and, where possible, develop specific statements with directionality that can be allocated to quotations. Therefore, the code-code analysis in ATLAS.ti is used, which allows extracting quotations belonging to the same two codes. First and foremost, the *policy dimensions* of the EPMC for CE are utilised for this. Apart from this, the codes are also screened manually for common themes that the coding framework is subduing. Also, quotations that do not belong to the code are excluded in this step, as well as quotations that lack meaning or are too generic are excluded. As a result, a set of statements and themes with quotations that support the statements, respectively incorporate the same theme, is derived, allowing to compare the Chinese and EU policy mixes by showing which statements and themes they share, which ones are unilateral, and which are opposing or contradictory.

For instance, of the 1258 coded quotations, 108 quotations are tagged with the code *instrument type – economic*. First, the subcodes of this category are used to cluster the quotations further. The subcode *Investment* is applied 56 times in total. Then, the code-code analysis in ATLAS.ti is used to identify common themes under the subcode. Figure 11 shows

an excerpt from the code-code analysis in ATLAS.ti, where e.g., the code *finance sector* appears 11 times together with *investment*. Again, the 11 quotations are screened for common themes. If the code-code analysis does not allow for further clustering, the quotations are read individually and grouped under a theme or, if possible, under a concrete statement that the quotations support. For instance, amongst the 11 quotations belonging to the finance sector, three quotations (4:95, 4:96, 16:40) referred to the adjustment of specific credit conditions in investment (Fig. 12). On the other hand, for example, the quotation 12:311 is the only one addressing investment in regard to sewage. Hence, it stands alone under the theme of addressing sewage in investment. Both of the above-mentioned themes are later categorised as supporting the purpose of technology push, which is decided for the themes and statement based on the definitions in the EPMC by Rogge and Reichardt (2016).

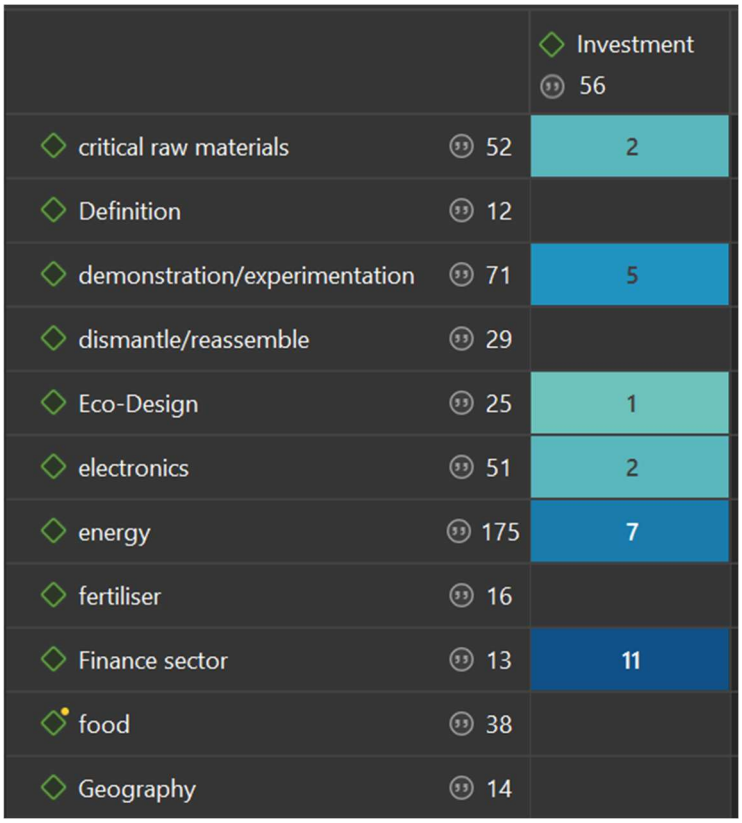
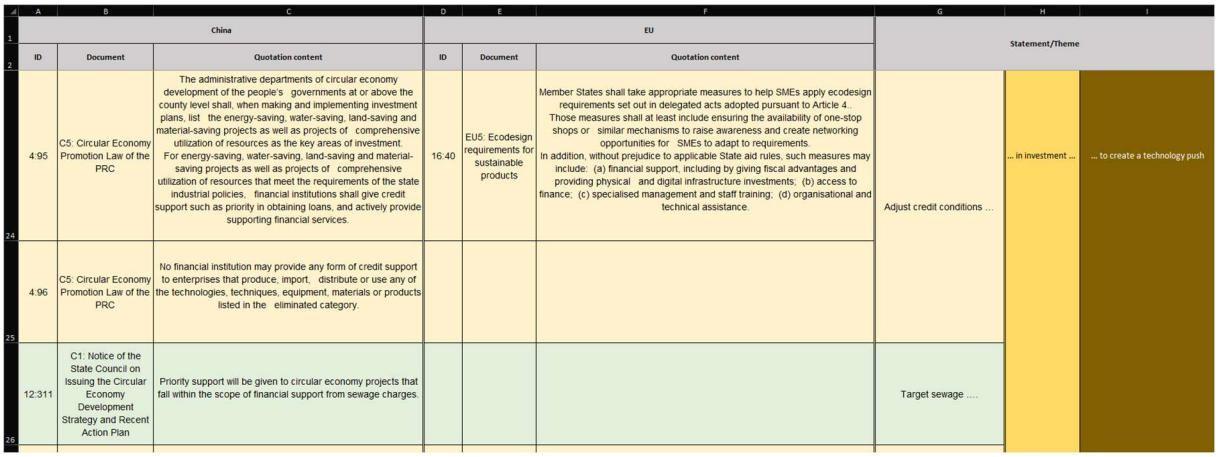


Figure 11: Excerpt from code-code analysis in ATLAS.ti for the code "investment"



	A	B	C	D	E	F	G	H	I
1	China			EU			Statement/Theme		
2	ID	Document	Quotation content	ID	Document	Quotation content			
24	4:95	C5: Circular Economy Promotion Law of the PRC	The administrative departments of circular economy development of the people's governments at or above the county level shall, when making and implementing investment plans, list the energy-saving, water-saving, land-saving and material-saving projects as well as projects of comprehensive utilization of resources as the key areas of investment. For energy-saving, water-saving, land-saving and material-saving projects as well as projects of comprehensive utilization of resources that meet the requirements of the state industrial policies, financial institutions shall give credit support such as priority in obtaining loans, and actively provide supporting financial services.	16:40	EU5: Ecodesign requirements for sustainable products	Member States shall take appropriate measures to help SMEs apply ecodesign requirements set out in delegated acts adopted pursuant to Article 4.. Those measures shall at least include ensuring the availability of one-stop shops or similar mechanisms to raise awareness and create networking opportunities for SMEs to adapt to requirements. In addition, without prejudice to applicable State aid rules, such measures may include: (a) financial support, including by giving fiscal advantages and providing physical and digital infrastructure investments; (b) access to finance; (c) specialised management and staff training; (d) organisational and technical assistance.	Adjust credit conditions …	… in investment …	… to create a technology push
25	4:96	C5: Circular Economy Promotion Law of the PRC	No financial institution may provide any form of credit support to enterprises that produce, import, distribute or use any of the technologies, techniques, equipment, materials or products listed in the eliminated category.						
26	12:311	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Priority support will be given to circular economy projects that fall within the scope of financial support from sewage charges.				Target sewage ….		

Figure 12: Excerpt from Appendix C. Quotations under economic policy instruments

4 Results

The results of this analysis are presented in the following in the categories of the EPMC for CE. The references for the quotations are either directly cited, or the respective quotation number is stated in brackets. The wording of the findings reflects the planning character of most policies i.e., they express a future ambition. However, some of the planned actions might already be implemented.

4.1 Policy Strategy

4.1.1 Policy Strategy - Objectives

The EU and China both share the objective of improved environmental quality, which is expressed in their general, long-term plans of the EU Green Deal and the Chinese 12th to 14th 5YPs. The EU acknowledges the planetary carrying capacity and its transgression by a resource consumption rate, that is considered to be too high (1:21). The EU Green Deal “aims to protect, conserve and enhance the EU's natural capital, and protect the health and well-being of citizens from environment-related risks and impacts” (EC, 2020b, p.2). Assuming that the wording is deliberate, the choice of the term “natural capital” instead of other synonyms such as “nature” or “environment” is worth noting. This objective is inherited by the specific CE plans i.e., the EU 2015 CE AP defines the CE as a tool to “help avoid the irreversible damages caused by using up resources at a rate that exceeds the Earth's capacity to renew them in terms of climate and biodiversity, air, soil and water pollution” (EC, 2015, p.2). This is again repeated in the 2020 CE AP, mentioning excessive resource consumption with its negative environmental impacts (13:96). Nevertheless, ultimately, environmental quality is described as a necessity for the superior objective of economic growth and competitiveness of the EU. The EU aims for “decoupling economic growth from resource use

while ensuring the long-term competitiveness of the EU and leaving no one behind" (EC, 2020a, p.2) and it clearly states in the Green Deal, that "[i]t must put people first, and pay attention to the regions, industries and workers who will face the greatest challenges" (EC, 2020b, p.2). In conclusion, the environment itself is seen as an asset and its deterioration as a source of risks for people and economic prosperity. A valuation of non-human life and nature itself is absent in EU CE policies. In a nutshell, to achieve the overall objective of economic growth and prosperity, the risks and negative impacts occurring from the natural environment, which are caused by excessive resource extraction and waste production must be overcome.

On the other hand, China addresses the environmental quality issue in its 13th 5YP as follows: "To improve the quality of the environment and resolve serious ecological and environmental problems, we will step up ecosystem and environmental protection efforts, ensure that resources are used more efficiently and that more quality ecological goods are available to the public, and simultaneously help the people become prosperous, help the country grow stronger, and build a Beautiful China" (NDRC, 2016, p.119). Thus, China also identifies high resource use as a primary cause of environmental degradation but sees environmental quality on equal footing with economic prosperity, which is reiterated in the current 14th five-year plan, which declares to "give priority to the environment and green development […] to achieve both high-quality economic growth and a high standard of environmental protection" (NDRC, 2021, p.183). China constitutes the CE to be part of a broader international effort to "break the resource and environmental constraints" (NDRC, 2024, p.1). Both, the EU and China follow a green growth strategy i.e., economic growth is sought to be decoupled from resource use and thus environmental degradation (7:1, 7:2, 17:1, 13:103, 13:2, 13:149). Chinese policies often use the term "environmentally-friendly products", but fall short of an explanation (4:101, 9:16, 12:184) China relates the objective of

carbon reduction to changes in consumption and people's lifestyles, which is absent in EU policies (5:62, 9:15, 12:256).

As cited above, the EU postulates the restoration of biodiversity as an objective in its CE policy mix (1:21, 13:2, 13:96). It finds the main cause of biodiversity loss in resource extraction and use (1:21, 13:2). Chinese policies mention only the loss of biodiversity but do not express the restoration or improvement of biodiversity as an explicit objective in regard to CE.

The objective of carbon reduction is present in all analysed documents except China's CEPL, which might be explained by the fact that it is a specific CE law that does not contain a section referring to general objectives and visions of policymaking. However, both sides state carbon reduction as an important target, referring to their greenhouse gas emissions reduction targets and also distinguishing it from other pollutant emissions (8:2, 9:22, 12:27, 13:141, 14:1, 14:3, 17:1). Specifically, both sides mention the goal to achieve carbon neutrality, but China adds its aim to peak carbon emissions first (10:3 ,11:1). Also, China and the EU claim that CE contributes to carbon neutrality (10:3, 10:18, 11:1, 13:2, 13:13, 13:88, 13:126, 13:127), while only the EU explicates this link, giving the example of carbon storage in wooden construction materials (13:127). While both sides see the locus of carbon reduction in the energy sector (5:13, 5:76, 14:4) and in industry (12:146, 10:30, 12:339, 14:6, 17:5) i.e., on the production side, only China connects the objective to consumers, aiming to promote carbon reduction publicly and aim for low-carbon lifestyles (5:62, 9:15, 12:256). Regarding producers, both sides mention the importance of carbon footprint accounting (11:64, 13:21, 13:26, 14:4, 15:44, 16:36). Also, they specifically mention batteries being subject to this (11:41, 13:60, 14:10). They divert in the sectors that are mentioned in the policy mix in relation to the general objective of carbon reduction: the EU refers to textiles and construction

(13:82), China mentions transport and tourism (12:185). China views carbon reduction as a foundation for its further economic and social development (11:3).

Pollution reduction is a shared objective of China and the EU (4:31, 4:32, 5:62, 9:4, 9:25, 12:265, 13:63). Policies refer to pollution reduction in different bodies i.e., air (7:35, 12:26, 1:21), water (7:36, 12:26, 1:21, 1:137), and soil (7:37, 12:26, 1:21). In detail, Chinese policies often refer to the reduction of "major pollutants" emissions (4:31, 4:32, 5:62), including nitrogen (ammonia), sulphur dioxide and volatile organic compounds, focussing on the chemical and non-ferrous metals industry and agriculture (8:10, 12:26), while the EU mentions plastics (13:72, 13:74, 13:80). Both policy mixes announce the goal of "zero emissions" without further specification (12:339, 12:280, 13:41). China also acknowledges the objective of avoidance of secondary pollution (12:223, 12:282).

As its primary policy objective, the EU pursues a "sustainable, low carbon, resource efficient and competitive economy" (EC, 2015, p.1). The subject of interest, also in a grammatical sense, is hence the economy, whereas the objectives of carbon reduction, sustainability and resource efficiency are subordinate as characteristic elements. In so doing, the EU sees CE as a tool to reduce resource scarcity and thereby prevent economic loss. For instance, the adverse economic effects of water scarcity in certain European regions are mentioned (1:126). By increasing resource efficiency, both sides aim to fight water scarcity, especially focusing on water use in agriculture and industrial processes (5:77, 4:50, 5:15, 9:41, 1:126, 1:127, 13:101). Furthermore, China aims for higher efficiency in land use (5:21, 7:43, 9:51), mining activities (9:5), and industry (12:33). The EU aims for innovation with the CE promising to open new business opportunities and models to "unlock the growth and jobs potential of the circular economy" (EC, 2015, p.2). The EU 2020 CE AP cites a growth potential of 0.5% (GDP) and 700000 jobs by 2030. Furthermore, it emphasises the cost

reduction potential of resources as productive inputs and potentially decreased price volatilities (1:16, 13:6). In that sense, also the objective of waste reduction is directly related, since the EU sees waste as a loss of valuable resources (1:72, 1:153, 13:118) e.g., food waste (1:143), but also in high-value waste streams such as vehicles (1:115), where the concern of loss of critical raw materials due to high waste rates is expressed. While the EU lists various examples of value loss in waste, China mentions the loss of value in waste discharge only once, referring to associated ores in mining tailings (4:58). However, both coincide in their analysis of anticipating increasing waste flows and hence aim to reduce the amount of waste produced and to reduce landfilling (10:65, 1:30, 1:117and discharge of waste into the environment, especially acknowledging marine plastic pollution (10:65, 1:137). Extraordinarily, the Chinese government mentions employment in regard to CE only once as a target for sectoral employment, but never explicates job opportunities or an increase in employment in any of the analysed policy documents (12:218).

However, the Chinese side concurs in anticipating the CE and its related technologies and business models to be part of a new international economic and industrial trend (10:18). Both governments frequently refer to innovation i.e., uttering the intention to support the invention and introduction of new products, services, technologies, processes, business models etc (7:26, 10:23, 11:5, 12:22, 13:13, 1:36, 1:42, 1:63, 1:166, 1:171). Those remarks range from the general mentioning of innovation as an end in itself, to more detailed elucidations e.g., when the EU promotes innovation hoping for “better preserving food, improving the recyclability of plastics or reducing the weight of materials used in vehicles” (EC, 2015, p.13). Hence, both sides believe that the current set of products, services, and processes is not sufficient to establish a CE. For instance, both see innovation in investment and financing facilities as important for CE (10:80, 12:317, 13:135).

Also, they agree that resource efficiency can reduce their respective dependency on resource imports (10:13, 1:185, 15:4, 13:7, 14:5, 14:8) and reduce economic scarcity, thereby improving resource and supply security (13:60, 14:8, 14:10, 15:47). The EU specifically aims to diverse its imports to increase supply security (17:16, 14:5, 15:50, 14:8). Both, China and the EU, see resource efficiency as part of a global trend (10:11, 10:12, 10:18, 1:48). Therein, the EU emphasises undertaking global action towards defining and achieving a "safe operating space" (13:141, 13:145).

The EU aims to "transform the EU into a fair and prosperous society" (EC, 2020b, p.2) and "protect the health and well-being of citizens from environment-related risks and impacts" (EC, 2020b, p.2) and to "leave no one behind" (EC, 2020b, p.16). In that sense, social equity can be identified as an objective of the EU, which is also formulated in its CE strategy. The EU sees improvement in social equity and general quality of life through new products and services provided by the CE, aiming for improved delivery and longevity of economic value for consumers (13:8, 13:9, 16:27) and reducing negative health impacts of hazardous substances in products (1:129, 1:131, 13:141, 16:27, 17:2, 15:1). Importantly, EU policies specifically refer to those impacts within the EU but also on the global stage i.e., in the countries of origin (1:74).

On the other hand, China caters the social dimensions of the CE in promoting new environmentally-friendly lifestyles as part of an "ecological civilisation" (NDRC, 2024, p.1), including advocation for "reasonable consumption while opposing waste and extravagance" (NDRC, 2016, p.125), making frugality a social norm. Reducing negative health aspects of products is also an objective of Chinese CE policies (10:65). Also, China acknowledges the contradiction of its objectives to boost domestic demand and maintain a frugal lifestyle. (10:13, 10:18)

As described above, mostly the EU emphasises job opportunities of the CE transition. However, it also aims for the guarantee of labour rights at home (15:42) and abroad and sees improvement for people in new skills and training opportunities (13:122, 13:9). Neither of which are present in Chinese policies.

Sustainability is a recurring theme and objective in both, EU and Chinese, policies. "Sustainability" as a subject is used as a term expressing it as a stand-alone objective but more often used as a characterising adjective ("sustainable"), in the EU to describe first and foremost future products and services of the CE (13:17, 13:9, 13:10, 13:21, 13:60, 13:63, 13:73, 13:83) and in China for the overall economic development path ("sustainable development") (4:3, 8:2, 9:22, 9:25, 10:20, 12:2, 12:25, 12:38, 12:268). Both sides fall short of elucidating their definition or interpretation of sustainability.

4.1.2 Policy Strategy - Limitations

Both sides acknowledge the need to improve existing policies, especially focusing on *policy instruments* such as investment, tax and fee schemes (12:23, 12:21, 1:111, 1:179). Furthermore, China and the EU see that some waste can be difficult to handle and treat adequately (10:16, 1:159, 1:111). For instance, Chinese policies mention the high complexity of waste from renewable energy (RE) equipment (10:16). Both sides see a misalignment of market participants, with the EU stating that "current market signals appear insufficient […], in particular because the interests of producers, users and recyclers are not aligned" (EC, 2015, p.3) and Chinese policies find a contradiction in supply and demand (10:13). China also asserts problems in the coordination between governmental bodies in different regions and departments (12:262). Similarly, different rules among Member States are identified as a limit to CE in the EU, especially in product quality and environmental standards.. Additionally, the EU regards existing voluntary policy approaches to be ineffective (13:20). The EU and China

both address foreign dependency of resource consumption to be a general problem for the development of CE (10:13, 1:185). Furthermore, the absence of standards for CE-related products and processes is acknowledged by both sides (10:14, 1:120, 1:124, 1:155).

The EU mentions missing standards for secondary raw materials (1:120, 1:155) to hamper CE and missing standards on product design (13:15, 1:66, 1:120, 1:124) and the identification of materials in products to hinder the reuse and remanufacturing of products in the EU (15:18, 1:155). The EU identifies a set of limits that hamper higher recycling rates and thus waste reduction: administrative capacity, a lack of investment in recycling facilities, insufficient use of *economic policy instruments*, overcapacity in residual waste treatment of specific waste flows (1:111, the presence of harmful substances in waste streams (1:139), as well as illegal export of waste (1:115). EU policies also claim that circular business models and development are hampered by lacking funding for SMEs (1:179). Furthermore, the EU addresses greenwashing i.e., untransparent and untruthful labelling of products, to hamper consumers from purchasing environmentally-friendly products and making informed choices (1:87, 1:88, 1:151, 17:12). EU policies also identify lacking information about material flows and stocks e.g., CRM (15:18, 1:155) and food waste (1:147), as a problem for policy making. Also, the EU sees the key problem in the premature breakdown and discarding of many products, also caused by planned obsolescence (13:16).

On the other hand, China asserts low quality and high costs of rare metal recycling as the reason for not achieving the necessary quality grades (10:17). It identifies missing standardisation, lacking land for recycling facilities, and difficulties in low-value recyclables (10:14).

4.2 Policy Instruments

4.2.1 Policy Instrument - Goals

Chinese policies encompass the 3R principles of *reduce*, *reuse*, and *recycle* (4:5, 10:19, 11:2, 12:5, 12:29), while the EU employs the 4R principles, also referred to as the waste hierarchy, of prevention of waste, preparation for reuse, recycling and recovery (1:103, 1:104, 1:107, 1:113, 1:114, 1:117, 1:164, 15:20, 16:41, 17:9). Both sides use these frameworks consistently i.e., although they do not appear in every single policy analysed, they are acknowledged throughout the chronology of published policies. Both sides emphasise the priority order given in those hierarchies.

Since the policies do not use the 9R principles, on which the coding framework is based, they do not distinguish between the principles as defined in Appendix C. For most parts, the additional principles of the 9R framework are included under *reduce*, *reuse*, and *recycling* in the policies. The aim for refusal or rethinking of product use is only present in the above-mentioned Chinese policy ambitions to promote a frugal lifestyle (12:256) i.e., to encourage consumers to consume less, which is not present in EU policies. The aim of repurposing is only mentioned once directly in the EU 2020 CE AP in regard to batteries (13:60). Otherwise, repurposing can only be interpreted in explications of reuse on both sides. While the principles *refuse*, *rethink*, and *repurpose* are not distinguished from the 3R and 4R frameworks used in the policies, the principles of *remanufacture*, *repurpose* and *repair/maintain* are specifically mentioned. Hence, in the following the *policy instrument - goals* are presented only for the principles used and distinguished in the policies.

Reduce

China and the EU both aim for a reduction in the generation of waste (5:66, 7:20, 1:145, 13:66) and the consumption of resources and declare reduction as superior to re-use and recycling (4:12, 12:32, 17:9). Both sides focus more on relative reduction i.e., efficiency increases, than absolute reduction. Nevertheless, both sides also mention the intention to reduce absolute levels of consumption e.g., the EU aims for a reduction of total energy demand, although without any further explication (14:12). China also aims to cap and reduce total consumption levels of water and land (9:50, 9:52, 9:41, 12:47, 8:5).

Both sides emphasise conservation and efficient use of energy, water, materials and land. The EU and China explicate their aim to reduce water consumption in industrial processes (4:50, 13:101), while China also focuses on water reduction in planting, cultivation, and irrigation in agriculture (5:67, 12:159, 7:7, 9:41) and in all newly developed construction projects (4:59). In EU policies water consumption is mentioned only once in a general statement (13:101), while Chinese policies explicate water reduction efforts detailed in listing equipment sought to have higher water efficiency (9:41) and water conservancy as an overall societal issue of high severity, saying China is aiming for the "strictest possible water resources management system and [to] get everyone to conserve water" (NDRC, 2016, p.122).

In materials consumption, China aims for a reduction of cement and concrete use in construction (12:112). Chinese policies further explicate the aim to conserve energy, water and material in construction projects (4:59). Specifically, energetic renovations are targeted (12:245), making a distinction between geographic regions to acknowledge different heating and ventilation necessities in the Northern and Southern regions of China (12:234). The locus

of action is put in the design phase of buildings i.e., planning shall include the targeted measures (12:235).

While the EU focuses on reducing food waste throughout the whole value chain (1:145, 17:18), China specifically mentions the losses in grain production and storage (5:66, 12:162). Chinese policies mention reduction in agriculture with a focus on energy-saving in machinery (12:158) and water-saving in equipment and planting and breeding processes (4:64, 5:67, 12:159). Fertiliser and pesticide application is sought to be reduced as well in China (5:68, 12:160).

China and the EU aim to reduce packaging waste with fewer and lighter packaging and the reduction of single-use plastics (7:20, 10:66, 13:66, 13:68, 13:100, 17:14). China additionally mentions thin film plastics in agriculture to be reduced (10:65). Only the Chinese side addresses catering, accommodation industry and tourism to use energy- and water-saving products (4:67, 12:199). In transport, the EU and China aim for the reduction of the weight of materials in vehicles and an increase in occupancy rates and load factors (12:202, 13:63). China additionally emphasises the use of energy-efficient new energy vehicles and higher efficiencies in logistics (12:204, 12:208, 12:247). China also aims for oil reduction in engine design (4:56) and reduction of power transmission losses (12:56). Also, both sides aim for higher energy efficiency in electrical appliances (5:9, 13:18, 13:23). Regarding CRMs, the EU aims to increase material efficiency in products that incorporate CRMs to diminish the rising demand, although stating that an absolute reduction does not seem to be feasible through efficiency alone (14:8). In a contradictory statement, the Chinese government claims to aim for a replacement of coal with alternative energy sources (5:71), while at the same time announcing higher-efficiency new coal power plants (5:69).

Chinese policies target public institutions as leading agents in the proposed actions for reduction of energy, water, materials, and land (9:17, 12:260, 4:65). They shall implement reduction in their operation and act as an example for the public (12:260, 4:65). Furthermore, reduction goals shall be implemented in the planning activity of governmental bodies (4:65).

A difference occurs in the relation of reduction and consumers as economic agents. While Chinese policies promote the reduction of consumption and the purchase of products with higher efficiencies addressing citizens, resp. consumers, directly, EU policies do not (4:24, 4:23, 9:16, 12:257, 12:258). EU policies rather frame it the other way around i.e., that the CE can deliver better products, being products with higher efficiencies, to consumers. Chinese policies actively promote a lifestyle of more frugality and less luxury. An outstanding example is the encouragement of "moderate ordering and packing when dining out, and simple arrangements for […] weddings and funerals" (SC of the PRC, 2013, p.35). However, the aim of frugality is contradictory to China's proclaimed goal of boosting domestic demand for economic growth.

Re-use

Both sides assert a necessity for a preparation for reuse i.e., the management and coordination of waste collection and separation is crucial for effective reuse activities (10.54, 1:30, 1:96).

Both sides aim for the reuse of water (5:18, 9:48, 12:139, 1:127, 1:128, 13:101). The EU specifies industrial and agricultural activities as areas of action (13:101). China specifically targets wastewater reuse in papermaking (12:120), the petrochemical industry (12:93), the cascaded reuse in industrial parks (12:68), and mining wastewater (12:70, 12:44). China also emphasises the potential in reusing sewage (10:58, 12:153).

Besides water reuse, the EU does not list any further materials of interest for reuse in agriculture, while Chinese policies see a multitude of possible reuse options, including (1) the use of crop straw as feed, fertiliser, cultivation ground for funghi, or for compound structural materials (12:163, 12:164, 12:165), (2) the use of waste from animal husbandry and aquaculture to produce medicine, health care and cosmetic products (12:172, 12:129) or (3) the reuse of agricultural plastic film (12:166). Both sides aim for the reuse of discarded edible food (12:179, 12:132, 12:128, 1:164), packaging materials (12:205, 12:321, 13:65, 13:67, 13:100, 17:10) and textiles (10:54, 13:83, 13:84, 13:87). Furthermore, the EU and China target the reuse of electronic products (10:63, 12:217, 12:221, 13:51, 13:55, 15:11) and automobiles (10:64, 11:31, 15:12), while the EU specifically focuses on batteries (13:60, 14:10) and CRM in those products (15:11, 15:12, 15:26, 15:31).

Only China expresses the goal of reusing waste energy in the form of heat and pressure e.g, for urban district heating and the use of flare gas and other by-product gases from, for instance, coke ovens or fibre production for energetic use, which can also be interpreted as recovery (12:69, 12:90, 10:57).

Both sides coincide in their aim to reutilise carbon in the processes of carbon capture, utilisation and storage (CCUS) (7:40, 11:38, 13:127)), with the EU also aiming to reutilise and therewith store carbon in wood products (13:127).

China aims to reuse construction residues and residues from industry such as fly ash or coal gangue in construction itself (10:60, 12:110, 12:114, 12:242). Furthermore, idle and deserted land from former industrial or mining use shall be reused (5:23).

Overall, Chinese policies have a paramount focus on specific industrial material streams for which policies suggest specific reuse and recycling opportunities e.g., the “recycling of coal-to-olefin water, treatment of phenol-containing wastewater through

pressure[s]ed gasification of crushed powder" (SC of PRC, 2013, p.18). This coincides with a strong emphasis of Chinese CE policies on industry and specifically industrial parks. Although industrial parks also exist within the EU, policies do not contain extensive lists of substance flows in industry.

Chinese policies encourage schools at all levels to set up sharing corners for used books and to establish special days to promote the exchange of used books among teachers and students (10:39).

Remanufacturing /Refurbishment

China and the EU aim for remanufacturing of products (5:34, 7:15, 9:12, 9:19, 10:40, 10:42, 12:307, 10:46, 10:62, 1:83, 13:25, 16:4, 16:8). Although EU policies generally acknowledge remanufacturing and refurbishment as an *policy instrument - goal*, they do not specify further ambition i.e., no specific areas of action or targeted products or materials are mentioned.

Chinese policies focus remanufacturing and refurbishment ambitions on large, costly products, such as motor vehicles (4:87, 12:226, 12:318, 10:62), machine tools (4:87, 10:41), engineering equipment (4:87, 10:41), engines (12:229), and industrial robots (10:41), but also on smaller products, including tyres (4:87) and office equipment (10:41). China also aims for remanufacturing services and for the export or re-export of remanufactured products (10:44, 10:45).

Repair/Maintain

The EU aims for repair and maintenance of electronic products, such as mobile phones, tablets and laptops, defining it as the priority sector of action for more repair and maintenance activity (1:64, 13:37, 13:51, 13:53, 17:11). Furthermore, the EU addresses textiles for repair (13:84).

China aims for maintenance of agricultural irrigation equipment, products in aviation, CNC machine tools, and communication equipment and connecting it to its re-export ambitions (10:45, 4:63). It also lists automobile repair and maintenance as a goal, which is not explicitly mentioned in EU policies (10:64, 12:226).

Part of the EU's goal to increase repair and maintenance activities is to tackle the issues of missing repairability, upgradability and planned obsolescence rooting in product design (1:58, 13:8, 13:51, 17:11).

Recycle

Both sides aim for recycling of waste streams that would otherwise go to landfill (10:65, 1:138, 1:107, 1:30). First, both sides focus on municipal i.e., household waste and promote advances in the collection and sorting of waste streams for recycling (4:22, 12:194, 1:30, 1:108, 1:164). China declares to aim for a recycling system that covers the whole society. Second, both sides aim for the recycling of packaging waste and for the recyclability of used packaging materials (7:20, 10:68, 10:69, 10:70, 1:166, 13:65, 13:67). Subsequently, both sides aim to increase the recycling of plastics to avoid plastic pollution (10:65, 12:166, 12:214, 1:136, 1:138, 1:140, 13:73, 13:81, 17:10).

Both sides aim for products that are recyclable and that contain recycled materials, hence, both policy mixes aim for improved product design to support recycling (10:28, 1:69, 13:8, 13:24, 13:51).

Both sides focus on recycling of consumer electronic products (10:63, 11:17, 11:20, 11:44, 11:66, 12:189, 12:227, 15:11) including their batteries (10:72, 10:81, 11:41, 13:58, 13:60, 14:10). Additionally, China aims for recycling of new energy vehicle batteries, which is not specifically acknowledged in EU policy mix (5:57, 10:72). The EU rather targets CRM

and magnets in its policies (1:153, 1:154, 14:8, 15:13, 15:14, 15:17, 15:25, 15:26, 15:27, 15:32, 15:23).

Both sides aim to recycle waste from the demolition of buildings (5:34, 12:66, 12:111, 12:238, 12:242, 1:158, 1:159, 1:160, 13:93). China more specifically addresses the recycling of asphalt (12:242), waste glass, ceramics, stone powder (12:111) and slag (12:66, 12:99) for concrete and other building materials production. The EU policies also seem to be contemplating the right way to recycle construction waste stating that "the recycling of construction and demolition waste is encouraged by an EU-wide mandatory target, but challenges on the ground still have to be addressed if waste management in this sector is to improve" (EC, 2015, p.16).

Both sides aim for textile recycling (5:34, 12:143, 13:87) and mention applications outside the clothing sector, for instance, China suggests insulation production (12:143). Also, both sides agree to increase recycled material use and recycling of automobile components (10:64, 10:81, 11:66, 12:226, 13:61). The EU does not mention recycling of wastewater, while China targets wastewater from coal washing, mines, and slaughtering for recycling (12:46, 12:70, 12:173). Both sides aim for the use and recycling of biobased materials (12:138, 1:164, 1:166). While China names biobased textile fibres (12:138), the EU targets wood-based packaging (1:166). Apart from that, the EU does not mention agriculture for recycling, while China details the recycling of manure, crop straw, agricultural film and packaging, machinery, nets, and landscaping waste (7:50, 9:49, 10:48, 11:15, 11:21).

There are a couple of focus areas that only occur in Chinese policies, this includes recycling of sludge and sewage (5:54, 5:55, 10:58, 11:27, 12:184), mining waste recycling (9:53), recycling of low-value recyclables (11:42), paper recycling (12:125), recycling of waste streams from RE applications (11:43) i.e., wind power and PV. Furthermore, China

mentions needed advances in technology for recycling and its adoption for successful recycling ambitions (11:61).

Recover

The EU acknowledges that recovery is last in its waste hierarchy, hence it seeks to avoid recovery and prefers recycling if possible, considering the possible economic losses and environmental impacts of waste incineration, stating that "the way we collect and manage our waste can lead either to high rates of recycling and to valuable materials finding their way back into the economy, or to an inefficient system where most recyclable waste ends in landfills or is incinerated, with potentially harmful environmental impacts and significant economic losses" (EC, 2015, p.8) Chinese policies coincide in seeking to avoid landfilling and exploiting the energy potential of waste incineration, although not mentioning negative impacts (7:38, 11:33). Here the EU and China differ since China seeks to establish more recovery capacity, while the EU refuses to support recovery further since it is considered the least desirable outcome next to landfilling, as it is frequently emphasised (1:106, 1:114, 1:138, 1:117). Chinese policies see the potential to avoid landfilling, specifically of plastic waste, by using it in conventional waste incineration plants or cofiring it in cement and smelting kilns (10:65, 12:71). Furthermore, Chinese policies aim to use organic wastes from various sources e.g., municipal, brewery, forestry, or sugar-making residues, and manure for direct incineration or production of various biofuels (11:35, 12:130, 12:170, 12:252, 12:123).

4.2.2 Policy Instrument - Types and Purposes

Economic Instruments

Both policy mixes underline the general importance of economic incentives and the use of market-based instruments. For instance, the Chinese CEPL phrases the overall ambition and action towards CE policies as follows: "the development of a circular economy shall be

propelled by the government, led by the market, effected by enterprises and participated in by the public" (PRC, 2008, p.1). Both sides, aim to use the allocation function of the market i.e., the distribution of goods through the interplay of supply and demand and the price as a signal, to create desired outcomes according to their proclaimed CE goals. (5:44, 7:26, 10:22, 10:74, 11:6, 1:32, 1:107, 13:7)

To spur demand, both sides want to use public procurement to purchase products that are "energy-saving, water-saving, material-saving and environment-friendly" (PRC, 2008, p.10) or "green", as the EU phrases it (4:101, 13:39, 14:7, 17:13). That also includes products containing recycled materials (4:101, 1:134). China additionally includes products with contents of low-value recyclables and renewable resources in its public procurement ambitions (10:78). Both sides include all levels of government authorities i.e., from macro to micro level, in the procurement plan.

The demand of private enterprises and households is only addressed with labelling initiatives for products, which both sides announce, although it is not clear if this act of improved information and transparency also aims to spark demand for those products. Also, China plans to adopt demand-side power management (9:37).

Both sides agree that the CE transition needs investment and financing (12:12, 12:342, 13:7, 13:135). The EU waste hierarchy is exhibited in the funding policy, which describes that "funding for new landfill will be granted only in exceptional cases (e.g. mainly for non-recoverable hazardous waste) and that funding for new facilities for the treatment of residual waste, such as incineration or mechanical biological treatment, will be granted only in limited and well-justified cases, where there is no risk of overcapacity and the objectives of the waste hierarchy are fully respected" (EC, 2015, p.10). China defines lists of desirable products and processes which shall be granted priority for public and private credit (4:95). Additionally,

lists of undesired investments are defined and financial institutions are prohibited to give financial support in any form to those excluded subjects or enterprises that engage in them (4:96). Public governments on all levels shall plan their investments in accordance with the specified lists and give priority to the CE-related investment purposes. Recycling is specifically named as an area of needed investment (11:57). China wants to establish new "green" financing instruments, such as green credit, green bonds, and green trusts (7:29, 11:57). The EU focuses its investment on SMEs, for which the EU seeks to give direct support through digital and physical infrastructure investments and provide access to other financing instruments (16:40, 13:7). It employs various investment facilities, amongst others the European Regional Development Fund, LIFE, and Horizon Europe for public investment in research and development e.g., in the field of biomass and biowaste refineries (1:169). For private investment in hydrogen, energy efficiency, and electrification the EU wants to define general public investment support allowances, in the form of fixed percentages of investment budgets (14:15). The EU claims investment demand to be high in the whole battery supply chain (17:17). The analysed EU policy mix, contains reference to the EU Taxonomy[1] for sustainable investment, a policy that defines levels of credit support and eligibility of certain sustainability labels for financial investments (13:129). .

Both sides use extended producer responsibility schemes for waste management and treatment systems i.e., making producers pay for the handling of the waste their products cause, hence aiming to create an incentive to design products to prevent waste discharge (9:18, 1:69). China aims to establish a waste handling fee for that purpose, stating that the financial contribution that is paid shall be used exclusively for that purpose (4:99), while the

[1] REGULATION (EU) 2020/852 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088. Available at https://eur-lex.europa.eu/eli/reg/2020/852/oj?locale=en

EU policies state that incineration and landfilling taxes shall be implemented (13:134). At this point, it remains ambiguous if the term “tax” is used as it is defined in legal terms i.e., as an uncommitted contribution to the fiscal budget in contrary to a fee. Although this is not of relevance to the incentivising function it differs in fiscal matters. The EU remains generic in not defining any specific type of waste that shall be subject to discharge fees. On the contrary, China aims to implement a sewage discharge fee which is coupled to the actual wastewater discharge of enterprises, so that enterprises that achieve zero discharge do not pay for sewage treatment (12:303). Despite household waste, China also wants to levy fees on construction waste, food waste (12:304), and electronic waste (12:306). On the opposite side of the value chain, resource extraction and resource consumption in general, are not addressed by the EU with *economic policy instruments*, while China aims to establish a royalty system for mineral resource use (5:31).

The two policy mixes differ in the promoted pricing strategies. EU policies only generally state that Member States shall internalise environmental externalities into product prices (1:92). On the other hand, China uses price controls on all governmental levels for minerals, water and energy (12:9, 4:97, 5:30, 7:30, 5:17). The water consumption shall be subject to tiered prices for residential use in urban areas, while non-residential water consumption prices shall be subject to progressively increasing prices above a specified quota (12:301). Similar pricing policies shall be employed for electricity consumption extended by schemes that dis/incentivise electricity use during power peaks and valleys (time-of-use pricing) (12:302, 4:98). Also, China aims to encourage power generation from coal gangue, waste heat and pressure, garbage, and methane through pricing policies (12:302).

Both sides see the necessity to establish domestic markets for CE-related products and materials. Nevertheless, the priorities differ. China seeks to establish second-hand goods

markets, including remanufactured products and after-sales services (10:38, 10:39, 10:43, 11:28), while the EU emphasises the secondary raw materials market (1:132, 13:11, 13:210, 17:15). Both see the necessity of proper regulation, product guarantees, and information exchange systems for the facilitation. The EU also sees the need for organic and waste-based fertiliser markets (1:125). Furthermore, China aims to build waste reverse logistics markets, to organise the flow of discarded products to waste treatment facilities (12:342).

In international trade relations, export and import ambitions differ. China wants to push the export of second-hand cars (11:31) and restrict the export of products with high energy consumption and high pollution levels (4:94). Furthermore, renewable resource imports shall be increased, focusing on import to coastal areas of China where those resources can be utilised in production (12:269). Generally, technology complimenting CE shall be boosted in import to China (4:94). On the other side, the EU plans to end the export of waste outside of the EU, to support the establishment of domestic waste treatment and recycling markets, but also to stop exporting environmental problems (13:210, 17:15).

Both sides emphasise their will to work at an international level to implement their CE ambitions in trade agreements, partnerships and policy dialogues (11:69, 13:144). The EU also mentions that it can use its global market power to set standards and take a leading role in defining product design and value chain management (13:17).

A theme that is only present in Chinese policies is that of government involvement in enterprises e.g., the state seeks to steer “merging and reorgani[sation] of small mines, and shut down mining activities that use outdated techniques or are environmentally undesirable” (NDRC, 2016, p.124). Also in renewable resource industries, the active reorganisation of enterprises through mergers and joint ventures is pursued (5:28, 12:219). Generally, technologies that are of high potential and strategically important for CE shall be pushed

through government buyouts i.e., the government will acquire part or total of the respective enterprises and manage them under government supervision (12:341).

Both sides want to employ tax and subsidy schemes to push their CE goals (12:10, 4:94, 7:29, 12:303, 12:314, 15:14). China declares to use tax and subsidy measures to incentivise energy, water and resource-saving products and environmental protection (12:10). The EU targets the increase in waste collection and treatment with tax and subsidy instruments (15:14). China seeks to subsidise the recycling of low-value recyclables (11:42). Also, China wants to adjust corporate income tax to incentivise environmental protection, energy, water and resource conservation (10:79, 11:54). Both sides aim to use value-added tax (VAT) for products with positive CE contributions to target final consumers (11:54, 13:134). The EU specifically aims at repair services (13:134). China wants to give farmers with recycling and dismantling certificates for agricultural machinery priority access to subsidies for their replacement (12:310). Regarding tariffs, China wants to lower or omit import tariffs on technology that is considered crucial for the CE transition and needs to be imported (12:316). Chinese policies also generally mention tax schemes to disincentivise the use of disposable products (12:315).

Both sides want to apply take-back and deposit schemes for certain products (4:100, 12:228, 15:14) e.g., electronic devices (12:335, 13:55). Specifically, the EU targets products with high CRM content for those schemes (15:31, 15:14).

China wants to establish a purchase and reserve system for rural land to control the use of land as a resource (5:24, 5:49). Furthermore, such right-of-use systems shall also be used for energy, water, and pollution (5:45, 5:49) i.e., certificates for the right to use energy and water and the right to pollute shall be issued and a market for exchange shall be established.

Chinese policies include contracting as an instrument, in that energy performance and water-saving shall be contractually agreed upon, although not further specifying details (7:22, 9:37). The EU aims to contract risk sharing between Member States and enterprises which engage in resource recovery from closed waste facilities (15:17).

The EU seeks to incentivise product-as-a-service business models aiming to retain the ownership of products and the duty of waste handling at producers rather than consumers (13:29, 13:85).

Regulative Instruments

China and the EU mandate certain aspects of product design (7:20, 7:27, 10:28, 1:65, 1:68, 13:17, 13:21, 13:22). Both sides determine that producers shall not use harmful or hazardous substances for products (4:48, 4:49, 13:108). Therefore they define lists of prohibited substances of concern. The EU also regulates that producers shall use components with recycled content (13:61). China determines that producers of engines and oil-consuming machines need to design for high oil efficiency (4:56). Both sides set standards for specific products regarding their needed energy-efficiency levels (9:34, 7:5, 13:18, 13:51). Both sides regulate products to be dismantlable, repairable, upgradable and recyclable, specifically targeting electronic consumer products (4:48, 13:51). The EU wants to include cartridges if the industry does not reach a voluntary self-agreement within a certain time (13:52).

Regarding product guarantees, the EU seeks to adjust regulations to establish a right to repair (13:37, 13:53) and build the product guarantee laws in a way that encourages producers to design for circularity (1:93). Furthermore, regulation shall guarantee consumers' access to repair services and information, including software updating for digital devices provided by the producers (13:36, 1:95). China focuses on establishing a guarantee system to cover

remanufactured products (12:231), which also shall include the protection of private data when electronic personal devices change ownership in the CE (10:63, 11:29).

Both sides work with quotas to cap the absolute or relative use of resources. China has mandatory targets for the use of energy (5:43), water (5:16, 7:6, 9:42), land (5:22, 5:24, 9:50, 7:11), and mineral resource exploitation (5:27). The EU has a mandatory target, for the recycling of construction waste (1:158), wood packaging waste (1:166), and the separation of textile waste (13:86). The EU also adopts non-mandatory targets, or at least does not specify their binding character (13:104, 13:93). This includes targets for packaging recycling, municipal waste recycling (1:108), and food waste volumes (13:99).

Despite the design of the products mentioned above, China and the EU plan to standardise specific product categories and CE processes. China seeks to standardise dismantling as a process (12:224). Both sides target quality standards for secondary raw materials from recycling (12:224, 1:121). On the Chinese side, this involves recycled metals, plastics, paper, tyres, electronics, and batteries (10:36). The EU mentions fertilisers (1:125) and reused water (1:128). Chinese policies also target second-hand goods such as vehicles, household appliances, and electronic devices, including the markets and platforms where they are traded for standardisation (10:39). China also seeks to establish green building standards for public buildings (12:236). The EU wants to standardise microplastics' use and release (13:76) and the design of electric chargers (13:54).

Both sides establish legally compulsory recycling for packaging materials, making the producers responsible for their recycling or if not possible to make the waste harmless (4:35, 4:38, 13:65). China also targets cars, tyres, mobile phones, and chargers (12:326). Furthermore, the EU seeks to mandate recycled material quotas for the production of certain goods, including vehicles, packaging, and construction materials (13:90, 13:61, 13:73). In its

compulsory recycling mandate, China includes the duty to reuse products if they are suitable (4:35). China also obliges consumers to deliver products that are subject to mandatory recycling back to producers, distributors, or other designated waste treatment facilities (4:37).

China works with lists or catalogues that specify allowed and prohibited activities, production processes, equipment, and products e.g., “Guidance Catalog for Industrial Structural Adjustment", "Guidance Catalog for Foreign Investment Industries" and "Catalogue of Restricted Land Use Projects" (12:292, 12:294, 4:47, 4:49). The EU policy mix only contains reference to so-called best practice reference lists, which are lists of state-of-the-art technologies that shall guide investment and funding procedures for private enterprises and public authorities (13:41). China also issues an industry negative list, that prohibits the operation of harmful industries in designated ecosystem protection areas (5:4). The production, sale and use of clay bricks is prohibited (4:61, 12:331), as well as the mining of natural gypsum where desulfurised gypsum is abundant (12:296). Also, China prohibits the use of tap water in certain areas for urban road cleaning, planting and landscape purposes (4:68, 12:333).

Both sides aim to restrict single-use products (5:41, 4:69, 13:59) and the use of microplastics (10:65, 12:196, 12:330, 13:75). The EU specifically aims at the phase-out of single-use batteries (13:59) and packaging materials (13:67) and China at ultra-thin plastics for shopping bags (12:257) and agricultural film (10:65). The EU prohibits the destruction of unsold consumer goods (13:28).

The CEPL of China also defines punishment in the form of fines ranging from 50000 to 500000 Yuan for non-compliance with restricted or prohibited technology, equipment, harmful substances, etc (4:104, 4:105, 4:106).

Only Chinese policies contain regulation that directly addresses the operation and management of enterprises. With the “100, 1000, 10000 energy conservation initiative” the government puts the top 100 energy-consuming enterprises under national, the top 1000 under provincial, and the top 10000 under lower-level government oversight (5:11). Also, industrial enterprises are obliged to undertake water conservation actions and establish management systems (4:50, 4:51, 7:33). Similarly, construction and architectural enterprises, agricultural industries and mining enterprises need to comply and implement energy, water-, land-, and material-saving measures in their operation (4:52, 4:57, 4:59, 12:235, 4:62). This shall be monitored and audited by the local governments (10:29, 11:37). China also mandates a specific license for business operations for firms in the dismantling and recycling of electronics, batteries, and vehicles to terminate illegal activities (11:44, 11:51, 11:52, 12:328). Local governments shall audit and inspect those businesses for strict oversight (10:37, 10:81, 11:41, 12:322).

China extends these mandates for energy-, water-, land-, and materials-saving to all departments and branches of public government, for which quotas for resource use and waste standards shall be implemented (4:65, 4:66). The public bodies shall act as a precedence for society in this regard (4:65). Also, the state government mandates local governments to set aside land for the construction of recycling and waste treatment facilities (11:58).

The EU uses voluntary and self-regulatory approaches, which are not present in Chinese policy mixes. In addition to the self-regulation mandate for cartridges mentioned above, the Eco-Design directive allows for the development of standards by enterprises or industry organisations for product design standards instead of a delegated act from the EC (16:39).

Informative Instruments

The EU mandates companies to report on their environmental impact as part of non-financial reporting duties (13:132, 16:21). Furthermore, the EU obliges operators of waste facilities to report on CRM recycling potentials and Member States to report on CRM recovery from closed waste facilities (1:155, 15:17, 15:22, 16:41).

Both sides use labelling to mark specific traits and to inform consumers about products. The labelling shall identify the environmental impacts and resource consumption of products i.e., show the contribution of products to CE goals (4:44, 7:27, 9:18, 1:90, 13:19). The EU aims to label financial products within the EU taxonomy (13:129). China seeks to establish rules for products that have been recycled, remanufactured, reused, etc. to give clear information to consumers (12:334). Both sides establish labelling for the energy efficiency of household appliances and other energy-related products (4:44, 7:27, 1:91). China also uses labelling for the water-efficiency performance of products (5:19, 7:27). The EU wants to make use of digital tools for labelling and provision of product information (13:30). Furthermore, the EU Ecodesign regulation mandates the labelling of magnets (15:38) and microplastic use (13:76) in products. China wants to label products that are made of recycled materials and that are subject to mandatory recycling (12:334).

Apart from labelling, EU policies seek to improve information about the lifetime, operation, assembly, use, repair services, spare parts, and repair manuals (1:151, 13:36, 13:30, 16:31, 16:45, 17:12). It aims to make use of digital product passports for that purpose (17:12, 13:30, 13:138). Both sides aim to use informational tools such as clear product labels, bin colours, product content labels, and waste information signs to better classify waste (11:16, 11:56, 11:42, 13:106, 13:69).

China seeks to establish a certification system for green packaging products (10:67) and for recycled products (11:63), which shall also be internationally recognised. The EU focuses on the certification of carbon removals (13:128) and critical raw materials regarding their performance in environmental protection, human rights, and labour rights (15:42).

The EU also addresses the information function of policies i.e., communicating the objectives and giving clear incentives to economic operators and society (1:28). Furthermore, the EU aims to exchange information between all levels of government, between Member States and between regions on best practices e.g., in the field of waste management (1:112, 1:99). China also wants to exchange information on policies amongst governmental bodies on various levels and regions, giving the example of re-export business for remanufactured equipment (10:45).

Both sides want to use environmental footprint accounting to measure and inform policy and give information about products to the public (11:64, 1:89, 15:43, 1:161). For instance, China wants to use the carbon footprint accounting for recycled materials (11:64). The EU mentions the application of life cycle assessment with environmental footprints for buildings and CRM (15:43).

Both sides aim to expand centralised statistical systems, where relevant data on resource endowments and flows of materials are systematically collected and published (10:77, 4:42, 9:18, 13:34, 13:44). Nevertheless, the two jurisdictions focus on different focal areas. China generally aims to improve the measurement and reporting of waste flows to enhance the waste management and treatment system (4:82), while the EU specifically focuses on the waste streams with CRM content, such as electronics and products containing magnets (1:155, 15:17, 15:22, 16:41). To support the establishment of markets for CE products, both sides aim to enhance information about the flows of materials and products,

with the EU targeting secondary raw materials (1:132) and China focusing on second-hand goods, such as remanufactured parts, for instance for automobiles (10:39, 10:64). China also aims for better tracking of batteries and their related substances (11:41). Additionally, the EU seeks to gain and publish more information on buildings regarding their construction and material use (13:91), as well as substances of concern i.e., chemicals with potentially high negative impacts on the environment and human health (1:130, 16:31, 13:111). China also aims to establish an information system that monitors environmental and resource-carrying capacity and works as an early warning system for ecological disasters (5:5).

Both sides acknowledge the importance of including consumers in their ambitions. The general public shall have access to or be confronted with higher quality information about products, but also the behaviour of people is addressed to promote habits that contribute to CE goals. Chinese and EU policies aim to provide more information on how to prevent food waste (12:345, 1:148) and seek to better inform citizens about waste separation and collection (12:185, 13:106). This shall be done on all governmental levels. The Chinese ambition can be interpreted as broader in its approach. China aims to publicly promote habits and all aspects of environmentally friendly lifestyles and behaviours that support CE (7:28, 9:40, 11:68, 12:185, 12:345). Hence, national special days and weeks with themes of ecology, energy efficiency, carbon reduction, and the environment are established where publications and education about the issues are provided to the general public (11:68). This also extends to various media channels (12:345).

Especially EU policies emphasise the importance of information exchange between stakeholders as an important instrument (13:107, 13:123). It plans to open a platform on food waste with all Member States and stakeholders from the food value chain (1:149). Furthermore, SMEs shall be connected to share information via the Enterprise Europe

Network and the Resource Efficiency Knowledge Center (13:46, 1:78). Targeting SMEs, the EU also seeks to provide better and more information about financing and investment opportunities, as well as technical support regarding policy implementation and compliance (16:40). On a similar note, China plans to share information on CE practices within and amongst industry, research, academia, and governmental bodies (12:338).

Both sides want to implement education and skills programmes to spread knowledge about CE-relevant skills. China wants to roll out educational programmes in basic, vocational, and higher education, universities, as well as CCP cadre and enterprise management (12:346). Here the two sides differ substantially. China does not mention the education and skill training for the workforce specifically, while this is the EUs only focus point. EU policies only refer to education and training in regard to jobs (1:181, 13:46, 13:123, 13:137, 14:9, 14:12, 14:17, 15:29).

Both sides aim to exchange information about CE and good practices at international level (11:69, 12:347, 13:143). China specifically names the exchange with Japan and South Korea, as well as with Hong Kong, Macau, and Taiwan (12:347).

Demonstration/Experimentation Instruments

Demonstration projects are a core instrument of Chinese CE policies (4:91, 4:92, 9:3, 12:7, 12:34, 12:327, 12:339). The EU only mentions demonstration projects twice. It aims to fund innovative process industries, manufacturing enterprises, and new business models through its Horizon 2020 program (1:173). Also, the EU aims to show the use of environmental impact indicators in construction projects (1:161).

China uses demonstration projects of technologies and products of CE in agriculture, industry, construction, commerce and trade services at all levels of cities, parks, and enterprises, and in all links of production, circulation, and consumption (9:3, 12:34, 12:327).

This also involves the demonstration of CE products in exhibitions and public displays (12:345). Demonstration is also an instrument that China promotes within policy-making, where financial policies shall be demonstrated on various government levels (5:48). Hence, demonstration is a broad, all-around instrument of China's CE approach.

Specifically, Chinese CE policies aim to establish demonstration projects of …

- industrial symbiosis in chemical industries (12:277, 12:278)
- energy efficiency and energy conservation (5:10, 7:40, 12:288)
- low-carbon technologies (7:40)
- water conservation e.g., in drought-resistant and dry-farming projects and recycled water demonstration bases (5:17, 9:44, 12:159, 12:275)
- agriculture and industry linkage for comprehensive utilisation of water, energy and wastes in ecoindustrial parks (12:279)
- agriculture with integrated planting and breeding and straw utilisation (5:51)
- safe use of agricultural lands in 100 counties with large areas of contaminated soil (7:37)
- comprehensive utilisation of bulk solid waste with a focus on tailings, coal gangue, fly ash, and construction residues (7:39, 10:59)
- waste recycling technology (10:30, 11:59, 11:60, 12:281, 12:284)
- national-level remanufacturing industrial bases (12:230, 12:283)
- recycling, remanufacturing, testing, and quality control systems for old automotive parts such as engines and gearboxes in 30 auto parts remanufacturing companies (10:64)
- green transformation in 100 accommodation enterprises (12:287)

Chinese CE policies target specific geographical areas for demonstration basis. Qinghai and Zhangjiakou shall serve as a zone for the implementation and demonstration of renewable energy power generation (5:70). Beijing-Tianjin-Hebei, the Yangtze River Delta, and the Pearl River Delta shall serve as demonstration bases for recycling (10:61). Shanxi, Qinghai, and Gansu are generally selected for CE and resource-efficiency demonstration (9:20). Furthermore, educational demonstration bases shall be established all over China for the dissemination of education and training on CE (12:345).

5 Discussion

The high level of congruence of *policy strategy - objectives* for CE between the EU and China shows that both regions seek to overcome problems of environmental degradation, high resource consumption, and high waste generation. Of course, many of these problems transgress national borders and are globalised as is the case for the emission of greenhouse gases, the global trade of waste, or marine pollution. Thus, it is not surprising that both regions share many objectives regarding those issues. Nevertheless, the domestic and local specificities of the two regions also manifest in their respective problem focus. For instance, China, as a developing country that is still moving from an agrarian to an industrial society, incorporates issues of land use and agriculture in its CE policy ambitions. Also, the pressing water scarcity issues that effect the whole country (Ma et al., 2020) reflect in the focus on water reuse and recycling ambitions. On the other hand, the EU concentrates more on product-level sustainability improvements, acknowledging that environmental degradation is often caused abroad through the imports of products. At the same time, the EU's domestic scarcity and concern about the importance of CRMs for its economic development and leadership reflects in its ambitions to keep those precious materials longer in circulation.

The objective of higher employment and the idea of CE creating new labour-intensive economic models fit the situation of the EU facing high unemployment rates, especially in Southern Europe (Eurostat, 2024) and among young people (Statista, 2024), and witnessing the outsourcing of virgin product manufacturing to low-wage countries, including China. On the other hand, also China faces unemployment (NBSC, 2024). Thus, the absence of an objective of higher employment in Chinese policies was not anticipated. The absence of agriculture as a policy field in the EU is unexpected since the common agricultural practice is one of the core competencies of the EU.

While the EU remains rather universal in its ambitions and aims to set the right incentivising framework and market conditions, the Chinese policies give detailed substance and product flow explications and aim to reorganise and merge companies, which is of course only viable since the government can intervene in enterprise operation due to the large number of state-owned enterprises (SOEs) in China. Hence, the policies reflect the economic and political structure of the two regions. The Chinese policies show a more proactive understanding of government action. By implementing CE measures in public administrations, SOEs, and demonstration projects first, the state takes a leading role in promoting and initiating CE practices in the economy. The EU rather leaves the CE transition and innovation in products and processes to private enterprises and sees its role as a supportive authority, by providing funding, technical support, and the connection of stakeholders and focusing direct support on research and development actions. This also results from the limited competence of the EU and the complex coordination of policymaking of various levels of government within the EU and its Member States.

In comparison to other studies, basic findings widely coincide, while the interpretation of conclusions can differ. My findings generally support the conclusions by McDowall et al. (2017), who find a broader scope of Chinese CE ambitions compared to the EU, since China defines CE as a new mode of development and employs CE as a tool to achieve an ecological civilisation. This is also congruent with Friant et al. (2021), who describe the EU policy mix as not holistic and lacking a broader socio-ecological context. Also, the findings by McDowall et al. (2017) on the EU's emphasis on new business opportunities and the CE sparking innovation are apt. McDowall et al. (2017) find that EU policy has a greater focus on product-level action, while Chinese policies focus on cleaner production in industry, which is supported by the results of this study. Also, the absence of the spatial dimension in EU policies compared to China is underpinned. Chinese policies mention specific development

zones and locations for demonstration projects, which is lacking in any way in EU policies. McDowall et al. (2017) interpret the ecodesign regulations and relatively high product-level focus as addressing consumption, stating that the EU is hence more concerned with consumptive issues than China. My findings do not support this conclusion. Although the EU ecodesign framework might be further developed compared to China, both sides address necessary product-level changes to make products more environmentally friendly and to provide better information to consumers e.g., through labelling. Also, both sides aim for the consumption of those products in public procurement. On the contrary, only Chinese policies address individual consumption behaviour and seek frugality in lifestyles, a topic which is absent in EU policies. On that note, my results support Domenech's and Bahn-Walkowiak's (2019) analysis, who state a higher focus of EU policies on the output side. Furthermore, my findings coincide with Ghisellini et al. (2016) who find a common ambition to decouple economic growth from environmental pressures. However, I consider the framing of the Chinese approach as "top-down" in contrast to "bottom-up" policymaking in the EU as oversimplifying. My findings do not support such a dichotomy. While it is true, that Chinese macro-level policies intend to shape the operation of SOEs in a deliberate way, EU policies are not "bottom-up". If one wants to conclude in a more polarising way, Chinese CE policies are made for a state-led market i.e., the state appears as an economic agent, directly intervening in the operation and management of enterprises, first and foremost SOEs, thereby guiding economic development in key strategic sectors, while on the other hand EU policies seek to initiate and coordinate CE policy-making in a political system with dispersed authority between Member States and the EU institutions, and markets led by private enterprise i.e., the EU does not involve in companies' business but focuses on setting the general market conditions and provide incentives in a supportive manner. My results support the conclusions by Bleischwitz et al. (2022), finding Chinese CE policies to incorporate upscaling approaches

through demonstration projects and a large-scale industrial strategy including the establishment of eco-industrial parks. Also, the objectives of energy efficiency and innovation are present in Chinese policies, which is also true for the EU policy mix. However, a lower focus on public procurement in Chinese policies cannot be derived from my results, which show that public procurement is used in both, China and the EU. The conclusions of Li and Yu (2011) stating the need to incorporate public education on CE and for key CE technology is reflected in the Chinese policies i.e., they include those ambitions. My results do not support the findings by Ranta et al. (2018), since an overwhelming focus on recycling in both regions cannot be derived. The objectives of 3R policies in the EU and China analysed by Sakai et al. (2011) i.e., prevention of landfilling, protection of natural resources, reduction of GHG emissions and prevention of hazardous waste, coincide with the findings in this study. Suggestions for *policy instruments* by Hartey et al. (2020), Yuan et al. (2020) and Domenech and Bahn-Walkowiak (2019) are found to be already incorporated in the two policy mixes e.g., better production standards, more public procurement, and tax incentives for CE products. Awareness campaigns for consumers, support for eco-industrial parks, and more modest lifestyles are *policy instruments* apparent in Chinese CE policies, but absent on the EU side. Hence, these *policy instruments* could also be utilised by the EU to support the CE transition.

In this study, I adopt a solely qualitative approach. In that the research approach pays respect to the inherently qualitative nature of speech in its written form. First, the policy documents vary in their scope, length, and comprehensiveness i.e., policy documents might cover different topics and different details of topics which depends on the competence of the issuing bodies and the structural organisation of different authorities in the respective jurisdiction. For instance, due to the supra-national character of the EU, it lacks certain legislative competencies e.g., in taxation which is a core competence of the Member States,

while the agricultural policy is a main competence of the EU. Second, depending on the authors of the policies, repetitiveness and writing style might vary, meaning one might use more or fewer synonyms of a term, or plainly write in a more or less comprehensive way. Third, I translated some Chinese policy documents in this study using online translators. This of course changes the quality of the texts depending on the translation technology that is used. Nevertheless, also the qualitative approach causes bias. Generally, the application of codes and identification of themes is based on the individual understanding and interpretation by myself as the researcher, which can be influenced by my gender, sex, religion, cultural background, educational background, personal experience, norms or beliefs.

The analysis is based on English policy documents. While the EU policy documents are officially published in English, four policy documents on the Chinese side are English translations from official sources and three documents are translated from Chinese to English using Google Translator. Cooperation with other researchers, preferably with a non-Western and/or Chinese background would have been preferable, first, to have multiple cultural perspectives which is desirable for interpretative work since certain words and phrases can be understood differently depending on the context i.e., a deeper knowledge of Chinese history, tradition, philosophy, etc. can alter interpretation. Second, to possibly have a Chinese native speaker, to eliminate translation bias and improve understanding of Chinese policies.

Policy selection is a crucial part of this study and thus a potential source of bias. Generally speaking, choosing a qualitative approach, the selection bias of policies is reduced compared to a purely quantitative approach. It allows to analyse and compare policy documents which are not of the same scope and type. The redundancy of themes and statements does not influence the results, since they are not counted but simply additionally considered in the interpretation if they add more context, otherwise they remain irrelevant.

Nonetheless, the selection of policies needs to be done in a way that allows comparability i.e., if policies are chosen that cover different *policy fields* or different specific *policy instruments*, obviously, the comparison would result in constituting high differences in *policy dimensions* and *policy instruments*. Thus, policies are chosen, so an equivalent policy for the other jurisdiction is included if such a document exists. The chosen set of policies includes policies which can be seen as equivalent in their scope and comprehensiveness, which includes the CE APs on the EU side and the 14th 5YP for CE on the Chinese side. Although there is no Green Deal equivalent on the Chinese side, the relevant section from the national 5YPs for Economic and Social Development are included as a fitting counterpart. The above-mentioned, more general plans for CE are relatively similar in their scope. However, for the other policies selected, equivalents on either side do not exist. While it would be beneficial to have exactly equivalent policies with the same scope, comprehensiveness and level of detail for both jurisdictions, this is not the case and the more specific policies were selected to give further inside into themes that occurred in the general (CE) plans, so their addition does not add new themes that would then be missing on the other side in the comparison. Nevertheless, with every policy added it is likely to extend the scope on one side towards new themes which are not present on the other side. To limit this bias, it is desirable to include all policies that are relevant to CE. For instance, issues concerning waste separation, management, and treatment are often organised at municipal, district or regional levels. Hence, the extension of the scope of policies to the meso and micro-level, but also towards more specific policies e.g., on single *policy instruments*, such as public procurement regulations or labelling regulations would benefit the study and are hence suggestions for future research.

However, while this selection bias can not be easily circumvented, the issue is addressed in the presentation of results i.e., if a certain theme is missing on one side, stating the policies in which it occurs gives more clarity and allows a judgement. Hence, if a theme is

only present in a specific policy, rather than in a general plan, the difference can be interpreted as less pronounced and the selection bias can be interpreted as higher. On the other hand, if a general plan encompasses a theme which is lacking in the other policy mix entirely, the bias is assumed to be lower and the difference in policy mixes can be viewed as more distinct.

For instance, the *policy instrument – goal* to recycle batteries of new energy vehicles is not present in the EU policy mix. However, this goal exists outside of the analysed policy mix e.g., in the EU battery regulation (EU, 2023). Hence, the absence in the analysed policy mix remains open to the interpretation mentioned above i.e., this goal is possibly of lower importance to the EU.

Regarding the EPMC framework, the categories of characteristics and policy processes of the original framework are excluded for the purpose of this study.. Policy documents as they are analysed in this study are the outcome of a political process shaped by various agents with different interests and values i.e., the phrasing of policies encompasses more than what is readable in the mere sentences written. Hence, in future research, the combination of this analysis with interviews of policy advisors, analysts, or policymakers, in the best case the authors of the policies themselves, can reduce bias and further substantiate the findings of this study.

In the application of the EPMC, certain weaknesses and difficulties occur stemming from the framework itself, but also from the impreciseness of policies. First, the category of principal plans under policy strategy in the EPMC does not fit the framework well in the way it is incorporated. Principal plans consider the overall structure and set of policies i.e., the category rather lies on a meta-level, but does not stand equally next to *policy strategy - objectives*, since those elements are the content of policies, while the policies themselves constitute the principal plans. For that reason, the category of principal plans was excluded.

Second, the distinction between *policy strategy - objectives* and *policy instrument - goals* can cause difficulties. Although their definition is clear as defined by Rogge and Reichardt, the allocation of policy excerpts to either of the two categories can be ambiguous since formulations in the policy documents often do not differentiate between long-term and short-term goals but rather generically state to pursue a goal, without reference to a time frame. In such cases, the excerpt is allocated to both categories. Third, the three types of *policy instruments – economic, regulatory,* and *informative* – differ in the precision of their definition of scope. While *economic* and *informative policy instruments* are precise in their definition, *regulatory policy instruments* lack precision in their definition, which manifested during the analysis in the frequent redundancy of code application, since *economic* and *informative policy instruments* can also be understood as regulation. Furthermore, the *policy instrument - purpose* of *demand pull*, *technology push*, and *systemic* purpose inherit similar problems. Policy documents do not state the intended purpose, leaving it open to interpretation. While some *policy instruments* can be easily allocated to certain *policy instrument - purposes* e.g., public procurement pursuing *demand pull* or investment pursuing *technology push*, many *policy instruments* could be allocated to two or three of the *policy instrument - purpose* categories e.g., tax and subsidy instruments can be argued to have all of the listed *policy instrument - purposes* and are named in all three of the categories by Rogge and Reichardt as well. Therefore, the *policy instrument - purpose* is mentioned in the results only where the intention of the policies allowed a clear allocation.

While some CE themes fit the EPMC well, such as the objectives, others allow different options of allocation. As argued above, the R-principles do suit the category of *policy instrument -goals*, since they do not serve as *policy strategy - objectives* for them being too specific and technical in their nature. However, the R-principles could also function as *policy dimensions*, since they would serve the function of cross-cutting themes as well.

However, in the way the EPMC for CE is used, the R-principles, being activities, serve the purpose of a *policy instrument - goal* well in combination with one or more *policy dimensions* being the subject of those activities.

The use of a mixed inductive and deductive approach proved to be reasonable. The derivation of a coding framework from the EPMC for CE provided a solid basis and gave structure to the coding and also allowed the alignment of coding with the EPMC as the overall methodological framework for the analysis. The introduction of new codes then allowed to include topics and new categories that are grounded in the policies themselves but could not be anticipated.

6 Conclusions

The study shows that the ***policy strategy - objectives*** of the CE policies in the EU and China coincide in almost all identified CE objectives, except the restoration of biodiversity, which is not mentioned in the Chinese CE policy mix and regarding higher employment, which is not formulated as a general objective in the Chinese policy mix. Although the specific explications of objectives differ, both sides generally agree to improve environmental quality, generate green economic growth, reduce pollution, carbon emissions, and waste generation, increase resource efficiency, enhance security and reduce foreign dependence, enhance sustainability, foster innovation, and improve social equity. Furthermore, both sides state economic growth to be their superior objective.

Regarding the ***policy strategy - limitations***, China and the EU both see a lack of adequate standardisation for CE-products. Consequently, they address issues of standardisation in their *policy instruments*. Furthermore, both sides agree that dependence on foreign resources is hampering their domestic CE development. The policy mixes differ e.g., when Chinese policies describe the unavailability of land for recycling facilities and economic inefficiency of low-value materials' recycling as a limit and the EU, on the other hand, focuses on product-level issues, such as misleading product labelling and information (i.e., greenwashing) and product design, which hampers CE ambitions (e.g., planned obsolescence). All of the limitations that the policy mixes list, are a logical link between the *policy strategy - objectives* that are defined and the *policy instruments* both sides seek to employ.

The EU and China both include reduction, re-utilisation, recycling and recovery as their ***policy instrument - goals***. The EU employs the 4R framework (waste hierarchy), while China uses the 3R framework. Nevertheless, China also aims for recovery. While the EU

views recovery as undesirable and seeks to avoid it, Chinese policies include it as a reasonable option to prevent landfilling. The two policy mixes vary in the importance and focus of certain policy fields. While water, land use, and agriculture are dominant in Chinese policies, the EU focuses on CRM and product-level policies.

The EU and China address consumers differently. While Chinese policies aim to change the lifestyle and consumption patterns of citizens to be environmentally friendly and hence also include rethinking and refusing in their ***policy instrument - goals***, the EU does not address behaviour change, rather it frames sustainable products as improved value delivery to consumers.

Both sides utilise similar *economic*, *regulatory*, and *informative* ***policy instrument - types***, which include among others: public procurement for environmentally friendly products, labelling of products with CE-contribution, investment and financing of CE-related projects and enterprises, establishment of product standards, extended producer responsibility schemes, VAT, and subsidy schemes. However, certain *policy instruments* are unique to the respective jurisdictions. For instance, *demonstration* as a *policy instrument* is a purely Chinese phenomenon, as is direct intervention in the organisation and management of enterprises. On the other hand, the focus on SMEs regarding funding, stakeholder networking, and technical support is unique in the EU policy mix. Also, Chinese *policy instruments* tend to be detailed in naming concrete products and substance flows and their potential reuse and recycling options, which is not the case in EU policies.

The ***policy instrument - purpose*** often remains ambiguous. While both sides coincide in using public procurement with the purpose of creating demand pull and the provision of funding for enterprises and research and development with the purpose of creating a technology push, other *policy instruments* are not explicitly linked to a specific purpose.

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Appendix

A - Final Coding Framework

Table 2: Final Coding framework

EPMC for CE Category	Code	Definition
Policy strategy		
Objectives		
	Objective: Economic Prosperity/Growth	improvement of the economic situation; generation of economic growth; business opportunities
	Objective: Environmental Quality	reducing negative environmental impacts, improving the state of ecosystems
	Objective: Social Equity	improving well-being of people, addressing social issues
	Objective: Sustainability	providing for the needs of current and future generations
	Objective: Biodiversity	variety and variability of life on Earth
	Objective: Employment	provision of jobs, labour conditions
	Objective: Carbon reduction	decrease greenhouse gas emissions to tackle climate change
	Objective: Pollution	contamination of the environment with adverse effects
	Objective: Innovation	invention and promotion of new technologies
	Objective: Resource efficiency/Scarcity	ratio of economic output / resource input; shortage of demanded resources
	Objective: Waste reduction	reduce the amount of materials discarded as solid waste
	Objective: Security/Dependency	maintaining/improving/restoring national sovereignty and security; reducing dependency on other states; reducing economic and military risk
Limitations		
	Limit	a limitation to the implementation of CE or the application of CE principles
	- Limit: Market functioning	undesired outcomes of the allocation or distribution produced through the market interactions
	- Limit: Information	undesired outcome of the information distribution/transmission in society
	- Limit: Policy	undesired outcome of current policies

	- Limit: Product design	Design of products does not support CE principles
Policy Instrument		
Goal		
	Refuse	avoid consumption/use of resources at all
	Rethink	provide product functions differently
	Reduce	increase efficiency of use (higher utility-output/resource-input)
	Re-use/redistribute	continued use of product
	Repair/Maintain	maintaining the original function of a product
	Refurbish/Remanufacture	restoration/upgrading of a product to state of the art/using parts of discarded products to rebuild the same product
	Repurpose	use discarded products for different purposes/downgrading
	Recycle	process discarded products to generate raw materials
	Recover	use discarded products to generate energy/waste incineration
	3R	reference the specific 3R framework or combined mentioning of "reduce", "reuse", "recycle"
	4R	reference the specific 4R framework or combined mentioning of "reduce", "reuse", "recycle", "recover"
Instrument: Type & Purpose		
	Instrument Type: Economic	referring to the allocation and distribution of goods/services in physical and monetary term; e.g, grants, loans, taxes, subsidies, etc.
	- Public Procurement	governmental institutions creating economic demand; government consumption
	- Investment	financial spending on non-consumptive goods i.e., goods with an aspired future profit
	Instrument Type: Information	training, qualification, workshops, labelling, campaigns, education
	- Labelling	label as information about a product
	Instrument Type: Regulation	including property rights, patent laws, technological and environmental standards, prohibitions, etc.;
	Demonstration/Experimentation	novel establishment of a project to demonstrate feasibility; testing of different approaches

	Instrument Purpose: Demand pull	Increasing demand
	Instrument Purpose: Technology push	Promoting development of a technology
	Instrument Purpose: Systemic	Setting of general environment, overall interaction of instruments; non-specific purpose
Dimensions		
Governance level		
	Level: Macro	national, supranational, international governance level
	Level: Meso	provincial, regional governance level
	Level: Micro	personal/individual, municipal, local, district, county governance level
Macroeconomic Perspective		
	Business Models/Supply side	provision/production of products/services; business models
	- SME	Small and Medium Enterprises
	Consumers/Demand side	final consumption/use of products/services
Policy Field		
	Plastics	
	Health	
	Chemicals / Substances of Concern	
	Mining	
	Agriculture	
	Food	
	Fertilizer	
	Paper	
	Energy	
	- Renewable Energy	
	Land-use	
	Water	
	Construction/Demolition	
	Critical Raw Materials	
	Finance Sector	
	Electronics	
	Waste	
	Transport	
	R&D/Science	Research and Development; Science
	Industrial Symbiosis	clustering of industrial processes to connect and cascade waste/resource/energy flows

	Monitoring	monitoring, measurement of policy implementation
Product Level		
	Product Design	choices for shape, functionality, production, etc. of a products
	- Eco-Design	product design based on environmental assessment
	- NIDS/Biomimicry	adopt design from nature
	- restorative	recovery of previously deteriorated ecosystems
	- regenerative	renewal or recovery of the sources of energy and materials that are consumed
	- renewable	resources that will naturally replenish within a finite amount of time in a human time scale
	- dismantle/reassemble	possibility to disassemble and reassemble products
	- Biobased	Materials from living organisms
	Product Guarantee	legal guarantees for the use phase of a product
	Product Safety	nonexistence of concerns of health resulting from product use
Geography	Geography	specific geographical area
Time	Time	change of policy over time; target dates; duration of actions; implementation time

B Coding Results

Excel-file with code results: Appendix B – Coding results.xlsx

ID	Document	Document Groups	Quotation Content	Codes
4:5	C5: Circular Economy Promotion Law of the PRC	China	reducing, reusing and recycling activities	3R Re-use/redistribute Recycle Reduce
10:19	C6: 14th 5YP CE	China	Guided by Xi Jinping's thought of socialism with Chinese characteristics in the new era, deeply implement the spirit of the 19th CPC National Congress and the 2nd, 3rd, 4th and 5th Plenary Sessions of the 19th CPC Central Committee and the State Council in accordance with the decision-making and deployment of the CPC Central Committee and the State Council, based on the new stage of development, implement the new development concept, build a new pattern of development, adhere to the basic national policy of resource conservation and environmental protection, and follow the principle of "reduce, reuse and resource", focusing on the development of circular economy and the efficient use of resources	3R Level: Macro Objective: Economic Prosperity/Growth Objective: Environmental Quality Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Reduce
11:2	C7: The General Office of the State Council on accelerating the construction of	China	To accelerate the construction of a waste recycling system, we must be guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, thoroughly implement the spirit of the 20th National Congress of the Party, comprehensively implement Xi Jinping Thought on Ecological Civilization, fully, accurately and comprehensively implement the new development concept, and accelerate the construction of a new development pattern, strive to promote high-quality development, follow the circular economy concept of reduction, reuse, and resource utilization, aim to improve resource utilization efficiency, and take fine waste management, effective recycling, and efficient utilization as the path to cover all aspects of production and life.	3R Business Models/Supply side Consumers/Demand side Objective: Economic Prosperity/Growth Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Reduce
12:5	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	principles of reduction, reuse, resource utilization, and reduction first.	3R Reduce
12:29	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Guided by Deng Xiaoping Theory, the important thought of "Three Represents", and the Scientific Outlook on Development, we will implement the basic national policy of conserving resources and protecting the environment, and focus on improving resource output and follow the principles of "reduce, reuse, recycle,	3R Objective: Environmental Quality Objective: Resource efficieny/scarcity

ID	Document	Document Groups	Quotation Content	Codes
1:103	EU1: EU action plan for the circular economy	EU	Waste management plays a central role in the circular economy: it determines how the EU waste hierarchy is put into practice.	4R/Waste Hierarchy
1:104	EU1: EU action plan for the circular economy	EU	The waste hierarchy establishes a priority order from prevention, preparation for reuse, recycling and energy recovery through to disposal, such as landfilling.	4R/Waste Hierarchy Re-use/redistribute Recover Recycle
1:107	EU1: EU action plan for the circular economy	EU	The Commission is putting forward new legislative proposals on waste to provide a long-term vision for increasing recycling and reducing the landfilling of municipal waste, while taking account of differences between Member States. These proposals also encourage greater use of economic instruments to ensure coherence with the EU waste hierarchy.	4R/Waste Hierarchy Instrument Type: Economic Level: Macro Recycle
1:113	EU1: EU action plan for the circular economy	EU	EU Cohesion Policy has a key role to play in closing the investment gap for improved waste management and supporting the application of the waste hierarchy	4R/Waste Hierarchy Investment
1:114	EU1: EU action plan for the circular economy	EU	This means that funding for new landfill will be granted only in exceptional cases (e.g. mainly for non-recoverable hazardous waste) and that funding for new facilities for the treatment of residual waste, such as incineration or mechanical biological treatment, will be granted only in limited and well justified cases, where there is no risk of overcapacity and the objectives of the waste hierarchy are fully respected. In total, it is foreseen that €5.5 billion will be dedicated to waste management in the current financing programme.	4R/Waste Hierarchy Instrument Type: Economic Instrument: Design Features Investment Recover waste
1:117	EU1: EU action plan for the circular economy	EU	When waste cannot be prevented or recycled, recovering its energy content is in most cases preferable to landfilling it, in both environmental and economic terms. ‘Waste to energy’ can therefore play a role and create synergies with EU energy and climate policy, but guided by the principles of the EU waste hierarchy. The Commission will examine how this role can be optimised, without compromising the achievement of higher reuse and recycling rates, and how the corresponding energy potential can best be exploited. To that end, the Commission will adopt a 'waste to energy' initiative in the framework of the Energy Union.	4R/Waste Hierarchy energy Objective: Economic Prosperity/Growth Objective: Environmental Quality Objective: Waste reduction Recover
1:164	EU1: EU action plan for the circular economy	EU	In a circular economy, a cascading use of renewable resources, with several reuse and recycling cycles, should be encouraged where appropriate. Biobased materials, such as for example wood, can be used in multiple ways, and reuse and recycling can take place several times. This goes together with the application of the waste hierarchy (including for food - see section 5.2) and, more generally, options that result in the best overall environmental outcome.	4R/Waste Hierarchy Objective: Environmental Quality Re-use/redistribute Recycle renewable
15:20	EU4: Regulation proposal Critical Rawmaterials Act	EU	In line with the waste hierarchy established in Directive 2008/98/EC of the European Parliament and of the Council46, priority should be given to preventing the generation of waste containing critical raw materials, by extracting critical raw materials from the extracted volume prior to it becoming waste.	4R/Waste Hierarchy critical raw materials Instrument Type: Regulation Objective: Waste reduction waste
16:41	EU5: Ecodesign requirements for sustainable products	EU	An economic operator that discards unsold consumer products directly, or on behalf of another economic operator, shall disclose: (a) the number of unsold consumer products discarded per year, differentiated per type or category of products; EN 63 EN (b) the reasons for the discarding of products; (c) the delivery of discarded products to preparing for re-use, remanufacturing, recycling, energy recovery and disposal operations in accordance with the waste hierarchy as defined by Article 4 of Directive 2008/98/EC. The economic operator shall disclose that information on a freely accessible website or otherwise make it publicly available, until a delegated act adopted pursuant to paragraph 3 starts applying to the category of unsold consumer products discarded by the operator in question.	4R/Waste Hierarchy Business Models/Supply side indicator/measurement/monitoring Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Re-use/redistribute Recover Recycle Refurbish/Remanufacture waste
17:9	EU6: Green Deal	EU	The circular economy action plan will include a ‘sustainable products’ policy to support the circular design of all products based on a common methodology and principles. It will prioritise reducing and reusing materials before recycling them. It will foster new business models and set minimum requirements to prevent environmentally harmful products from being placed on the EU market. Extended producer responsibility will also be strengthened.	4R/Waste Hierarchy Business Models/Supply side product design Recycle Reduce

ID	Document	Document Groups	Quotation Content	Codes
4:64	C5: Circular Economy Promotion Law of the PRC	China	The people's governments at or above the county level and the agricultural departments and other competent departments thereunder shall promote the intensive use of land, encourage agricultural producers to take advanced water-saving, fertilizer-saving and pesticide-saving planting, cultivating and irrigating technologies, improve the energy efficiency of agricultural machinery and give priority to the development of ecological agriculture. Areas short of water shall adjust the planting structure, give priority to the development of watersaving agriculture, make more efforts in storing and using rainwater, build and maintain water saving irrigation facilities so as to improve the water use efficiency and reduce the evaporation and loss of water.	agriculture best practice Objective: Resource efficieny/scarcity Reduce
4:68	C5: Circular Economy Promotion Law of the PRC	China	The state encourages and supports the use of recycled water. Areas with the conditions for using recycled water shall restrict or forbid the use of tap water for urban road cleaning, planting and landscape purposes.	agriculture Instrument Type: Regulation Instrument: Design Features Recycle water
4:80	C5: Circular Economy Promotion Law of the PRC	China	The state encourages agricultural producers and the relevant enterprises to take advantage of advanced or applicable technologies to make comprehensive utilization of crop straws, livestock and poultry excrements, byproducts of the agro-product processing industry and waste agricultural films, and develop and use biogas and other biomass energies.	agriculture best practice biobased Business Models/Supply side energy
4:81	C5: Circular Economy Promotion Law of the PRC	China	The people's governments at or above the county level and the administrative departments of forestry thereunder shall make vigorous efforts to develop ecology-friendly forestry, encourage forestry producers and relevant enterprises to use timber-saving technologies and timber-replacing Translation by lawinfochina.com 8 technologies, and make comprehensive utilization of forestry wastes, wood castoffs, small firewood and desert bush so as to improve the comprehensive utilization rate of wood.	agriculture biobased energy Level: Macro Level: Meso Level: Micro
5:17	C3: 13th 5YP	China	We will move more quickly toward water conservancy in agriculture, industry, and cities, make steady progress in the comprehensive price reform of water for agricultural purposes, and carry out demonstrations of comprehensive improvements in water-saving equipment and technologies.	agriculture demonstration/experimentation Instrument Type: Economic
5:33	C3: 13th 5YP	China	We will make coordinated plans for industrial layouts based on material flow and industrial linkage, encourage industrial parks to adopt a more circular operational flow, establish hybrid industry-agriculture circular economy demonstration zones, and promote the coupled growth of enterprises, industrial parks, and industries.	agriculture demonstration/experimentation industrial symbiosis Objective: Economic Prosperity/Growth
5:51	C3: 13th 5YP	China	We will implement a demonstration project for circular agriculture through integrated planting and breeding, and promote the recovery of resources and safe disposal of waste materials from planting and breeding industries.	agriculture Chemicals demonstration/experimentation Objective: Resource efficieny/scarcity Re-use/redistribute Recycle waste
5:52	C3: 13th 5YP	China	Implement the household refuse treatment project, make comprehensive improvements to the environment in 130,000 administrative villages, implement showcase projects for agricultural waste recycling, develop sewage and refuse collection and treatment facilities, progressively promote the treatment of household wastewater, and ensure that the household refuse of 90% of administrative villages is treated;	agriculture demonstration/experimentation Objective: Environmental Quality Recycle waste water
5:66	C3: 13th 5YP	China	We will move forward with the development of intelligent storage facilities for grain crops and work to conserve grain crops and reduce waste	agriculture food Reduce waste
5:67	C3: 13th 5YP	China	3. Water-efficient Water-efficient Water-efficient Water-efficient agriculture agriculture agriculture agriculture § Spread the application of water-efficient irrigation and promote watereefficient projects, crop breeds, agronomy, and management; § Accelerate the implementation of regional scaled high-efficiency watersaving irrigation projects, using water-conserving methods to increase crop production in the northeast, raise irrigation efficiency in the northwest, address groundwater overdraft in the north, and reduce waste water discharge in the south; § Increase the area of cropland making use of high-efficiency waterconserving irrigation by 6.7 million hectares, thereby raising the irrigation water utilization coefficient to 0.55 or above.	agriculture Objective: Resource efficieny/scarcity Reduce waste water

5:68	C3: 13th 5YP	China	6. Agricultural Agricultural Agricultural Agricultural product product product product quality quality quality quality and safety § Make a serious push to reduce pesticide and chemical fertilizer use in the production of agricultural products;	agriculture Chemicals Reduce
7:7	C2: 14th 5YP	China	We will improve the efficiency of water conservation in agriculture, reduce the discharge of wastewater from industrial sources, and promote the conservation and loss reduction of water in urban areas.	agriculture Reduce waste water
7:16	C2: 14th 5YP	China	We will accelerate the development of circular agriculture, which will see the integration of crop production and livestock and poultry farming.	agriculture Business Models/Supply side
7:37	C2: 14th 5YP	China	03 Soil contamination prevention and control and safe use of land □ Carry out demonstrations on the safe use of agricultural lands in 100 counties with large areas of contaminated soil; □ Implement 100 projects to control soil contamination at the source with a focus on chemical and non-ferrous metal industries.	agriculture Chemicals demonstration/experimentation indicator/measurement/monitoring land-use Level: Meso Level: Micro metals Objective: Environmental Quality Objective: Pollution
7:50	C2: 14th 5YP	China	We will promote the comprehensive utilization of crop straws and the recovery of resources from livestock and poultry manure.	agriculture Re-use/redistribute Recycle
7:51	C2: 14th 5YP	China	We will develop modern agriculture industrial parks and agricultural modernization demonstration zones.	agriculture demonstration/experimentation industrial symbiosis
8:4	C4: 12th 5YP V2	China	Farmland reserves (billion mu) 1.818 1.818 0 binding	agriculture Refuse
8:6	C4: 12th 5YP V2	China	Increase of water efficiency coefficient in agricultural irrigation 0.5 0.53 0.03 forecast	agriculture Reduce water
9:3	C4: 12th 5YP V1	China	There is a need to promote clean production, and promote clean production demonstration at agricultural, industrial, construction, commerce and trade service, and other key sectors.	agriculture construction/demolition demonstration/experimentation
9:6	C4: 12th 5YP V1	China	We will promote the recovery and utilization of bulk industrial solid waste, construction waste, roadside waste, agricultural and forestry waste.	agriculture construction/demolition Recover Recycle waste
9:26	C4: 12th 5YP V1	China	For urbanized regions that have undergone optimized development, we will enhance evaluations on economic structure, sci-tech innovation, resources utilization, and on environmental protection. For urbanized regions that have been given emphasized development, we will make comprehensive evaluations on their economic growth, industrial mix, quality, efficiency, energy conservation and emissions reduction, environmental protection, and population intake. For key farm produce agricultural production zones and for key ecological functional zones that ban development, we will give priority to the performance-based evaluations of agricultural production and to ecological protection, and will not evaluate the total output value and industrial indices in their zones. For key ecological functional zones that ban development, we will make comprehensive evaluations on the protection of the originality and integrity of the natural and cultural resources.	agriculture energy indicator/measurement/monitoring Objective: Carbon reduction Objective: Economic Prosperity/Growth Objective: Environmental Quality Objective: Pollution Objective: Resource efficieny/scarcity Reduce
9:44	C4: 12th 5YP V1	China	We will promote water conservation in agriculture, increase efficiency, promote highly efficient water saving irrigation technology including pipeline water transportation popularization and drip irrigation, increase 50 million mu of highly efficient water saving irrigation area, and support the construction of drought-resistant demonstration bases.	agriculture demonstration/experimentation indicator/measurement/monitoring
9:45	C4: 12th 5YP V1	China	On the premise of protecting irrigation area, of irrigation guarantee rate, and of the farmers' interest, we will establish a sound water right transfer mechanism for industrial and agricultural water utilization.	agriculture Instrument Type: Regulation
10:7	C6: 14th 5YP CE	China	By 2020, the comprehensive utilisation rate of agricultural straw will reach more than 86%, and the comprehensive utilisation rate of bulk solid waste will reach 56%.	agriculture indicator/measurement/monitoring Reduce waste

10:20	C6: 14th 5YP CE	China	focus on building a resource recycling-based industrial system, accelerate the construction of waste materials recycling system, deepen the development of circular economy in agriculture, comprehensively improve the efficiency of resource use, enhance the level of renewable resources, establish and improve the green, low-carbon and recycling development of the economic system, to provide resources for the sustainable development of the economy and society.	agriculture biobased Objective: Carbon reduction Objective: Economic Prosperity/Growth Objective: Resource efficieny/scarcity Objective: Social Equity Objective: Sustainability Recycle Reduce Renewable Energy waste
10:27	C6: 14th 5YP CE	China	By 2025, the output rate of major resources will be about 20% higher than that of 2020, energy consumption and water consumption per unit of GDP will be about 13.5% and 16% lower than that of 2020, the comprehensive utilisation rate of agricultural straw will be maintained at more than 86%, the comprehensive utilisation rate of bulk solid waste will reach 60%, the comprehensive utilisation rate of construction waste will be 60%, the utilisation of waste paper will reach 60 million tonnes, and the utilisation of waste steel will reach 320 million tonnes. The utilization of waste paper has reached 60 million tons, the utilization of waste steel has reached 320 million tons, the output of renewable nonferrous metals has reached 20 million tons, of which the output of renewable copper, renewable aluminium and renewable lead has reached 4 million tons, 11.5 million tons and 2.9 million tons, respectively, and the output value of the resource recycling industry has reached 5 trillion yuan.	agriculture construction/demolition energy indicator/measurement/monitoring metals Recycle renewable waste water
10:47	C6: 14th 5YP CE	China	Strengthen the resource utilisation of agricultural and forestry waste. Promote the efficient use of agricultural and forestry waste such as crop straw, livestock and poultry manure, forestry waste, and by-products of agricultural product processing. Strengthen the comprehensive utilisation of crop straw, adhere to the priority of agricultural use, increase the efforts to return straw to the field, give full play to the function of arable land conservation, encourage the industrialised use of straw away from the field, the development of new materials and new products, and improve the added value of straw feed, fuel, raw materials and so on. Strengthen the construction of livestock and poultry manure treatment facilities, encourage the combination of planting and raising, and promote the use of agricultural organic fertilisers returned to the field in the vicinity of the site. According to local conditions, encourage the use of secondary small fuelwood, forestry three residues (logging residues, wood residues, processing residues) for composite panel production, edible fungi cultivation and energy use, and promote the resourceful use of agricultural products processing by-products.	agriculture biobased Business Models/Supply side energy fertiliser Objective: Resource efficieny/scarcity
10:48	C6: 14th 5YP CE	China	Strengthen the recycling of waste agricultural materials. Guiding planting households, farmers' cooperatives, family farms, agricultural materials enterprises, waste materials recycling enterprises and other relevant responsible subjects to take the initiative to participate in recycling.	agriculture Business Models/Supply side Recycle waste
10:49	C6: 14th 5YP CE	China	Promote the combination of planting and raising, agriculture and animal husbandry, the organic combination of farm construction and farmland construction, and promote the synergistic development model of livestock, poultry, fish, food, vegetables, fruits and tea.	agriculture food land-use
10:50	C6: 14th 5YP CE	China	Create a number of ecological farms and ecological recycling agricultural industrial complexes, and explore sustainable operation mechanisms.	agriculture Objective: Sustainability Recycle
10:52	C6: 14th 5YP CE	China	Build a forestry circular economy industry chain, and promote the three-dimensional development of industrial models on, between and under forests. Promote circular links between planting, breeding, agricultural product processing, biomass energy, tourism and recreation, and encourage the integrated development of primary, secondary and tertiary industries.	agriculture biobased Business Models/Supply side energy
10:59	C6: 14th 5YP CE	China	Focusing on fly ash, coal gangue, metallurgical slag, industrial by-product gypsum, tailings, coassociated minerals, crop residues, forestry residues and other key species, promoting advanced technology and equipment for the comprehensive utilisation of bulk solid wastes, implementing key projects with demonstrative effect, vigorously promoting the use of comprehensive utilisation of resources, and constructing 50 bases for the comprehensive utilisation of bulk solid wastes and 50 bases for the comprehensive utilisation of industrial resources.	agriculture Business Models/Supply side coal demonstration/experimentation mining Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Reduce waste

11:14	C7: The General Office of the State Council on accelerating the construction of	China	Establish and improve the collection, treatment and utilization system of livestock and poultry manure, and build supporting facilities such as centralized collection and treatment of livestock and poultry manure, and storage and utilization of biogas residue and biogas slurry according to local conditions. Improve the straw collection, storage and transportation system, guide large straw-producing households to collect and store on site, and cultivate third-party service entities for collection, storage and transportation.	agriculture energy waste
11:15	C7: The General Office of the State Council on accelerating the construction of	China	Guide local governments to strengthen the recycling of agricultural film, pesticide and fertilizer packaging, agricultural machinery, fishing nets and other waste agricultural materials.	agriculture Chemicals fertiliser Level: Meso Level: Micro Plastics Recycle waste
11:35	C7: The General Office of the State Council on accelerating the construction of	China	Promote the development and utilization of agricultural and forestry biomass energy according to local conditions, and steadily promote the diversified development and utilization of biomass energy.	agriculture biobased energy Recover
11:40	C7: The General Office of the State Council on accelerating the construction of	China	romote circular agricultural production models such as the combination of planting and breeding, and the combination of agriculture and animal husbandry.	agriculture Business Models/Supply side
12:26	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Environmental pollution is serious. The overall deterioration of my country's environmental conditions has not been fundamentally curbed. Water pollution in key river basins is serious. Air pollution problems are prominent in some areas. The phenomenon of "garbage siege" is common. Agricultural non-point source pollution, heavy metal and soil pollution are serious problems. Major environmental incidents occur from time to time. occur, causing harm to the health of the people.	agriculture Objective: Environmental Quality Objective: Pollution waste water
12:27	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	The pressure to deal with climate change is increasing. my country is one of the countries most vulnerable to the effects of climate change. Climate change has led to increased instability in agricultural production, severe drought and high temperatures in some areas, 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 7/47 reduced biodiversity, and increased ecosystem vulnerability. In recent years, my country's greenhouse gas emissions have grown rapidly, per capita emissions have continued to rise, and the pressure to reduce emissions has continued to increase.	agriculture Objective: Carbon reduction Objective: Environmental Quality

12:34	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Cultivate a number of circular economy demonstration models in various industries such as agriculture, industry, and service industries, at all levels of cities, parks, and enterprises, and in all links of production, circulation, and consumption, comprehensively promote typical circular economy models, and promote the circular economy to form a large scale.	agriculture demonstration/experimentation industrial symbiosis Level: Meso Level: Micro
12:135	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Section 9 Food Industry Strengthen energy conservation and consumption reduction. Accelerate the elimination of backward production capacity and accelerate the promotion of energy-saving, water-saving, and grain-saving technology and equipment. Optimize the production process and realize the cascade utilization of water and heat in the production process. Drastically reduce excessive packaging of food. Promote the resource utilization of food processing by-products and waste. The grain processing industry focuses on promoting the use of rice husk, rice bran, wheat germ, bran and other by-products to produce rice husk carbon, rice bran oil, rice bran protein, corn oil, wheat germ oil, dietary fiber, etc. The meat and aquatic product processing industry focuses on promoting the use of fur, viscera, blood and other by-products to produce medicines, biochemical products, etc. The fermentation and brewing industries focus on promoting the harmless treatment of distiller's grains, waste liquid, etc., and using them as raw materials for the production of feed, organic fertilizers, biomass energy, etc. The sugar industry focuses on promoting the use of bagasse to generate electricity, papermaking, and production of building materials products, 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 22/47 and the use of waste molasses to produce alcohol. The beverage industry focuses on harmless treatment of fruit pomace, tea residue, etc., and uses them as raw materials for the production of feed or fertilizer. Strengthen wastewater recycling. Strengthen the risk-free resource utilization of expired food and recalled food. Promote the integrated development of the food industry and upstream and downstream industries. Encourage the food industry to	agriculture biobased food
12:150	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Industrial and agricultural complex industrial parks should promote the deep processing and utilization of agricultural and sideline products, extend the industrial chain, and increase added value.	agriculture Objective: Economic Prosperity/Growth Re-use/redistribute
12:179	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the effective connection between the aquaculture industry and the planting industry to achieve coordinated development of fish, grain, fruits and vegetables. Encourage the use of fish, shrimps, crabs, shellfish and aquatic product processing by-products to produce amino acids, condiments, health care products and other products.	agriculture Chemicals food industrial symbiosis Re-use/redistribute

12:181	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Section 1 Planting Industry Develop economical planting industry. Accelerate the elimination of old agricultural machinery, promote the use of energy-saving agricultural machinery, promote energy-saving renovation of water pumping stations, and popularize energy-saving solar vegetable greenhouses. Promote and popularize high-efficiency water-saving irrigation technologies such as piped water transmission, drip irrigation under film, and water-fertilizer integration, support the construction of dry farming demonstration bases, and increase the promotion of dry farming water-saving agricultural technologies. Vigorously promote the technology of soil testing and formulated fertilization, use chemical fertilizers scientifically, encourage farmers to apply more organic fertilizers, and reduce the unreasonable amount of chemical fertilizers. Eliminate outdated pesticide application machinery and promote the use of high-efficiency, low-toxicity, and low-residue pesticides. Carry out the construction of organic agricultural product bases. Promote the mechanization of the entire grain production process, accelerate the construction of grain drying and storage facilities, and reduce grain field losses and storage losses. Promote the comprehensive utilization of crop straw. Promote the use of crop straw as feed, fertilizer, base material, raw material, and fuel according to local conditions. Focus on 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 26/47 promoting the return of straw to the field, decomposition and mechanization of straw, and encourage the use of peanuts and beans rich in nutrients. We will process straw to make feed, promote the use of straw to cultivate edible fungi, develop new straw substitutes for wood and functional straw wood-plastic composite profiles and	agriculture
12:182	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Section 5 Industrial and Agricultural Complex Promote circular links in planting, breeding, agricultural product processing, biomass energy industry, agricultural and forestry waste recycling industry, high-efficiency organic fertilizer industry, leisure agriculture and other industries to form a waste-free and efficient cross-enterprise and cross-farmer household circular economic consortium. Build a modern industrial-agricultural compound circular economy industrial system that integrates grain, vegetables, livestock, forestry, processing, logistics, and tourism and the coordinated 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 28/47 development of primary, secondary, and tertiary industries. Vigorously promote the typical model of agricultural circular economy, focusing on cultivating and promoting the livestock (poultry)- biogas-fruit (vegetables, forests, fruits) composite model, the agriculture, forestry, animal husbandry and fishery composite model, the farming-to-fishing model, the industrial and agricultural composite model, etc. Improve the comprehensive benefits of agriculture.	agriculture industrial symbiosis
12:229	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Focus on promoting the remanufacturing of motor vehicle parts, machine tools, engineering machinery, mining machinery, agricultural machinery, metallurgical rollers, photocopiers, computer servers, ink cartridges, toner cartridges, etc., explore the remanufacturing of aircraft engines and steam turbines, and continue to promote the retreading of waste tires.	agriculture Refurbish/Remanufacture transport
12:233	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	By 2015, we will achieve annual remanufacturing of 800,000 engines, 8 million pieces of gearboxes, starters, generators, etc., and 200,000 sets of engineering machinery, mining machinery, agricultural machinery, etc., and the annual output value of the remanufacturing industry will reach about 50 billion yuan. .	agriculture indicator/measurement/monitoring Refurbish/Remanufacture

12:279	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	support the transformation of 10 The industrial and agricultural complex industrial park promotes the deep processing and utilization of agricultural and forestry products and byproducts.	agriculture demonstration/experimentation
12:286	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Pilot demonstration projects for comprehensive utilization of straw will be implemented in 13 major grain-producing areas, areas with a high concentration of single varieties of straw such as cotton straw, and key areas along traffic arteries, airports, and highways.	agriculture demonstration/experimentation
12:310	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Farmers who have scrapped old agricultural machinery and obtained recycling and dismantling certificates will be given priority in purchasing subsidies for agricultural machinery.	agriculture dismantle/reassemble Instrument Type: Economic Instrument Type: Regulation Instrument: Design Features labelling Recycle
12:319	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	he list and management methods of products and packaging that are compulsorily recycled, regulations on kitchen waste management and resource utilization, agricultural machinery scrap recycling methods and other laws and regulations.	agriculture food Instrument Type: Regulation Instrument: Design Features Objective: Resource efficieny/scarcity Plastics Recycle
12:321	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Accelerate the formulation of product standards for degradable products, recycled products, kitchen waste resource products, waste-recycling building materials and agricultural machinery prohibition and scrapping 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 43/47 standards, and improve energy-saving, water-saving, and comprehensive resource utilization product standards. Improve standards for excessively packaged goods.	agriculture biobased construction/demolition energy food Instrument Type: Regulation Objective: Resource efficieny/scarcity Re-use/redistribute Recycle water

12:333	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Study and formulate management measures to restrict the use of urban tap water as water for urban road cleaning, urban greening and landscape in areas where conditions permit the use of recycled water.	agriculture Instrument Type: Regulation Recycle water
13:99	EU2: A new Circular Economy Action Plan 2020	EU	Therefore, in line with the Sustainable Development Goals and as part of the review of Directive 2008/98/EC38 referred to in section 4.1, the Commission will propose a target on food waste reduction, as a key action under the forthcoming EU Farm-to-Fork Strategy, which will address comprehensively the food value chain.	agriculture food indicator/measurement/monitoring Instrument Type: Regulation Objective: Waste reduction SDG waste
13:101	EU2: A new Circular Economy Action Plan 2020	EU	The new Water Reuse Regulation will encourage circular approaches to water reuse in agriculture. The Commission will facilitate water reuse and efficiency, including in industrial processes.	agriculture Instrument Type: Regulation Objective: Resource efficieny/scarcity Re-use/redistribute Reduce water
17:18	EU6: Green Deal	EU	The Farm to Fork Strategy will also contribute to achieving a circular economy. It will aim to reduce the environmental impact of the food processing and retail sectors by taking action on transport, storage, packaging and food waste.	agriculture food Objective: Environmental Quality Reduce

ID	Document	Document Groups	Quotation Content	Codes
1:123	EU1: EU action plan for the circular economy	EU	Recycled nutrients are a distinct and important category of secondary raw materials, for which the development of quality standards is necessary. They are present in organic waste material, for example, and can be returned to soils as fertilisers. Their sustainable use in agriculture reduces the need for mineral-based fertilisers, the production of which has negative environmental impacts, and depends on imports of phosphate rock, a limited resource.	biobased fertiliser Objective: Environmental Quality Objective: Resource efficieny/scarcity Recycle
1:124	EU1: EU action plan for the circular economy	EU	However, the circulation of fertilisers based on recycled nutrients is currently hampered by the fact that rules as well as quality and environmental standards differ across Member States.	biobased fertiliser Level: Macro limit limit: policy Recycle
1:125	EU1: EU action plan for the circular economy	EU	In order to address this situation, the Commission will propose a revision of the EU regulation on fertilisers. This will involve new measures to facilitate the EU wide recognition of organic and waste-based fertilisers, thus stimulating the sustainable development of an EU-wide market.	biobased fertiliser Instrument Type: Economic Instrument Type: Regulation
1:128	EU1: EU action plan for the circular economy	EU	Water reuse in agriculture also contributes to nutrients recycling by substitution of solid fertilisers. The Commission will take a series of actions to promote the reuse of treated wastewater, including legislation on minimum requirements for reused water.	biobased fertiliser Instrument Type: Regulation Re-use/redistribute Recycle water
1:139	EU1: EU action plan for the circular economy	EU	The presence of hazardous chemical additives can pose technical difficulties and the emergence of innovative types of plastics raises new questions, e.g. as regards plastics biodegradability.	biobased Chemicals limit
1:162	EU1: EU action plan for the circular economy	EU	5.5. Biomass and bio-based products Bio-based materials, i.e. those based on biological resources (such as wood, crops or fibres) can be used for a wide range of products (construction, furniture, paper, food, textile, chemicals, etc...) and energy uses (e.g. biofuels). The bioeconomy hence provides alternatives to fossil-based products and energy, and can contribute to the circular economy. Bio-based materials can also present advantages linked to their renewability, biodegradability or compostability. On the other hand, using biological resources requires attention to their lifecycle environmental impacts and sustainable sourcing. The multiple possibilities for their use can also generate competition for them and create pressure on land-use. The Commission will examine the contribution of its 2012 a Bioeconomy Strategy43 to the circular economy and consider updating it if necessary. In a circular economy, a cascading use of renewable resources, with several reuse and recycling cycles, should be encouraged where appropriate. Biobased materials, such as for example wood, can be used in multiple ways, and reuse and recycling can take place several times. This goes together with the application of the waste hierarchy (including for food - see section 5.2) and, more generally, options that result in the best overall environmental outcome. National measures such as extended producer responsibility schemes for furniture or wood packaging, or separate collection of wood can have a positive impact. The Commission will work on identifying and sharing best practices in this sector and promote innovation; the revised legislative proposals on waste also include a mandatory EU-level target on recycling wood packaging waste. In addition, the Commission will promote synergies with the circular economy when examining the sustainability of bioenergy under the Energy Union. The bio-based sector has also shown its potential for innovation in new	biobased
4:48	C5: Circular Economy Promotion Law of the PRC	China	Enterprises engaging in the design of products, equipment, products and packages shall, in accordance with the requirement of reducing the consumption of resources and the generation of wastes, give preference to the materials which are recyclable, dismountable, degradable, innocuous, harmless or slightly harmful or poisonous, and the compulsory requirements in the relevant state standards shall be satisfied.	best practice biobased Business Models/Supply side Chemicals dismantle/reassemble Instrument Type: Regulation product design Recycle Reduce waste
4:80	C5: Circular Economy Promotion Law of the PRC	China	The state encourages agricultural producers and the relevant enterprises to take advantage of advanced or applicable technologies to make comprehensive utilization of crop straws, livestock and poultry excrements, byproducts of the agro-product processing industry and waste agricultural films, and develop and use biogas and other biomass energies.	agriculture best practice biobased Business Models/Supply side energy

4:81	C5: Circular Economy Promotion Law of the PRC	China	The people's governments at or above the county level and the administrative departments of forestry thereunder shall make vigorous efforts to develop ecology-friendly forestry, encourage forestry producers and relevant enterprises to use timber-saving technologies and timber-replacing Translation by lawinfochina.com 8 technologies, and make comprehensive utilization of forestry wastes, wood castoffs, small firewood and desert bush so as to improve the comprehensive utilization rate of wood.	agriculture biobased energy Level: Macro Level: Meso Level: Micro
9:11	C4: 12th 5YP V1	China	We will perfect the renewable resources recycling system, speed up the establishment of the "trinity" recycling networks of recycling stations at communities in urban areas and in rural areas, of sorting centers, of terminal markets, and promote the scale utilization of renewable resources.	biobased regenerative renewable waste
9:49	C4: 12th 5YP V1	China	Recycling of such biomass energy as crop stubs and of waste materials from the forestry sector, and wind power and solar power will also be energetically promoted.	biobased energy Recycle Renewable Energy waste
10:20	C6: 14th 5YP CE	China	focus on building a resource recycling-based industrial system, accelerate the construction of waste materials recycling system, deepen the development of circular economy in agriculture, comprehensively improve the efficiency of resource use, enhance the level of renewable resources, establish and improve the green, low-carbon and recycling development of the economic system, to provide resources for the sustainable development of the economy and society.	agriculture biobased Objective: Carbon reduction Objective: Economic Prosperity/Growth Objective: Resource efficieny/scarcity Objective: Social Equity Objective: Sustainability Recycle Reduce Renewable Energy waste
10:32	C6: 14th 5YP CE	China	5. Promote the coordinated disposal of municipal waste. Improve policies, mechanisms and standards, promote coordinated disposal facilities with reference to the management of urban environmental infrastructure, and guarantee the continuous and stable operation of facilities. Determine the standard of payment for co-disposal of municipal waste through market-oriented methods, and orderly promote the co-disposal of medical waste, hazardous waste and domestic rubbish in cement kilns and smelting kilns, as well as the coordinated promotion of the co-disposal of medical waste in domestic rubbish incinerators in an emergency. Promote the co-ordinated co-disposal of food waste, garden waste, sewage plant sludge and other low-value organic waste.	biobased Chemicals construction/demolition food Instrument Type: Economic Instrument Type: Regulation Instrument: Design Features Recover waste
10:47	C6: 14th 5YP CE	China	Strengthen the resource utilisation of agricultural and forestry waste. Promote the efficient use of agricultural and forestry waste such as crop straw, livestock and poultry manure, forestry waste, and by-products of agricultural product processing. Strengthen the comprehensive utilisation of crop straw, adhere to the priority of agricultural use, increase the efforts to return straw to the field, give full play to the function of arable land conservation, encourage the industrialised use of straw away from the field, the development of new materials and new products, and improve the added value of straw feed, fuel, raw materials and so on. Strengthen the construction of livestock and poultry manure treatment facilities, encourage the combination of planting and raising, and promote the use of agricultural organic fertilisers returned to the field in the vicinity of the site. According to local conditions, encourage the use of secondary small fuelwood, forestry three residues (logging residues, wood residues, processing residues) for composite panel production, edible fungi cultivation and energy use, and promote the resourceful use of agricultural products processing by-products.	agriculture biobased Business Models/Supply side energy fertiliser Objective: Resource efficieny/scarcity
10:51	C6: 14th 5YP CE	China	Promote the development and utilisation of rural biomass energy, and give full play to the comprehensive benefits of clean energy supply and rural ecological environment management.	biobased energy
10:52	C6: 14th 5YP CE	China	Build a forestry circular economy industry chain, and promote the three-dimensional development of industrial models on, between and under forests. Promote circular links between planting, breeding, agricultural product processing, biomass energy, tourism and recreation, and encourage the integrated development of primary, secondary and tertiary industries.	agriculture biobased Business Models/Supply side energy

10:65	C6: 14th 5YP CE	China	(9) Special action on the whole chain management of plastic pollution Scientific and reasonable promotion of plastic source reduction, strictly prohibit the production of ultra-thin agricultural film, daily chemical products containing plastic microbeads and other products that endanger the environment and human health, and encourage the public to reduce the use of disposable plastic products. In-depth assessment of the resource and environmental impacts of various types of plastic substitutes throughout their life cycle. Promote degradable plastics according to local conditions, actively and steadily, improve the standard system, enhance inspection and testing capacity, and regulate the application and disposal of degradable plastics. Promote the application of standard films and improve the recycling level of used agricultural films. Strengthen the classification, recycling and reuse of plastic waste, accelerate the construction of domestic waste incineration and treatment facilities, and reduce the amount of plastic waste in landfills. Carry out plastic rubbish cleanup in rivers, lakes and coastlines, and implement special actions to clean up marine rubbish. Strengthen policy interpretation and publicity and guidance to create a good social atmosphere.	biobased Chemicals Consumers/Demand side health indicator/measurement/monitoring Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Objective: Environmental Quality Objective: Social Equity Objective: Waste reduction Plastics R&D / Science Re-use/redistribute Recover Recycle Reduce waste water
11:21	C7: The General Office of the State Council on accelerating the construction of	China	Strengthen the recycling and utilization of urban landscaping waste.	biobased Recycle waste
11:35	C7: The General Office of the State Council on accelerating the construction of	China	Promote the development and utilization of agricultural and forestry biomass energy according to local conditions, and steadily promote the diversified development and utilization of biomass energy.	agriculture biobased energy Recover
12:61	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	By 2015, the average coal consumption of thermal power supply will be reduced to 325 grams of standard coal/kWh, the comprehensive utilization rate of fly ash will reach 70%, the comprehensive utilization rate of desulfurization gypsum will reach 80%, and the installed capacity of biomass power generation will reach 13 million kilowatts.	biobased indicator/measurement/monitoring
12:121	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	encourage the application of anaerobic biochemical technology to produce biogas,	biobased energy
12:123	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage the use of bark, sawdust and other material preparation process residues, and papermaking wastewater treatment sludge as boiler fuel.	biobased energy Recover
12:135	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Section 9 Food Industry Strengthen energy conservation and consumption reduction. Accelerate the elimination of backward production capacity and accelerate the promotion of energy-saving, water-saving, and grain-saving technology and equipment. Optimize the production process and realize the cascade utilization of water and heat in the production process. Drastically reduce excessive packaging of food. Promote the resource utilization of food processing by-products and waste. The grain processing industry focuses on promoting the use of rice husk, rice bran, wheat germ, bran and other by-products to produce rice husk carbon, rice bran oil, rice bran protein, corn oil, wheat germ oil, dietary fiber, etc. The meat and aquatic product processing industry focuses on promoting the use of fur, viscera, blood and other by-products to produce medicines, biochemical products, etc. The fermentation and brewing industries focus on promoting the harmless treatment of distiller's grains, waste liquid, etc., and using them as raw materials for the production of feed, organic fertilizers, biomass energy, etc. The sugar industry focuses on promoting the use of bagasse to generate electricity, papermaking, and production of building materials products, 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 22/47 and the use of waste molasses to produce alcohol. The beverage industry focuses on harmless treatment of fruit pomace, tea residue, etc., and uses them as raw materials for the production of feed or fertilizer. Strengthen wastewater recycling. Strengthen the risk-free resource utilization of expired food and recalled food. Promote the integrated development of the food industry and upstream and downstream industries. Encourage the food industry to	agriculture biobased food

12:136	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the use of biodegradable slurries and clean gas-phase thermal oil to reduce the use of toxic and harmful substances from the source.	biobased Chemicals Reduce renewable
12:138	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Accelerate the development of biomass textile fiber materials that can replace petroleum, encourage the use of waste polyester bottles, waste polypropylene, etc. to produce high value-added recycled fibers to reduce the consumption of primary resources.	biobased Recycle
12:160	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Vigorously promote the technology of soil testing and formulated fertilization, use chemical fertilizers scientifically, encourage farmers to apply more organic fertilizers, and reduce the unreasonable amount of chemical fertilizers.	biobased Chemicals fertiliser indicator/measurement/monitoring Reduce
12:163	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the use of crop straw as feed, fertilizer, base material, raw material, and fuel according to local conditions.	biobased Re-use/redistribute
12:164	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	promoting the return of straw to the field,	biobased fertiliser Re-use/redistribute
12:165	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	We will process straw to make feed, promote the use of straw to cultivate edible fungi, develop new straw substitutes for wood and functional straw wood-plastic composite profiles, and promote centralized gas supply for straw biogas production and solidified molded fuel.	biobased energy food Plastics Re-use/redistribute
12:168	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage the use of forestry "three leftovers" such as logging, lumber making, and processing, as well as sub-small firewood to produce boards, cultivate edible fungi, etc., and encourage the reuse of edible fungus culture media. Promote the use of the "three leftovers" of the bamboo industry to produce bamboo charcoal, activated carbon, refined vinegar powder and other products as well as extended processing and utilization.	biobased energy food Re-use/redistribute waste
12:170	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage the use of livestock and poultry manure to develop rural household and centralized gas supply biogas projects, and encourage the use of livestock and poultry manure, straw, organic domestic waste and other raw materials to develop very large biogas projects.	biobased energy Re-use/redistribute Recover
12:171	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote composting, factory-based production of organic fertilizer, and aerobic fermentation direct application technology on farmland, and promote resource utilization and harmless treatment of breeding manure.	biobased fertiliser Re-use/redistribute
12:172	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage the use of livestock and poultry blood, organs, bone tissue, fur, eggshells, etc. to produce medicines, health care products, daily necessities, etc., to increase the added value of livestock and poultry processing.	biobased Chemicals Re-use/redistribute
12:174	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Build an industrial chain of livestock and poultry manure - biogas - power generation, livestock and poultry manure - biogas - biogas residue, biogas slurry - harmless treatment - fertilizers, pesticides - agricultural and forestry crops, livestock and poultry processing - by-products - biochemical products.	biobased Chemicals energy fertiliser industrial symbiosis

12:252	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Support the construction of kitchen waste resource utilization facilities, and encourage the use of kitchen waste to produce biogas, biodiesel, industrial oils, organic fertilizers, etc.	biobased energy fertiliser food Recover Recycle waste
12:295	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage power generation from coal gangue, waste heat and pressure, garbage and biogas to be brought online.	biobased coal energy waste
12:321	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Accelerate the formulation of product standards for degradable products, recycled products, kitchen waste resource products, waste-recycling building materials and agricultural machinery prohibition and scrapping 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 43/47 standards, and improve energy-saving, water-saving, and comprehensive resource utilization product standards. Improve standards for excessively packaged goods.	agriculture biobased construction/demolition energy food Instrument Type: Regulation Objective: Resource efficieny/scarcity Re-use/redistribute Recycle water
13:1	EU2: A new Circular Economy Action Plan 2020	EU	There is only one planet Earth, yet by 2050, the world will be consuming as if there were three1 . Global consumption of materials such as biomass, fossil fuels, metals and minerals is expected to double in the next forty years2 , while annual waste generation is projected to increase by 70% by 20503 .	biobased coal metals Objective: Environmental Quality oil waste
13:43	EU2: A new Circular Economy Action Plan 2020	EU	supporting the sustainable and circular bio-based sector through the implementation of the Bioeconomy Action Plan18	biobased Instrument Type: Regulation
13:79	EU2: A new Circular Economy Action Plan 2020	EU	sourcing, labelling and use of bio-based plastics, based on assessing where the use of bio-based feedstock results in genuine environmental benefits, going beyond reduction in using fossil resources;	biobased Instrument Type: Regulation labelling Plastics Reduce
13:80	EU2: A new Circular Economy Action Plan 2020	EU	use of biodegradable or compostable plastics, based on an assessment of the applications where such use can be beneficial to the environment, and of the criteria for such applications. It will aim to ensure that labelling a product as 28 COM(2018) 28 final. 10 ‘biodegradable’ or ‘compostable’ does not mislead consumers to dispose of it in a way that causes plastic littering or pollution due to unsuitable environmental conditions or insufficient time for degradation.	biobased Consumers/Demand side Instrument Type: Regulation labelling Objective: Pollution Objective: Waste reduction Plastics renewable waste
13:97	EU2: A new Circular Economy Action Plan 2020	EU	Biological resources are a key input to the economy of the EU and will play an even more important role in the future. The Commission will aim at ensuring the sustainability of renewable bio-based materials, including through actions following the Bioeconomy Strategy and Action Plan.	biobased Instrument Type: Regulation renewable
14:8	EU3: A Green Deal Industrial Plan for the Net-Zero Age	EU	Second, the Commission will propose a Critical Raw Materials Act. The manufacturing of EU net-zero technologies is only possible if access to relevant critical raw materials is ensured, including by diversifying sourcing and by recycling raw materials to lower the EU’s dependence on highly concentrated supplies from third countries and boost quality jobs and growth in the circular economy. This act will aim to provide the EU security of supply, including by strengthening international engagement, facilitating extraction (where relevant), processing and recycling, while ensuring high environmental standards and continuing research and innovation, e.g. to reduce material use and to develop bio-based substitutes. There have already been tangible successes: today, some EU companies are using lignin stemming from wood in batteries, instead of graphite.	biobased critical raw materials Level: Macro Objective: Economic Prosperity/Growth Objective: Employment Objective: Environmental Quality Objective: Innovation Objective: Resource efficieny/scarcity R&D / Science Recycle Reduce security/dependency
14:9	EU3: A Green Deal Industrial Plan for the Net-Zero Age	EU	Modelled on the European Battery Alliance Academy34, the Commission will propose to establish Net-Zero Industry Academies to roll out up-skilling and re-skilling programmes in strategic industries for the green transition, such as raw materials, hydrogen and solar technologies, The Commission will initiate an Academy to offer onand offline trainings for sustainable construction with a focus on the use of biobased materials, circularity and digital technologies.	biobased construction/demolition critical raw materials Instrument Type: Information Objective: Carbon reduction Objective: Sustainability Renewable Energy

17:10	EU6: Green Deal	EU	The Commission will follow up on the 2018 plastics strategy focusing, among other things, on measures to tackle intentionally added micro plastics 13 Global Resources Outlook 2019: Natural Resources for the Future We Want: The International Resource Panel. 14 https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=cei_srm030&plugin=1 15 https://ec.europa.eu/commission/presscorner/detail/en/IP_19_6353 8 and unintentional releases of plastics, for example from textiles and tyre abrasion. The Commission will develop requirements to ensure that all packaging in the EU market is reusable or recyclable in an economically viable manner by 2030, will develop a regulatory framework for biodegradable and bio-based plastics, and will implement measures on single use plastics.	biobased Plastics Re-use/redistribute Recycle

ID	Document	Document Groups	Quotation Content	Codes
1:26	EU1: EU action plan for the circular economy	EU	Economic actors, such as business and consumers, are key in driving this process.	Business Models/Supply side Consumers/Demand side
1:28	EU1: EU action plan for the circular economy	EU	The aim is to ensure that the right regulatory framework is in place for the development of the circular economy in the single market, and to give clear signals to economic operators and society at large on the way forward with long term waste targets as well as a concrete, broad and ambitious set of actions, to be carried out before 2020	Business Models/Supply side Consumers/Demand side Instrument Type: Information Instrument Type: Regulation Objective: Waste reduction Time
1:33	EU1: EU action plan for the circular economy	EU	improve extended producer responsibility schemes.	Business Models/Supply side Instrument Type: Regulation
1:34	EU1: EU action plan for the circular economy	EU	By stimulating sustainable activity in key sectors and new business opportunities, the plan will help to unlock the growth and jobs potential of the circular economy	Business Models/Supply side Objective: Economic Prosperity/Growth Objective: Employment Objective: Sustainability
1:46	EU1: EU action plan for the circular economy	EU	Making the circular economy a reality will however require long-term involvement at all levels, from Member States, regions and cities, to businesses and citizens	Business Models/Supply side Consumers/Demand side Level: Macro Level: Meso Level: Micro
1:49	EU1: EU action plan for the circular economy	EU	This action plan will be instrumental in reaching the Sustainable Development Goals (SDGs) by 2030, in particular Goal 12 of ensuring sustainable consumption and production patterns.	Business Models/Supply side Consumers/Demand side SDG
1:56	EU1: EU action plan for the circular economy	EU	Production	Business Models/Supply side
1:62	EU1: EU action plan for the circular economy	EU	current market signals appear insufficient to make this happen, in particular because the interests of producers, users and recyclers are not aligned	Business Models/Supply side Consumers/Demand side limit: market functioning limit: unaligned interest
1:69	EU1: EU action plan for the circular economy	EU	encourage better product design by differentiating the financial contribution paid by producers under extended producer responsibility schemes on the basis of the end-of-life costs of their products. This should create a direct economic incentive to design products that can be more easily recycled or reused.	Business Models/Supply side Instrument Type: Economic Instrument: Design Features Re-use/redistribute Recycle
1:71	EU1: EU action plan for the circular economy	EU	Production processes Even for products or materials designed in a smart way, inefficient use of resources in production processes can lead to lost business opportunities and significant waste generation. 2 Directive 2009/125/EC. This Directive covers all energy-related products. 3 Together with the energy labelling measures in place, it is estimated that the Ecodesign Directive will save 175 Mtoe of primary energy by 2020. 4 e.g. Ecodesign, Energy Labelling, Ecolabel, Green Public Procurement, and other relevant product legislation. 5 Primary raw materials, including renewable materials, will continue to play an important role in production processes, even in a circular economy. In this context, attention must be paid to the environmental and social impacts of their production, both in the EU and in non-EU countries. The Commission therefore promotes the sustainable sourcing of raw material globally, for example through policy dialogues, partnerships and its trade5 and development policy. Industry has a key role to play by making specific commitments to sustainable sourcing and cooperating across value chains. Each industry sector is different when it comes to resource use, waste generation and management. Therefore, the Commission will further promote best practices in a range of industrial sectors through the 'best available technique reference documents' (BREFs) that Member States have to reflect when issuing permit requirements for industrial installations, and promote best practices on mining waste. The Commission is also helping SMEs to benefit from the business opportunities of increased resource efficiency with the creation of the European Resource Efficiency Excellence Centre.6 Facilitating substitution of chemicals of concern or supporting SME access to innovative technologies7 are examples of actions in this area.	Business Models/Supply side
1:76	EU1: EU action plan for the circular economy	EU	Industry has a key role to play by making specific commitments to sustainable sourcing and cooperating across value chains.	Business Models/Supply side
1:100	EU1: EU action plan for the circular economy	EU	Innovative forms of consumption can also support the development of the circular economy, e.g. sharing products or infrastructure (collaborative economy), consuming services rather than products, or using IT or digital platforms. These new forms of consumption are often developed by businesses or citizens, and promoted at national, regional and local level. The Commission supports these new business and consumption models through Horizon 2020 and through Cohesion Policy funding (see also section 6). As announced in the Single Market Strategy24, it will also develop a European agenda for the collaborative economy.	Business Models/Supply side Investment Level: Macro Level: Meso Level: Micro

1:109	EU1: EU action plan for the circular economy	EU	To raise levels of high-quality recycling, improvements are needed in waste collection and sorting. Collection and sorting systems are often financed in part by extended producer responsibility schemes, in which manufacturers contribute to product collection and treatment costs. In order to make these schemes more effective, the Commission is proposing minimum conditions on transparency and cost-efficiency. Member States and regions can also use these schemes for additional waste streams such as textiles or furniture.	Business Models/Supply side Recycle
1:133	EU1: EU action plan for the circular economy	EU	A key factor in creating a dynamic market for secondary raw materials is sufficient demand, driven by the use of recycled materials in products and infrastructure.	Business Models/Supply side Consumers/Demand side Recycle
1:165	EU1: EU action plan for the circular economy	EU	National measures such as extended producer responsibility schemes for furniture or wood packaging, or separate collection of wood can have a positive impact.	Business Models/Supply side Level: Macro
4:11	C5: Circular Economy Promotion Law of the PRC	China	The development of a circular economy shall be propelled by the government, led by the market, effected by enterprises and participated in by the public.	Business Models/Supply side Consumers/Demand side Instrument Type: Economic Instrument Type: Regulation
4:22	C5: Circular Economy Promotion Law of the PRC	China	Enterprises and public institutions shall set up management systems and take measures to reduce the consumption of resources, reduce the production and discharge of wastes and improve the reutilization and recycling level of wastes	Business Models/Supply side Objective: Resource efficieny/scarcity Objective: Waste reduction Re-use/redistribute Recycle Reduce
4:26	C5: Circular Economy Promotion Law of the PRC	China	The people's governments at or above the county level may entrust qualified industrial associations or other social organizations to provide public services which promote the development of circular economy	Business Models/Supply side Level: Meso Level: Micro
4:35	C5: Circular Economy Promotion Law of the PRC	China	Enterprises producing products or packages listed in the catalogue of articles subject to compulsory recycle must be responsible for recycling deserted products or packages. For those usable, the producers thereof shall be responsible for using them, while for those products which are inappropriate for reutilization due to the absence of technical or economic conditions, the producers shall make them harmless.	Business Models/Supply side Instrument Type: Regulation Instrument: Design Features Re-use/redistribute Recycle
4:36	C5: Circular Economy Promotion Law of the PRC	China	For the deserted products or packages as prescribed in the preceding paragraph, if the producers thereof entrust the distributors or other organizations to recycle or entrust waste using or disposing enterprises to use or dispose of them, the entrusted parties shall recycle, use or dispose of them in accordance with the relevant laws, administrative regulations or contractual stipulations.	Business Models/Supply side Re-use/redistribute Recycle
4:37	C5: Circular Economy Promotion Law of the PRC	China	For products or packages listed in the catalogue of articles subject to compulsory recycle, consumers shall deliver the deserted ones to the producers or the distributors or other organizations entrusted by Translation by lawinfochina.com 4 the producers for recycle.	Business Models/Supply side Consumers/Demand side Instrument Type: Regulation Instrument: Design Features Recycle
4:39	C5: Circular Economy Promotion Law of the PRC	China	The state adopts a key supervision and administration system to key enterprises in the high energy or water consuming industries such as steel, non-ferrous metal, coal, electric power, petroleum processing, chemical industry, building materials, building construction, paper-making, printing and dyeing.	Business Models/Supply side Chemicals coal construction/demolition energy Level: Macro metals oil paper water
4:48	C5: Circular Economy Promotion Law of the PRC	China	Enterprises engaging in the design of products, equipment, products and packages shall, in accordance with the requirement of reducing the consumption of resources and the generation of wastes, give preference to the materials which are recyclable, dismountable, degradable, innocuous, harmless or slightly harmful or poisonous, and the compulsory requirements in the relevant state standards shall be satisfied.	best practice biobased Business Models/Supply side Chemicals dismantle/reassemble Instrument Type: Regulation product design Recycle Reduce waste
4:50	C5: Circular Economy Promotion Law of the PRC	China	Industrial enterprises shall use advanced or applicable water-saving technologies, techniques and equipment, work out and implement water-saving plans, strengthen water-saving management and exercise control over the use of water in the whole process of production.	best practice Business Models/Supply side Instrument Type: Regulation Objective: Resource efficieny/scarcity Reduce water

4:51	C5: Circular Economy Promotion Law of the PRC	China	Industrial enterprises shall strengthen quantitative management of water use, be equipped with and use acceptable water measurement instrument, and set up a water consumption statistics system and a water use status analysis system.	Business Models/Supply side indicator/measurement/monitoring Instrument Type: Regulation Instrument: Design Features
4:55	C5: Circular Economy Promotion Law of the PRC	China	Enterprises in such industries as electric power, oil processing, chemical industry, steel, non-ferrous metal and building materials must replace fuel oil with clean energy, e.g., clean coal, petroleum coke, natural gas, etc. within the scope and time limit prescribed by the state, and must stop using fuel generator sets and oil boilers that fail to satisfy the relevant state provisions.	Business Models/Supply side Chemicals coal construction/demolition energy Instrument Type: Regulation Instrument: Design Features Level: Macro metals oil
4:56	C5: Circular Economy Promotion Law of the PRC	China	Enterprises manufacturing combustion engines and motor vehicles shall, in accordance with the fuel economy standards of the state for combustion engines and motor vehicles, use oil-saving technologies to reduce the consumption of petroleum products.	Business Models/Supply side Instrument Type: Regulation Instrument: Design Features Objective: Resource efficieny/scarcity oil Reduce transport
4:57	C5: Circular Economy Promotion Law of the PRC	China	A mining enterprise shall make overall plans, work out reasonable mineral resource exploitation and utilization plans and take reasonable mining sequences, methods and milling techniques. The mining license issuing organ shall examine the mining recovery rate, impoverishment rate, milling recovery rate, water reutilization rate in mines, land re-reclamation rate and other indicators stated in the development and utilization plan submitted by an applicant, and, where any indicator fails to reach the prescribed standards, shall not issue a mining license to the applicant. The mining license issuing organ shall strengthen supervision and administration over the exploitation of mineral resources according to law.	Business Models/Supply side indicator/measurement/monitoring Instrument Type: Regulation Instrument: Design Features land-use mining Objective: Resource efficieny/scarcity water
4:58	C5: Circular Economy Promotion Law of the PRC	China	A mining enterprise shall, at the same time of mining the major mineral resources, make comprehensive exploitation and reasonable utilization of the intergrown and associated ores which have industrial values, and take protection measures against the minerals which must be mined simultaneously but may not be used temporarily as well as the tailings which have useful components so as to prevent the loss of resources and damage to the ecological environment.	Business Models/Supply side Instrument Type: Regulation Instrument: Design Features Objective: Economic Prosperity/Growth Objective: Environmental Quality Objective: Resource efficieny/scarcity
4:59	C5: Circular Economy Promotion Law of the PRC	China	Entities in architectural design and construction industry shall, according to the relevant state provisions and standards, use energy-saving, water-saving, land-saving and material-saving technologies and techniques as well as small, light and recyclable products for construction. Areas shall, where possible, make sufficient utilization of solar energy, geothermal energy, wind energy and other renewable energy resources.	Business Models/Supply side construction/demolition energy Instrument Type: Regulation land-use Objective: Resource efficieny/scarcity Recycle Reduce Renewable Energy water
4:62	C5: Circular Economy Promotion Law of the PRC	China	The people's governments at or above the county level and the agricultural departments and other competent departments thereunder shall promote the intensive use of land, encourage agricultural producers to take advanced water-saving, fertilizer-saving and pesticide-saving planting, cultivating and irrigating technologies, improve the energy efficiency of agricultural machinery and give priority to the development of ecological agriculture.	Business Models/Supply side Chemicals energy fertiliser Instrument Type: Regulation land-use Level: Macro Level: Meso Level: Micro water
4:67	C5: Circular Economy Promotion Law of the PRC	China	Enterprises in the catering, entertainment, hotel and other service industries shall use energy-saving, water-saving, material-saving and environment-friendly products and reduce or stop using energy-waste or contaminating products. Enterprises in the catering, entertainment, hotel and other service industries which are established after this Law comes into effect shall use energy-saving, water-saving, material-saving and environmentfriendly technologies, equipment and facilities.	Business Models/Supply side Chemicals food Objective: Resource efficieny/scarcity product design Reduce water

4:69	C5: Circular Economy Promotion Law of the PRC	China	The state sets restrictions on the production and distribution of one-off consumption goods under the precondition of safeguarding product security and sanitation. The specific directory of the one-off consumption goods under restriction shall be formulated by the administrative department of circular economy development under the State Council together with the public finance department and the environmental protection department under the State Council. For the production and distribution of the one-off consumption goods listed in the directory as mentioned in the preceding paragraph, the public finance department, the tax department and the foreign trade department under the State Council shall work out corresponding restrictive tax and export policies.	Business Models/Supply side Instrument Type: Regulation Instrument: Design Features Level: Macro product design Product safety waste
4:71	C5: Circular Economy Promotion Law of the PRC	China	The people's governments at or above the county level shall make overall plans on the geographical distribution of the different sectors of the economy in their respective regions, reasonably readjust the industrial structure and compel enterprises to cooperate in such areas as the comprehensive utilization of resources so as to realize the efficient utilization and recycling of resources.	Business Models/Supply side industrial symbiosis Level: Macro Level: Meso Level: Micro
4:72	C5: Circular Economy Promotion Law of the PRC	China	An industrial park or zone shall organize the enterprises in the park or zone to make comprehensive utilization of resources so as to promote the development of circular economy.	Business Models/Supply side industrial symbiosis Level: Meso Level: Micro
4:75	C5: Circular Economy Promotion Law of the PRC	China	Enterprises shall, in accordance with the relevant state provisions, make comprehensive utilization of the fly ash, coal slack, tailings, mullock, waste materials, waste gas and other industrial wastes generated in the production process.	Business Models/Supply side waste
4:76	C5: Circular Economy Promotion Law of the PRC	China	Enterprises shall develop an interconnected water use system and a circulatory water use system so as to improve the repeated use of water. Enterprises shall use advanced technologies, techniques and equipment for the circulatory use of the waste water generated in the production process.	best practice Business Models/Supply side water
4:77	C5: Circular Economy Promotion Law of the PRC	China	Enterprises shall use advanced or applicable recovery technologies, techniques and equipment to make comprehensive utilization of the waste heat and pressure generated in the production process.	best practice Business Models/Supply side energy waste
4:78	C5: Circular Economy Promotion Law of the PRC	China	To build a grid-connected power generation project with waste heat, waste pressure, coalbed gas, coal slack, slime, refuse and other low-calorie fuels, the parties concerned shall get an administrative permit or file the project for archival purposes in accordance with laws and the provisions of the State Council. A grid enterprise shall, according to the relevant state provisions, conclude a grid connection agreement with an enterprise which generates power by comprehensive utilization of resources, provide grid access services and purchase the on-grid electricity of a grid-connected power generation project in full amount.	Business Models/Supply side energy Instrument Type: Regulation Instrument: Design Features Level: Macro Public procurement waste
4:79	C5: Circular Economy Promotion Law of the PRC	China	A construction entity shall make comprehensive utilization of the construction wastes generated in the construction process. Where any construction entity does not have the conditions for comprehensive utilization, it shall entrust a producer or operator with such conditions to make comprehensive utilization or harmless disposal of construction wastes.	Business Models/Supply side construction/demolition waste
4:80	C5: Circular Economy Promotion Law of the PRC	China	The state encourages agricultural producers and the relevant enterprises to take advantage of advanced or applicable technologies to make comprehensive utilization of crop straws, livestock and poultry excrements, byproducts of the agro-product processing industry and waste agricultural films, and develop and use biogas and other biomass energies.	agriculture best practice biobased Business Models/Supply side energy
4:82	C5: Circular Economy Promotion Law of the PRC	China	The state upholds producers and operators to set up an industrial waste information exchange system for enterprises to better exchange information about industrial wastes.	Business Models/Supply side Instrument Type: Information Instrument: Design Features
4:83	C5: Circular Economy Promotion Law of the PRC	China	The state encourages and advocates the construction of a waste recovery system. The local people's governments shall, according to the urban and rural planning, reasonably position the waste recycling outlets and trading markets, and support waste recycling enterprises and other organizations in the collection, storage, transport and information exchange of wastes. Waste trading markets shall conform to the state provisions on environmental protection, security and fire control.	Business Models/Supply side Instrument Type: Economic Instrument Type: Information Instrument: Design Features Level: Micro transport

4:86	C5: Circular Economy Promotion Law of the PRC	China	Any recycled electric apparatus or electronic product which needs to be dismantled or reutilized shall be delivered or sold to a dismantling enterprise with corresponding conditions.	Business Models/Supply side dismantle/reassemble electronics Instrument Type: Regulation
4:87	C5: Circular Economy Promotion Law of the PRC	China	The state upholds enterprises to reproduce the parts and components of motor vehicles, engineering equipment, machine tools, etc. and to renew tyres.	Business Models/Supply side Refurbish/Remanufacture transport
4:90	C5: Circular Economy Promotion Law of the PRC	China	The people's governments at or above the county level shall uphold enterprises to build facilities for the reutilization and disposal of sewage sludge so as to improve the comprehensive utilization efficiency of sewage sludge and prevent secondary pollution.	Business Models/Supply side Level: Macro Level: Meso Level: Micro
4:94	C5: Circular Economy Promotion Law of the PRC	China	The state shall offer tax preferences to industrial activities promoting the development of circular economy, and use tax measures to encourage the import of advanced energy-saving, watersaving and material-saving technologies, equipment and products and limit the export of products with high energy-consumption or serious pollution. The specific measures shall be formulated by the public finance department and the tax department under the State Council. Enterprises using or producing the technologies, techniques or products listed in the catalogue of clean production, the catalogue of comprehensive utilization of resources or any other encouraged catalogue shall enjoy tax preferences in accordance with the relevant state provisions.	best practice Business Models/Supply side energy Instrument Type: Economic Instrument: Design Features Level: Macro Objective: Resource efficieny/scarcity Reduce water
4:95	C5: Circular Economy Promotion Law of the PRC	China	The administrative departments of circular economy development of the people's governments at or above the county level shall, when making and implementing investment plans, list the energy-saving, water-saving, land-saving and material-saving projects as well as projects of comprehensive utilization of resources as the key areas of investment. For energy-saving, water-saving, land-saving and material-saving projects as well as projects of comprehensive utilization of resources that meet the requirements of the state industrial policies, financial institutions shall give credit support such as priority in obtaining loans, and actively provide supporting financial services.	Business Models/Supply side energy Finance sector Instrument Type: Economic Instrument: Design Features Investment land-use Level: Macro Level: Meso Level: Micro Objective: Resource efficieny/scarcity Reduce water
4:96	C5: Circular Economy Promotion Law of the PRC	China	No financial institution may provide any form of credit support to enterprises that produce, import, distribute or use any of the technologies, techniques, equipment, materials or products listed in the eliminated category.	Business Models/Supply side Eco-Design Finance sector Instrument Type: Economic Instrument Type: Regulation Instrument: Design Features Investment
4:103	C5: Circular Economy Promotion Law of the PRC	China	Any enterprise producing or selling any product or equipment listed in the eliminated category shall be punished in accordance with the Product Quality Law of the People's Republic of China.	Business Models/Supply side Instrument Type: Regulation Instrument: Design Features Product safety
4:104	C5: Circular Economy Promotion Law of the PRC	China	Where any enterprise uses any technology, technique, equipment or material listed in the eliminated category, the administrative department of circular economy development under the local people's government at or above the county level shall order it to stop such use, confiscate the illegally used equipment or material, and impose a fine of not more than 200,000 yuan but not less than 50,000 yuan. If the circumstances are serious, the administrative department of circular economy development may submit its opinions to the people's government at the same level and request the latter to order, within its authority prescribed by the State Council, the enterprise to wind up its business or close down. Where any enterprise, in violation of this Law, imports any equipment, material or product listed in the eliminated category, the customs shall order it to return such equipment, material or product, and may impose a fine of not more than one million yuan but not less than 100,000 yuan. If the importer is unidentified, the carrier shall be responsible for returning the goods or paying the relevant disposal costs.	Business Models/Supply side Instrument Type: Regulation Instrument: Design Features Level: Macro Level: Meso Level: Micro Product safety

4:105	C5: Circular Economy Promotion Law of the PRC	China	Where any enterprise designs the use of any poisonous and harmful substance listed in the prohibited category of the state in any electric apparatus, electronic product or other product which may cause environmental pollution in the process of dismantlement or disposal, the product quality control department of the local people's government at or above the county level shall order it to Translation by lawinfochina.com 11 correct within a certain time limit, impose a fine of not more than 200,000 yuan but not less than 20,000 yuan upon it if it refuses to correct within the time limit, and, if the circumstances are serious, notify the administrative department for industry and commerce of the situation and the latter shall revoke the business license of the enterprise according to law.	Business Models/Supply side Chemicals electronics Instrument Type: Regulation Instrument: Design Features Level: Macro Level: Meso Level: Micro Objective: Environmental Quality Objective: Pollution
4:106	C5: Circular Economy Promotion Law of the PRC	China	Where any enterprise in electric power, petroleum processing, chemical industry, steel, non-ferrous metal or building materials, as in violation of this Law, fails to stop using a fuel generator set or oil boiler which fails to meet the prescribed standards of the state within a prescribed scope or time limit, the administrative department of circular economy development under the local people's government at or above the county level shall order it to correct within a certain time limit, and, if it fails to correct within the time limit, order it to dismantle the fuel generator set or oil boiler, and impose a fine of not more than 500,000 yuan but not less than 50,000 yuan upon it.	Business Models/Supply side Chemicals energy Instrument Type: Regulation Instrument: Design Features metals oil
4:107	C5: Circular Economy Promotion Law of the PRC	China	Where any mining enterprise, as in violation of this Law, fails to reach such indicators predetermined upon examination as mining recovery rate, impoverishment rate, milling recovery rate, water reutilization rate in mines, and land re-reclamation rate, the administrative department of circular economy development under the local people's government at or above the county level shall order it to correct within a certain time limit and impose a fine of not more than 500,000 yuan but not less than 50,000 yuan upon it. If the enterprise fails to correct within the time limit, the organ issuing the mining license to the enterprise shall revoke its mining license according to law.	Business Models/Supply side indicator/measurement/monitoring Instrument Type: Regulation Instrument: Design Features mining
4:108	C5: Circular Economy Promotion Law of the PRC	China	Where any enterprise, as in violation of this Law, produces, sells or uses clay bricks in a period or area when or where the production, sale or use of clay bricks is prohibited by the State Council or the people's government of a province, autonomous region or municipality directly under the Central Government, the department appointed by the local people's government at or above the county level shall order it to correct within a certain time limit and confiscate the illegal gains, if any. If it continues to do so after the prescribed time limit expires, the administrative department for industry and commerce of the local people's government shall revoke its business license according to law.	Business Models/Supply side Instrument Type: Regulation Instrument: Design Features land-use Level: Macro Level: Meso Level: Micro
4:109	C5: Circular Economy Promotion Law of the PRC	China	Where any power grid enterprise, as in violation of this Law, refuses to purchase the electric power generated by an enterprise with waste heat, waste pressure, coalbed gas, coal slack, slime, refuse or other low-calorie fuels, the power regulatory organ of the state shall order it to correct within a certain time limit and, if any losses are incurred to the enterprise, to make compensation according to law.	Business Models/Supply side coal energy Instrument Type: Regulation Instrument: Design Features Public procurement
4:110	C5: Circular Economy Promotion Law of the PRC	China	Where any enterprise, as in violation of this Law, commits any of the following acts, the administrative department for industry and commerce of the local people's government shall order it to correct within a certain time limit, and may impose a fine of not more than 50,000 yuan but not less than 5000 yuan upon it. If it fails to correct within the time limit, the administrative department for industry and commerce shall revoke its business license, and order it to make compensation if any loss has been incurred: 1. selling any reutilized electric apparatus or electronic product which does not have the special label for reutilized products; or 2. selling any reproduced or renewed product which does not have the special label for reproduced or renewed products.	Business Models/Supply side electronics Instrument Type: Regulation Instrument: Design Features labelling Level: Micro Refurbish/Remanufacture
5:2	C3: 13th 5YP	China	We will work to move leading development regions toward the higher end of production and greater efficiency, improve the structure of spatial development, cut annually the amount of land designated for construction purposes, and bring about more efficient land use.	Business Models/Supply side construction/demolition Geography land-use Objective: Resource efficieny/scarcity

5:11	C3: 13th 5YP	China	We will launch the “100, 1,000, 10,000” energy conservation initiative to put the top 100 energy consuming enterprises in China under national regulation, the top 1,000 energy consuming enterprises under the regulation of their respective provincial- level governments, and other high energy consuming enterprises under the regulation of lower-level governments; encourage enterprises to take voluntary measures to reduce energy consumption; facilitate the development of energy management systems, energy measurement systems, and online energy consumption monitoring systems; and carry out energy reviews and efficiency evaluations.	Business Models/Supply side energy indicator/measurement/monitoring Instrument Type: Regulation Level: Macro Level: Meso Level: Micro Reduce
5:16	C3: 13th 5YP	China	We will plan industrial production and urban development based on water resources and impose stricter control over industrial development and water quotas in regions affected by water scarcity.	Business Models/Supply side Instrument Type: Regulation
5:27	C3: 13th 5YP	China	We will tighten planning and management of mineral resources; put in place strict systems which ensure their regional management, control total exploitation, and require mining authorization; and we will better coordinate multiple mining activities.	Business Models/Supply side Instrument Type: Regulation Level: Micro
5:28	C3: 13th 5YP	China	We will support technological and process upgrading in mining enterprises, guide the merging and reorganization of small mines, and shut down mining activities that use outdated techniques or are environmentally undesirable.	Business Models/Supply side Instrument Type: Economic Instrument Type: Regulation Objective: Economic Prosperity/Growth Objective: Environmental Quality
5:30	C3: 13th 5YP	China	We will improve mechanisms to keep the prices of superior minerals stable through limiting production.	Business Models/Supply side Instrument Type: Economic
5:32	C3: 13th 5YP	China	We will implement a plan for guiding circular development, encourage the circular use of resources between production and society, and accelerate efforts to recycle resources from refuse.	Business Models/Supply side Consumers/Demand side Objective: Resource efficieny/scarcity Recycle
5:35	C3: 13th 5YP	China	We will put into effect an extended producer responsibility system.	Business Models/Supply side Instrument Type: Regulation
5:38	C3: 13th 5YP	China	We will work to see that economy is practiced throughout all stages—from production to distribution, storage, and consumption	Business Models/Supply side
5:62	C3: 13th 5YP	China	Achieve an overall improvement in the quality of the environment and ecosystems Our modes of production and ways of life will become more eco- friendly and low-carbon. We will extract and use energy and resources with much greater efficiency. Aggregate energy and water consumption, the total amount of land used for construction, and aggregate carbon emissions will be effectively controlled, and aggregate emissions of major pollutants will be significantly reduced. We will basically complete functional zoning and the building of protective barriers for eco-security.	Business Models/Supply side construction/demolition Consumers/Demand side energy land-use mining Objective: Carbon reduction Objective: Environmental Quality Objective: Pollution Objective: Resource efficieny/scarcity Reduce water
7:14	C2: 14th 5YP	China	We will encourage industrial parks to make their operations more circular, strengthen weak links in industrial chains, and extend the length of industrial chains to promote the cascading use of energy and resources and advance waste recycling and the centralized disposal of pollutants.	Business Models/Supply side energy industrial symbiosis Objective: Pollution Re-use/redistribute Recycle waste
7:15	C2: 14th 5YP	China	We will promote the comprehensive utilization of bulk solid waste and ensure the wellregulated development of the remanufacturing industry.	Business Models/Supply side Instrument Type: Regulation Re-use/redistribute Reduce Refurbish/Remanufacture waste
7:16	C2: 14th 5YP	China	We will accelerate the development of circular agriculture, which will see the integration of crop production and livestock and poultry farming.	agriculture Business Models/Supply side
7:18	C2: 14th 5YP	China	We will promote “reverse recycling” models for producers and establish a sound resource recycling system which integrates online and offline businesses so as to control resource flows.	Business Models/Supply side Objective: Resource efficieny/scarcity Recycle
7:19	C2: 14th 5YP	China	We will expand the scope of the extended producer responsibility system.	Business Models/Supply side
7:26	C2: 14th 5YP	China	We will create a market-based system for green technology innovation, implement initiatives to make breakthroughs in this area, and perform benchmarking to improve the resource efficiency of key industries and products.	best practice Business Models/Supply side Instrument Type: Economic Objective: Innovation Objective: Resource efficieny/scarcity Reduce

7:33	C2: 14th 5YP	China	We will strengthen management of water quotas in water-consuming industries.	Business Models/Supply side Instrument Type: Regulation water
7:35	C2: 14th 5YP	China	Reduction of air pollution emissions Put in place clean production facilities for 850 million metric tons of cement clinkers, 460 million metric tons of coking capacity, and about 4,000 non-ferrous metal furnaces; Realize ultra-low emissions for 530 million metric tons of steel capacity; Transform treatment practices for volatile organic compounds in petrochemicals, chemicals, painting, medicine, packaging and printing, and other key industries; Eliminate the use of bulk coal in key areas aff ected by heavy air pollution.	Business Models/Supply side Chemicals coal construction/demolition indicator/measurement/monitoring metals Objective: Environmental Quality Objective: Pollution
7:44	C2: 14th 5YP	China	Notable progress will be made in the transition to eco-friendly work practices and lifestyles.	Business Models/Supply side Consumers/Demand side
9:1	C4: 12th 5YP V1	China	In line with the principle of reduction, of re-utilization, and of resources recovery, with reduction as priority and with the rise in resources output efficiency as objective, we will promote the development of circular economy at various links of production, distribution, and consumption, and accelerate the building of a resources circular utilization system that covers the entire society.	Business Models/Supply side Consumers/Demand side Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Reduce
9:2	C4: 12th 5YP V1	China	1. Promote Circular Type Production Methods There is a need to promote clean production, and promote clean production demonstration at agricultural, industrial, construction, commerce and trade service, and other key sectors. We will control the generation, discharge, emission of pollutants at the source and during the entire process, and reduce resources consumption. It is necessary to enhance the comprehensive utilization of associated minerals and mineral tailings, and raise the comprehensive utilization level of resources. We will promote the recovery and utilization of bulk industrial solid waste, construction waste, roadside waste, agricultural and forestry waste. We will strive to reach the comprehensive utilization rate of industrial solid waste by 72 percent. We will, in line with the demands of circular economy, plan, build and transform various types of industrial parks, realize intensive land utilization, exchange utilization of waste, energy gradient utilization, waste water circular utilization, and concentrated disposal of pollutants. It is necessary to promote circular economy industrial chain and establish a circular linkage industrial system. We will raise resources output rate by 15 percent.	Business Models/Supply side
9:12	C4: 12th 5YP V1	China	It is necessary to accelerate the perfection of the system to recover re-manufactured old stuff, and promote the development of the remanufacturing sector.	Business Models/Supply side Refurbish/Remanufacture
9:19	C4: 12th 5YP V1	China	We will develop application technologies for reduction at source, for circular utilization, for re-manufacturing, for zero emissions, and production chain, and promote the typical model of circular economy.	Business Models/Supply side Objective: Carbon reduction Objective: Pollution Objective: Resource efficieny/scarcity Re-use/redistribute Reduce Refurbish/Remanufacture
9:28	C4: 12th 5YP V1	China	We will implement the strategy of giving priority to conservation, comprehensively implement the policy of exercising control over the total volume of resources utilization, of making bi-directional readjustment of supply and demand, and of carrying out differentiated management. There will be big rise in energy and resources utilization efficiency and in the degree of protection over various types of resources.	Business Models/Supply side Consumers/Demand side energy Instrument Type: Regulation Objective: Resource efficieny/scarcity Re-use/redistribute Reduce
9:39	C4: 12th 5YP V1	China	Campaigns on energy saving and on practicing low carbon economy will be promoted among enterprises.	Business Models/Supply side Instrument Type: Information Objective: Carbon reduction
9:46	C4: 12th 5YP V1	China	There is a need to promote water conservation technology in key water-using sectors and citizens' conservation of water in their daily lives.	Business Models/Supply side Consumers/Demand side

10:13	C6: 14th 5YP CE	China	Domestically, during the "14th Five-Year Plan" period, China will focus on building a new development pattern with the domestic macro-cycle as the main body and the domestic and international doublecycle promoting each other, releasing the potential of domestic demand, expanding the consumption of the population, upgrading the level of consumption, and constructing a super-large-scale domestic market, and the demand for resources and energy will still be rigidly growing, while some of China's major resources have a high degree of dependence on the outside world, and there is a contradiction between supply and demand. At the same time, some of China's major resources have a high degree of dependence on foreign countries, the contradiction between supply and demand is prominent, the efficiency of resource and energy utilisation is still not high in general, the mode of production and life of mass production, mass consumption and mass emission has not yet been fundamentally reversed, and the security of resources is under greater pressure. The need to develop a circular economy and to improve the efficiency of resource use and the level of renewable resources utilisation is very urgent, and there is enormous room for it.	Business Models/Supply side Consumers/Demand side energy Level: Macro limit: unaligned interest Objective: Economic Prosperity/Growth Objective: Pollution Objective: Resource efficieny/scarcity renewable Renewable Energy security/dependency
10:24	C6: 14th 5YP CE	China	By 2025, the circular production mode will be fully implemented, green design and clean production will be generally promoted, the comprehensive utilisation of resources will be significantly enhanced, and a resource-cycling industrial system will be basically established.	Business Models/Supply side Eco-Design Objective: Resource efficieny/scarcity Recycle
10:28	C6: 14th 5YP CE	China	Promote the green design of key products. Improve the policy mechanism for green design of products, and guide enterprises to use environmentally friendly raw materials such as non-toxic, lowtoxic, low-harm, and low (no) volatile organic compounds (VOCs) content in the production process. Promote product design solutions that are easy to disassemble, classify and recycle, and increase the proportion of alternative use of recycled raw materials. Promote the reduction of packaging and packaging printing. Accelerate the improvement of technical specifications for green design evaluation of key products, encourage industry associations to issue guidelines on green design of products, and promote cases of green design.	Business Models/Supply side Chemicals dismantle/reassemble Eco-Design Instrument Type: Regulation Instrument: Design Features Objective: Environmental Quality product design Recycle Reduce
10:29	C6: 14th 5YP CE	China	Strengthen clean production in key industries. In accordance with the law, the "double over double high energy-consuming" industry to implement mandatory cleaner production audits, and guide other industries to carry out audits voluntarily. Further regulate the cleaner production audit behaviour and improve the quality of cleaner production audits. Promote petrochemical, chemical, coking, cement, non-ferrous metals, electroplating, printing and dyeing, packaging and printing and other key industries, "a line a policy" to develop cleaner production transformation and upgrading plans. Accelerate cleaner production technology innovation, transformation and standard system construction, establish and improve the differentiation of reward and punishment mechanism, and explore the development of regional, industrial parks and industry cleaner production audit pilot demonstration work as a whole.	Business Models/Supply side Chemicals construction/demolition demonstration/experimentation energy industrial symbiosis Instrument Type: Information Instrument Type: Regulation Instrument: Design Features metals Objective: Innovation
10:30	C6: 14th 5YP CE	China	3. Promote the development of recycling parks. Promote the cyclic production of enterprises and the cyclic combination of industries, promote the comprehensive utilisation of wastes, the gradual utilisation of energy and the recycling of water resources, promote the resourceful utilisation of industrial residual pressure and heat, wastewater, waste gas and waste liquids, realise the green, lowcarbon and recycling development, and actively promote the centralised supply of gas and heat. Encourage the parks to promote the construction of green factories to achieve the intensification of plants, harmlessness of raw materials, clean production, resourcefulness of waste, low-carbon energy and green building materials. It has formulated guidelines for the development of circularisation in parks, and promoted typical models of circular economy development in key industries such as iron and steel, non-ferrous metals, metallurgy, petrochemicals, equipment manufacturing and light industry. Encourage the creation of national eco-industrial demonstration parks.	Business Models/Supply side Chemicals demonstration/experimentation energy industrial symbiosis metals Objective: Carbon reduction Objective: Resource efficieny/scarcity Recycle waste water
10:35	C6: 14th 5YP CE	China	Promote the scale, standardisation and clean utilisation of renewable resources, promote the clustering development of the renewable resources industry, and build a modern "urban minerals" base at a high level.	Business Models/Supply side industrial symbiosis Instrument Type: Regulation mining renewable

10:36	C6: 14th 5YP CE	China	The implementation of scrap iron and steel, waste non-ferrous metals, waste plastics, waste paper, waste tyres, waste mobile phones, waste power batteries and other renewable resources recycling industry norms and management, to enhance the level of standardisation of the industry, and promote the resources to the advantage of the enterprise agglomeration.	Business Models/Supply side electronics Instrument Type: Regulation Instrument: Design Features metals Plastics Recycle renewable waste
10:37	C6: 14th 5YP CE	China	Strengthen the standardised management and environmental supervision of dismantling and utilisation enterprises of waste electrical and electronic products, end-of-life motor vehicles, end-of-life ships, and waste lead storage batteries, etc., and intensify the remediation of non-compliant enterprises, so as to create a fair environment for market competition.	Business Models/Supply side dismantle/reassemble electronics Instrument Type: Economic Instrument Type: Regulation Instrument: Design Features transport waste
10:40	C6: 14th 5YP CE	China	Promote the high-quality development of the remanufacturing industry.	Business Models/Supply side Refurbish/Remanufacture
10:41	C6: 14th 5YP CE	China	Enhance the level of remanufacturing of automotive parts, construction machinery, machine tools, office equipment, etc., promote the development of remanufacturing industries in emerging fields such as shield machines, aviation engines, industrial robots, etc., and promote the application of common key remanufacturing technologies such as non-destructive testing, additive manufacturing, and flexible processing.	Business Models/Supply side Refurbish/Remanufacture transport
10:42	C6: 14th 5YP CE	China	ultivate professional remanufacturing old parts recycling enterprises.	Business Models/Supply side Recycle Refurbish/Remanufacture
10:44	C6: 14th 5YP CE	China	Encourage enterprises to apply remanufactured products in the after-sales service system and fulfil the notification obligation. Promote the combination of remanufacturing technology and digital transformation of equipment, and provide customised remanufacturing services for large-scale electromechanical equipment.	Business Models/Supply side electronics Refurbish/Remanufacture
10:45	C6: 14th 5YP CE	China	Under the premise of information sharing among regulatory authorities and risk control, support the exploration of bonded maintenance and remanufacturing re-export business for aviation, CNC machine tools, communication equipment, etc. in the Pilot Free Trade Zone.	Business Models/Supply side demonstration/experimentation indicator/measurement/monitoring Instrument Type: Economic Instrument Type: Information Instrument: Design Features Refurbish/Remanufacture Repair/Maintain
10:47	C6: 14th 5YP CE	China	Strengthen the resource utilisation of agricultural and forestry waste. Promote the efficient use of agricultural and forestry waste such as crop straw, livestock and poultry manure, forestry waste, and by-products of agricultural product processing. Strengthen the comprehensive utilisation of crop straw, adhere to the priority of agricultural use, increase the efforts to return straw to the field, give full play to the function of arable land conservation, encourage the industrialised use of straw away from the field, the development of new materials and new products, and improve the added value of straw feed, fuel, raw materials and so on. Strengthen the construction of livestock and poultry manure treatment facilities, encourage the combination of planting and raising, and promote the use of agricultural organic fertilisers returned to the field in the vicinity of the site. According to local conditions, encourage the use of secondary small fuelwood, forestry three residues (logging residues, wood residues, processing residues) for composite panel production, edible fungi cultivation and energy use, and promote the resourceful use of agricultural products processing by-products.	agriculture biobased Business Models/Supply side energy fertiliser Objective: Resource efficieny/scarcity
10:48	C6: 14th 5YP CE	China	Strengthen the recycling of waste agricultural materials. Guiding planting households, farmers' cooperatives, family farms, agricultural materials enterprises, waste materials recycling enterprises and other relevant responsible subjects to take the initiative to participate in recycling.	agriculture Business Models/Supply side Recycle waste
10:52	C6: 14th 5YP CE	China	Build a forestry circular economy industry chain, and promote the three-dimensional development of industrial models on, between and under forests. Promote circular links between planting, breeding, agricultural product processing, biomass energy, tourism and recreation, and encourage the integrated development of primary, secondary and tertiary industries.	agriculture biobased Business Models/Supply side energy
10:56	C6: 14th 5YP CE	China	Develop a list of recycling development parks in each region, and formulate recycling transformation programmes one by one in accordance with the principle of "one policy for one park".	Business Models/Supply side industrial symbiosis Level: Meso Level: Micro Recycle

10:57	C6: 14th 5YP CE	China	Actively utilise waste heat and pressure resources, promote the application of cogeneration, distributed energy and integrated photovoltaic energy storage systems, and promote the gradual utilisation of energy.	Business Models/Supply side energy industrial symbiosis Re-use/redistribute Renewable Energy
10:58	C6: 14th 5YP CE	China	Construct centralised sewage collection, treatment and reuse facilities in the park, and strengthen sewage treatment and recycling. Strengthen industrial circular links in the park and promote the comprehensive utilisation of enterprise waste resources. Constructing public information service platforms in the parks and strengthening material flow management in the parks. Provincial-level parks with conditions will all implement recycling transformation by the end of 2025.	Business Models/Supply side industrial symbiosis Level: Meso Re-use/redistribute Recycle
10:59	C6: 14th 5YP CE	China	Focusing on fly ash, coal gangue, metallurgical slag, industrial by-product gypsum, tailings, coassociated minerals, crop residues, forestry residues and other key species, promoting advanced technology and equipment for the comprehensive utilisation of bulk solid wastes, implementing key projects with demonstrative effect, vigorously promoting the use of comprehensive utilisation of resources, and constructing 50 bases for the comprehensive utilisation of bulk solid wastes and 50 bases for the comprehensive utilisation of industrial resources.	agriculture Business Models/Supply side coal demonstration/experimentation mining Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Reduce waste
10:60	C6: 14th 5YP CE	China	Construction of 50 demonstration cities for resource utilisation of construction waste. Promote the reduction of construction waste at source, establish a management system for the classification of construction waste, and regulate the construction and operation and management of places for dumping, transferring and resource utilisation of construction waste. Improve the policy on recycling and utilisation of construction waste and the certification standard system for recycled products, promote the resourceful utilisation of engineering residue, engineering slurry, demolition waste, engineering rubbish and renovation rubbish, and enhance the scale of market use of recycled products. Cultivate backbone enterprises in the construction waste resource utilisation industry, and accelerate the development, application and integration of new technologies, new techniques and new equipment for the resource utilisation of construction waste.	Business Models/Supply side construction/demolition demonstration/experimentation Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Level: Meso Level: Micro Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Reduce waste
10:62	C6: 14th 5YP CE	China	Combined with industrial intelligent transformation and digital transformation, vigorously promote the remanufacturing of industrial equipment, and expand the scope of remanufacturing applications of machine tools, industrial motors and industrial robots. Support tunnel boring, coal mining, oil extraction and other areas of enterprises to use a wide range of remanufactured products and services. Promote remanufactured auto parts and remanufactured office equipment in after-sales maintenance, insurance, commerce, logistics, leasing and other fields, and further increase the proportion of remanufactured products used in the after-sales market. The scale of the remanufacturing industry will be enlarged, 10 or so remanufacturing industry clusters will be formed, a number of leading remanufacturing enterprises will be cultivated, and the output value of the remanufacturing industry will reach RMB 200 billion.	Business Models/Supply side coal industrial symbiosis Instrument Type: Economic mining oil Refurbish/Remanufacture
10:63	C6: 14th 5YP CE	China	(7) Actions to improve the quality of the recycling of waste electrical and electronic products Using Internet information technology and encouraging diversified participation, we will build a recycling network for waste electrical and electronic products that integrates online and offline, and continue to carry out pilot projects on the extension of producer responsibility for electrical and electronic products. Support for electrical and electronic product manufacturers to establish a recycling system through independent recycling, joint recycling or entrusted recycling, guide and regulate the production enterprises and recycling enterprises, e-commerce platforms to share information. Guide the flow of waste electrical and electronic products into standardised dismantling enterprises. Guarantee the security of personal privacy information throughout the recycling process of mobile phones, computers and other electronic products. Strengthen scientific and technological innovation, encourage the promotion and application of new technologies, new techniques and new equipment, support the upgrading and transformation of processes and equipment of standardised dismantling enterprises, promote intelligent and refined dismantling, and promote high-value utilisation.	Business Models/Supply side demonstration/experimentation dismantle/reassemble electronics Instrument Type: Regulation Instrument: Design Features Objective: Innovation R&D / Science Re-use/redistribute Recycle waste

10:66	C6: 14th 5YP CE	China	Encourage packaging production, ecommerce, express delivery and other upstream and downstream enterprises to establish industrial alliances, support the establishment of qualified supplier system for express packaging products, and promote the production enterprises to consciously carry out packaging reduction.	Business Models/Supply side Plastics Reduce
10:70	C6: 14th 5YP CE	China	Encourage ecommerce and express delivery enterprises to cooperate with commercial institutions, convenience stores and property service enterprises to set up recyclable express delivery packaging agreement recycling points, and put in professional recycling facilities for recyclable express delivery packaging.	Business Models/Supply side Plastics Recycle
10:72	C6: 14th 5YP CE	China	Strengthen the construction of the traceability management platform for power batteries of new energy vehicles, and improve the traceability management system for the recycling of power batteries of new energy vehicles. Promote new energy vehicle manufacturers and used power battery laddering enterprises to build standardised recycling service outlets through self-built, co-built, authorised and other means. Promote the standardised laddering use of power batteries, and improve the technical level of residual energy detection, residual value assessment, restructuring and utilisation, and safety management. Strengthen the recycling of waste power batteries and the promotion and application of complete sets of advanced technology and equipment for secondary use. Improve the standard system of power battery recycling. Cultivate backbone enterprises for comprehensive utilisation of waste power batteries, and promote the development of waste power battery recycling industry.	Business Models/Supply side electronics energy Instrument Type: Economic Instrument Type: Regulation Instrument: Design Features Recycle transport
10:76	C6: 14th 5YP CE	China	Improve the standard system of circular economy, improve the standards and norms for green design, clean production, remanufacturing, recycled raw materials, green packaging, wasteful building materials, etc., and deepen the pilot work of national standardisation of circular economy.	Business Models/Supply side construction/demolition Eco-Design Instrument Type: Regulation Recycle Refurbish/Remanufacture waste
10:81	C6: 14th 5YP CE	China	Strengthen the standardised management of enterprises recycling end-of-life motor vehicles, waste electrical and electronic products and waste batteries, crack down on illegal modification and assembling, dismantling and processing, and increase investigation and punishment. Strengthen market supervision, crack down on the illegal production and sale of plastic products banned by the state, and strictly investigate and deal with the behaviour of degradable plastics such as false labelling and pseudo-labelling. Strengthen the environmental supervision of recycling, utilisation and disposal of waste materials.	Business Models/Supply side dismantle/reassemble electronics Instrument Type: Regulation Instrument: Design Features labelling Plastics Recycle transport
11:2	C7: The General Office of the State Council on accelerating the construction of	China	To accelerate the construction of a waste recycling system, we must be guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, thoroughly implement the spirit of the 20th National Congress of the Party, comprehensively implement Xi Jinping Thought on Ecological Civilization, fully, accurately and comprehensively implement the new development concept, and accelerate the construction of a new development pattern, strive to promote high-quality development, follow the circular economy concept of reduction, reuse, and resource utilization, aim to improve resource utilization efficiency, and take fine waste management, effective recycling, and efficient utilization as the path to cover all aspects of production and life.	3R Business Models/Supply side Consumers/Demand side Objective: Economic Prosperity/Growth Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Reduce
11:6	C7: The General Office of the State Council on accelerating the construction of	China	Give full play to the decisive role of the market in resource allocation, better play the role of the government, establish a policy system and incentive and restraint mechanisms conducive to waste recycling, stimulate the vitality of various business entities, guide the participation of the whole people, and enhance the internal content of waste recycling. vitality.	Business Models/Supply side Instrument Type: Economic Instrument Type: Regulation Recycle waste
11:11	C7: The General Office of the State Council on accelerating the construction of	China	Consolidate the main responsibilities of waste generating units and improve the general industrial solid waste management ledger system. Promote the classified collection and storage of industrial solid waste, prevent mixed piles and discharge, and reserve conditions for resource recycling. Comprehensively conduct a thorough investigation of historical solid waste storage sites, implement graded and classified rectification, and urge enterprises with large storage volumes to strengthen resource recycling.	Business Models/Supply side Recycle waste
11:13	C7: The General Office of the State Council on accelerating the construction of	China	Encourage waste generation units and waste utilization units to carry out point-to-point targeted cooperation.	Business Models/Supply side Re-use/redistribute Recycle waste

11:19	C7: The General Office of the State Council on accelerating the construction of	China	Promote qualified production and sales enterprises to carry out reverse logistics recycling of waste products.	Business Models/Supply side Recycle waste
11:20	C7: The General Office of the State Council on accelerating the construction of	China	Deeply implement the producer recycling target responsibility system in the fields of home appliances, electronic products and other fields.	Business Models/Supply side electronics Recycle
11:25	C7: The General Office of the State Council on accelerating the construction of	China	Encourage the reasonable extension of the intensive processing industry chain of scrap steel, scrap non-ferrous metals, waste paper, waste plastics and other renewable resources.	Business Models/Supply side metals Plastics renewable waste
11:29	C7: The General Office of the State Council on accelerating the construction of	China	Promulgated regulations on how to clear information when second-hand goods trading companies trade tablets, mobile phones and other electronic products to ensure the security of sellers' information when trading second-hand goods.	Business Models/Supply side electronics Instrument Type: Regulation Product safety
11:32	C7: The General Office of the State Council on accelerating the construction of	China	Promote the development of the remanufacturing industry in traditional fields such as auto parts, engineering machinery, machine tools, and cultural and office equipment, and explore the orderly development of high-end equipment remanufacturing in new fields such as shield machines, aerospace engines, and industrial robots.	Business Models/Supply side Refurbish/Remanufacture transport
11:36	C7: The General Office of the State Council on accelerating the construction of	China	Promote the resource recycling production model. Promote the cascade utilization of energy, recycling of water resources, and comprehensive utilization of solid waste within enterprises, parks, and between industries, and strengthen the resource utilization of industrial waste pressure and heat and waste gas and liquid waste.	Business Models/Supply side energy industrial symbiosis Objective: Resource efficieny/scarcity Recycle waste water
11:37	C7: The General Office of the State Council on accelerating the construction of	China	Strengthen cleaner production audits and results application of enterprises in key industries.	Business Models/Supply side Instrument Type: Regulation
11:40	C7: The General Office of the State Council on accelerating the construction of	China	romote circular agricultural production models such as the combination of planting and breeding, and the combination of agriculture and animal husbandry.	agriculture Business Models/Supply side
11:41	C7: The General Office of the State Council on accelerating the construction of	China	Strengthen the recycling of used power batteries. Strengthen the traceability management of new energy vehicle power batteries. Organize and carry out producer recycling target responsibility system actions. Establish and improve standard systems for power battery ecological design and carbon footprint accounting, actively participate in the formulation of international standards for power battery recycling, and promote international cooperation and mutual recognition of standards and specifications. Vigorously promote the quality certification of power battery cascade utilization products, and study and formulate technical specifications for waste power battery recycling and dismantling enterprises. Carry out a joint special inspection operation of "workshopstyle recycling" of used power batteries.	Business Models/Supply side dismantle/reassemble Eco-Design electronics Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Level: Macro Objective: Carbon reduction product design Recycle transport waste
11:47	C7: The General Office of the State Council on accelerating the construction of	China	Cultivate a group of industry backbone enterprises in different fields and regions with advanced technology and equipment, standardized management and operations, outstanding innovation capabilities, and strong leadership.	Business Models/Supply side demonstration/experimentation Objective: Innovation
11:49	C7: The General Office of the State Council on accelerating the construction of	China	Support domestic resource recycling enterprises to "go global" and make positive contributions to the construction of a green Silk Road. Guide state-owned enterprises to play a backbone and exemplary role in waste recycling.	Business Models/Supply side Level: Macro Recycle waste
11:61	C7: The General Office of the State Council on accelerating the construction of	China	Incorporate the research and development of key process technologies and equipment for waste recycling into the scope of key special support related to the national key research and development plan. Support enterprises to carry out industry-universityresearch cooperation with universities and scientific research institutes.	Business Models/Supply side R&D / Science Recycle
11:66	C7: The General Office of the State Council on accelerating the construction of	China	In conjunction with the implementation of the extended producer responsibility system, we will launch an action to upgrade the application of recycled materials, and guide manufacturers of automobiles, electrical appliances and electronic products to increase the proportion of recycled materials. Encourage enterprises to include the application of recycled materials into the scope of corporate social responsibility.	Business Models/Supply side electronics Objective: Social Equity Recycle transport

12:20	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	and systems such as extended producer responsibility have not yet been fully established;	Business Models/Supply side
12:33	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Transform the stock and optimize the increment. Carry out circular transformation of existing industrial parks and key enterprises to increase resource output rates. Industrial parks, enterprises and projects must implement the requirements of circular economy from planning, design, construction, operation, management and other aspects. In accordance with the characteristics of the development and utilization of natural resources and the product production and manufacturing industry, that is, the arterial industry, coordinate the rational layout of industries related to waste resource utilization, that is, the venous industry, and promote the coordinated development of the arterial industry and the venous industry.	Business Models/Supply side industrial symbiosis Objective: Resource efficieny/scarcity waste
12:53	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Section 1 Coal Industry Promote green mining of coal mines. Select advanced and efficient mining technologies based on resource occurrence conditions, promote instant mining and filling technologies such as gangue filling and exchanging gangue for coal, and encourage the use of water-preserving mining, coal and gas co-mining and other mining methods to increase the recovery rate of coal resources. Promote the comprehensive development and utilization of coal-related resources. Strengthen the comprehensive utilization of coal-based kaolin (rock), kerogen shale, diatomite, graphite, bentonite, refractory clay and other associated minerals to increase the added value of products. Encourage coal-bed methane power generation or use coal-bed methane as production and living gas in mining areas and cities. Promote the use of mine water for supplementary water sources in mining areas and production, domestic and ecological water use in surrounding areas. Implement system energy saving and consumption reduction. Encourage coal mines and coal preparation plants to carry out systematic energy conservation, eliminate old equipment and coal preparation processes, strengthen process energy consumption management, increase technical transformation of fans, water pumps and coal preparation plants, strengthen the recycling of coal washing wastewater, and reduce electricity consumption, water consumption and Media consumption. Increase efforts in researching coal slime dehydration technology and improve coal slime utilization. Promote ecological environment protection in mining areas. Encourage the use of mining gangue to fill goafs, carry out three-dimensional ecological improvement of subsidence areas, use gangue, ash, etc. for land reclamation, and develop ecological	Business Models/Supply side coal
12:62	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Section 2 Electric Power Industry Strengthen energy conservation and consumption reduction. Adjust and optimize the power supply structure, eliminate backward small thermal power units, and improve the technical equipment level of thermal power units. Increase the energy-saving renovation of boilers, fans, water pumps and other equipment, promote energy-saving technologies such as plasma oil-free ignition, and reduce the power consumption rate of the factory. Encourage the development of combined heat and power and combined heating, electricity and cooling, and strictly implement "heat determines electricity." Accelerate the construction of smart grids and power grid energysaving technological transformation, improve grid transmission efficiency, and effectively reduce line losses. Where conditions permit, the use of unconventional water sources such as gray water and sea water as cooling water is encouraged. Promote the comprehensive utilization of fly ash and desulfurization gypsum. Encourage the use of fly ash to produce building materials, promote the application of fly ash in municipal construction, road construction and other projects, orderly promote the extraction of alumina from high-aluminum fly ash, and support the ultra-fine processing of fly ash for papermaking , rubber and other filling materials. Encourage the use of desulfurized gypsum to 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 12/47 produce gypsum boards, high-end decorative building materials and improve saline-alkali soil. Support the construction of renewable energy power generation and comprehensive resource utilization power plants. Strengthen access supervision, and give priority to supporting renewable energy power generation such as wind energy, solar energy, biomass energy, and	Business Models/Supply side energy

12:189	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote communication operators to recycle used lead-acid batteries in base stations. Relying on the service outlets of communication operators, explore the use of deposit systems and other methods to establish a recycling system for used mobile phones, batteries, chargers and other communication products to increase the recycling rate. Promote the standardization of mobile phone chargers and batteries.	Business Models/Supply side electronics Instrument Type: Regulation Recycle
12:197	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Give full play to the role of the retail and wholesale industry as a bridge connecting production and consumption, support the retail and wholesale industry in purchasing energy-saving and environmentally friendly products, encourage trade and circulation enterprises to open green product sales areas, counters, etc., promote green products to consumers, expand the consumption of green products, and promote green products. Product production. Actively cultivate the development of the rental industry and used goods industry, and promote product reuse.	Business Models/Supply side Consumers/Demand side energy Objective: Environmental Quality product design Re-use/redistribute Reduce
12:219	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Accelerate the cultivation of leading enterprises in renewable resources, encourage mergers, reorganizations, joint ventures, etc. to accelerate industry integration and increase industry concentration.	Business Models/Supply side Instrument Type: Economic renewable
12:226	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Support the establishment of an auto parts recycling system with auto 4S stores and special maintenance sites as the main channels, supplemented by recycling and dismantling enterprises. Standardize the establishment of specialized remanufacturing and used parts recycling enterprises and regional remanufacturing and used parts recycling logistics distribution centers.	Business Models/Supply side dismantle/reassemble Recycle Refurbish/Remanufacture Repair/Maintain transport
12:230	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Support the construction of remanufacturing industry demonstration bases and promote the development of industrial clusters.	Business Models/Supply side demonstration/experimentation industrial symbiosis
12:289	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Select scientific research units or large enterprises with good foundation and strong technical strength to support the construction of a number of key circular economy engineering laboratories, technology centers, engineering research centers and quality inspection centers. Strengthen the research and development of key common technologies for the circular economy such 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 40/47 as source reduction, recycling, remanufacturing, zero emissions, and industrial linkage. Build an industry-university-research docking platform and a mechanism for the industrialization of scientific research results, build a number of resource recycling technology industrialization demonstration bases and demonstration projects, and increase the promotion and application of advanced and applicable technologies.	Business Models/Supply side industrial symbiosis Objective: Carbon reduction Objective: Pollution R&D / Science Recycle Reduce Refurbish/Remanufacture
12:292	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Implement the "Guidance Catalog for Industrial Structural Adjustment", "Guidance Catalog for Foreign Investment Industries", "Catalogue of Restricted Land Use Projects" and "Catalogue of Prohibited Land Use Projects".	Business Models/Supply side Instrument Type: Regulation Instrument: Design Features Investment land-use
12:293	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Further raise the entry threshold for industries with high energy consumption, high water consumption, high land consumption, and high emission, and strictly enforce constraints on energy conservation, environmental protection, land, and safety.	Business Models/Supply side energy Instrument Type: Regulation land-use Objective: Environmental Quality Objective: Pollution Reduce water

12:317	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Banking financial institutions are encouraged to provide diversified credit support, including credit loans, for key circular economy projects and the "Ten Hundreds and Thousands" demonstration project of circular economy, innovate credit products, broaden the scope of mortgage guarantees, and improve guarantee methods. Support circular economy demonstration pilot enterprises in issuing direct financing instruments such as corporate (corporate) bonds, project revenue bonds, convertible bonds, short-term financing bonds, and medium-term notes. Explore the issuance of collective bonds and collective bills by small and medium-sized enterprises in the circular economy demonstration pilot park. Support qualified resource recycling companies to apply for domestic and overseas listings and refinancing. Encourage the establishment of circular economy venture capital funds and study the establishment of circular economy industry investment funds. All localities should formulate supporting investment and financing policies and implementation plans to support the development of circular economy in accordance with relevant national policies.	Business Models/Supply side demonstration/experimentation Finance sector Investment Objective: Innovation Recycle
12:324	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Improve relevant laws and regulations, establish an extended producer responsibility system, and promote producers to implement responsibilities such as recycling and processing of discarded products.	Business Models/Supply side Instrument Type: Regulation product guarantee Recycle
12:326	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Study and establish a producer responsibility system for mandatory recycling of products and packaging, cars, tires, mobile phones, and chargers.	Business Models/Supply side electronics Instrument Type: Regulation Plastics Recycle transport
12:336	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Strictly investigate and deal with enterprises that cause secondary pollution through comprehensive utilization of resources and dismantling and processing of renewable resources.	Business Models/Supply side dismantle/reassemble Objective: Pollution Objective: Resource efficieny/scarcity renewable
12:341	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Explore the promotion and application of advanced and applicable technologies through government buyouts. Implement the "going global" strategy of circular economy and accelerate the export of competitive key technologies and equipment for circular economy.	Business Models/Supply side Instrument Type: Economic
13:4	EU2: A new Circular Economy Action Plan 2020	EU	For business, working together on creating the framework for sustainable products will provide new opportunities in the EU and beyond. This progressive, yet irreversible transition to a sustainable economic system is an indispensable part of the new EU industrial strategy.	Business Models/Supply side Eco-Design Objective: Economic Prosperity/Growth Objective: Sustainability product design
13:6	EU2: A new Circular Economy Action Plan 2020	EU	A recent study estimates that applying circular economy principles across the EU economy has the potential to increase EU GDP by an additional 0.5% by 2030 creating around 700 000 new jobs5 . There is a clear business case for individual companies too: since manufacturing firms in the EU spend on average about 40% on materials, closed loop models can increase their profitability, while sheltering them from resource price fluctuations.	Business Models/Supply side indicator/measurement/monitoring Objective: Economic Prosperity/Growth Objective: Employment Objective: Resource efficieny/scarcity Time
13:9	EU2: A new Circular Economy Action Plan 2020	EU	A whole new range of sustainable services, productas-service models and digital solutions will bring about a better quality of life, innovative jobs and upgraded knowledge and skills.	Business Models/Supply side Objective: Employment Objective: Innovation Objective: Social Equity Objective: Sustainability
13:10	EU2: A new Circular Economy Action Plan 2020	EU	The plan presents a set of interrelated initiatives to establish a strong and coherent product policy framework that will make sustainable products, services and business models the norm and transform consumption patterns so that no waste is produced in the first place.	Business Models/Supply side Consumers/Demand side Eco-Design Objective: Sustainability Objective: Waste reduction product design waste
13:29	EU2: A new Circular Economy Action Plan 2020	EU	incentivising product-as-a-service or other models where producers keep the ownership of the product or the responsibility for its performance throughout its lifecycle;	Business Models/Supply side Instrument Type: Economic

13:38	EU2: A new Circular Economy Action Plan 2020	EU	The Commission will also propose that companies substantiate their environmental claims using Product and Organisation Environmental Footprint methods. The Commission will test the integration of these methods in the EU Ecolabel and include more systematically durability, recyclability and recycled content in the EU Ecolabel criteria.	Business Models/Supply side indicator/measurement/monitoring labelling Recycle
13:42	EU2: A new Circular Economy Action Plan 2020	EU	facilitating industrial symbiosis by developing an industry-led reporting and certification system, and enabling the implementation of industrial symbiosis;	Business Models/Supply side indicator/measurement/monitoring industrial symbiosis labelling
13:63	EU2: A new Circular Economy Action Plan 2020	EU	applying product-as-service solutions to reduce virgin material consumption, use sustainable alternative transport fuels, optimise infrastructure and vehicle use, increase occupancy rates and load factors, and eliminate waste and pollution.	Business Models/Supply side Objective: Pollution Objective: Resource efficieny/scarcity Objective: Sustainability Objective: Waste reduction Reduce transport waste
13:83	EU2: A new Circular Economy Action Plan 2020	EU	The strategy will aim at strengthening industrial competitiveness and innovation in the sector, boosting the EU market for sustainable and circular textiles, including the market for textile reuse, addressing fast fashion and driving new business models.	Business Models/Supply side Objective: Economic Prosperity/Growth Objective: Sustainability Re-use/redistribute
13:85	EU2: A new Circular Economy Action Plan 2020	EU	incentives and support to productas-service models, circular materials and production processes, and increasing transparency through international cooperation;	Business Models/Supply side Instrument Type: Economic Level: Macro
13:87	EU2: A new Circular Economy Action Plan 2020	EU	boosting the sorting, re-use and recycling of textiles, including through innovation, encouraging industrial applications and regulatory measures such as extended producer responsibility.	Business Models/Supply side Objective: Innovation Re-use/redistribute Recycle
13:119	EU2: A new Circular Economy Action Plan 2020	EU	overdependence of the EU on foreign waste treatment, but they have also mobilised the recycling industry to increase its capacity and add value to waste in the EU.	Business Models/Supply side Level: Macro Recycle security/dependency waste
13:133	EU2: A new Circular Economy Action Plan 2020	EU	support a business led initiative to develop environmental accounting principles that complement financial data with circular economy performance data;	Business Models/Supply side indicator/measurement/monitoring
13:136	EU2: A new Circular Economy Action Plan 2020	EU	Horizon Europe will support the development of indicators and data, novel materials and products, substitution and elimination of hazardous substances based on “safe by design” approach, circular business models, and new production and recycling technologies, including exploring the potential of chemical recycling, keeping in mind the role of digital tools to achieve circular objectives.	Business Models/Supply side Chemicals indicator/measurement/monitoring Product safety R&D / Science Recycle
13:139	EU2: A new Circular Economy Action Plan 2020	EU	The European Institute of Innovation and Technology will coordinate innovation initiatives on circular economy in collaboration with universities, research organisations, industry and SME’s within the Knowledge and Innovation Communities.	Business Models/Supply side Objective: Innovation R&D / Science SME
15:17	EU4: Regulation proposal Critical Rawmaterials Act	EU	Finally, Member States should promote the recovery of critical raw materials from extractive waste by improving the availability of information and by addressing legal, economic and technical barriers. One possible solution that Member States should look into are risk-sharing mechanisms between operators and the Member State to promote recovery from closed waste facilities.	Business Models/Supply side critical raw materials Eco-Design Instrument Type: Economic Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Level: Macro limit limit: information limit: market functioning limit: policy Recycle waste
15:19	EU4: Regulation proposal Critical Rawmaterials Act	EU	Operators of extractive waste facilities, both existing and new, should perform a preliminary economic assessment study regarding the recovery of critical raw materials from extractive waste present on the site and from such waste being generated.	Business Models/Supply side critical raw materials indicator/measurement/monitoring mining waste
15:35	EU4: Regulation proposal Critical Rawmaterials Act	EU	Operators obliged to submit waste management plans in accordance with Article 5 of Directive 2006/21/EC shall provide to the competent authority as defined in Article 3 of Directive 2006/21/EC a preliminary economic assessment study regarding the potential recovery of critical raw materials from: (a) the extractive waste stored in the facility; and (b) the extractive waste being generated or, where considered more effective, from the extracted volume prior to it becoming waste.	Business Models/Supply side critical raw materials indicator/measurement/monitoring Recycle waste

15:37	EU4: Regulation proposal Critical Rawmaterials Act	EU	Member States shall establish a database of all closed waste facilities, including abandoned waste facilities, located on their territory. This database shall contain information on: (a) the location, areal extent and waste volume of the waste facility; (b) the operator or former operator of the waste facility and, where applicable, their legal successor; (c) the approximate quantities and concentrations of all raw materials contained in the extractive waste and, where available, in the original mineral deposit, in accordance with paragraph 6 of this Article; EN 41 EN (d) any additional information considered relevant by the Member State to enable the recovery of critical raw materials from a waste facility. 5. The database referred to in paragraph 4 shall be put in place by [OP please insert: 1 year after the date of entry into force of this Regulation] and all information completed by [OP please insert: 3 years after the date of entry into force of this Regulation]. It shall be made available in a publicly accessible and digital form and updated at least every 2 years to incorporate additional available information and newly closed or newly identified facilities.	Business Models/Supply side critical raw materials Geography indicator/measurement/monitoring Level: Macro Recycle Time waste
15:38	EU4: Regulation proposal Critical Rawmaterials Act	EU	From [OP please insert: 3 years after the date of entry into force of this Regulation], any natural or legal person that places on the market magnetic resonance imaging devices, wind energy generators, industrial robots, motor vehicles, light means of transport, cooling generators, heat pumps, electric motors, including where they are integrated in other products, automatic washing machines, tumble driers, microwaves, vacuum cleaners or dishwashers shall ensure that those products bear a conspicuous, clearly legible and indelible label indicating: (a) whether or not those products incorporate one or more permanent magnets; EN 42 EN (b) if the product incorporates one or more permanent magnets, whether those magnets belong to any of the following types: (i) Neodymium-Iron-Boron; (ii) Samarium-Cobalt; (iii) Aluminium-Nickel-Cobalt; (iv) Ferrite.	Business Models/Supply side Instrument Type: Information Instrument: Design Features labelling
15:39	EU4: Regulation proposal Critical Rawmaterials Act	EU	From [OP please insert: 3 years after the date of entry into force of this Regulation], any natural or legal person that places on the market products referred to in paragraph 1 incorporating one or more permanent magnets of the types referred in paragraph 1, point (b), points (i) to (iii), shall ensure that a data carrier is present on or in the product. 4. The data carrier referred to in paragraph 3 shall be linked to a unique product identifier that provides access to the following: (a) the name, registered trade name or registered trade mark and the postal address of the responsible natural or legal person and, where available, electronic means of communication where they can be contacted; (b) information on the weight, location and chemical composition of all individual permanent magnets included in the product, and on the presence and type of magnet coatings, glues and any additives used; (c) information enabling access and removal of all permanent magnets incorporated in the product, at least including the sequence of all removal steps, tools or technologies required for the access and removal of the permanent magnet, without prejudice to Article 15(1) of Directive 2012/19/EU.	Business Models/Supply side dismantle/reassemble indicator/measurement/monitoring Instrument Type: Information Instrument: Design Features product design
15:40	EU4: Regulation proposal Critical Rawmaterials Act	EU	From either [OP please insert: 3 years after the date of entry into force of this Regulation] or 2 years after the entry into force of the delegated act referred to in paragraph 2, whichever is later, any natural or legal person that places on the market products referred to in Article 27(1) which incorporate one or more permanent magnets referred to in Article 27(1), point (b)(i) to (iii) and for which the total weight of all such permanent magnets exceeds 0.2 kg shall make publicly available on a free access website the share of neodymium, dysprosium, praseodymium, terbium, boron, samarium, nickel and cobalt recovered from post-consumer waste present in the permanent magnets incorporated in the product.	Business Models/Supply side indicator/measurement/monitoring Instrument Type: Information Instrument: Design Features Recycle Time waste
15:52	EU4: Regulation proposal Critical Rawmaterials Act	EU	The measures on monitoring leave Member States responsible for identifying and monitoring key market operators. The burden on companies to provide information is limited as it only captures large companies active in extraction, refining or recycling of CRMs.	Business Models/Supply side critical raw materials indicator/measurement/monitoring mining

16:21	EU5: Ecodesign requirements for sustainable products	EU	Delegated acts referred to in the first subparagraph may also supplement this Regulation by: (a) requiring manufacturers, their authorised representatives or importers to make parts of the technical documentation related to the relevant product digitally available to the Commission or market surveillance authorities without request, in accordance with Article 30(3); (b) requiring manufacturers, their authorised representatives or importers to make available to the Commission information on the quantities of a product covered by those delegated acts placed on the market or put into service, in accordance with Article 31(1);	Business Models/Supply side Instrument Type: Information Instrument: Design Features Level: Macro
16:22	EU5: Ecodesign requirements for sustainable products	EU	requiring products placed on the market to be able to measure the energy they consume or their performance in relation to other relevant product parameters referred to in Annex I while in use, in accordance with Article 31(2); (d) requiring manufacturers, their authorised representatives or importers to collect, anonymise, or report to the Commission the in-use data referred to in point (c), in accordance with Article 31(3); (e) requiring the use of online tools to calculate the performance of a product in relation to a product parameter referred to in Annex I, in accordance with Article 32(2);	Business Models/Supply side energy indicator/measurement/monitoring product design
16:28	EU5: Ecodesign requirements for sustainable products	EU	(d) there shall be no disproportionate negative impact on the competitiveness of economic actors, at least of SMEs; (e) there shall be no proprietary technology imposed on manufacturers or other economic actors; (f) there shall be no disproportionate administrative burden on manufacturers or other economic actors.	Business Models/Supply side Objective: Economic Prosperity/Growth SME
16:29	EU5: Ecodesign requirements for sustainable products	EU	provide, upon request, manufacturers, notified bodies and competent national authorities with available information related to their supplies or services that is relevant in order to verify compliance with ecodesign requirements; (b) allow, in the absence of information referred to in point (a), manufacturers to assess their supplies or services in order to verify compliance with ecodesign requirements and give access to relevant documents or facilities to those manufacturers; (c) enable notified bodies and competent national authorities to verify the correctness of information related to their activities and relevant for verifying compliance with ecodesign requirements.	Business Models/Supply side indicator/measurement/monitoring Instrument Type: Information Instrument Type: Regulation Instrument: Design Features
16:38	EU5: Ecodesign requirements for sustainable products	EU	The Commission shall ensure that when it conducts its activities, it observes a balanced participation of Member States' representatives and all interested parties involved with the product or product group in question, such as industry, including SMEs and craft industry, trade unions, traders, retailers, importers, environmental protection groups and consumer organisations.	Business Models/Supply side Consumers/Demand side SME
16:39	EU5: Ecodesign requirements for sustainable products	EU	Two or more economic operators may submit a self-regulation measure establishing ecodesign requirements for products to the Commission as an alternative to a delegated act adopted pursuant to Article 4. Those operators shall provide evidence that the criteria referred to in paragraph 3, points (a) to (e), are fulfilled. With respect to paragraph 3, point (a), that evidence shall consist of a structured technical, environmental and economic analysis, justifying the ecodesign requirements and objectives of the self-regulation measure, and assessing the impacts of the ecodesign requirements set in that self-regulation measure.	Business Models/Supply side indicator/measurement/monitoring Instrument Type: Regulation Instrument: Design Features
16:41	EU5: Ecodesign requirements for sustainable products	EU	An economic operator that discards unsold consumer products directly, or on behalf of another economic operator, shall disclose: (a) the number of unsold consumer products discarded per year, differentiated per type or category of products; EN 63 EN (b) the reasons for the discarding of products; (c) the delivery of discarded products to preparing for re-use, remanufacturing, recycling, energy recovery and disposal operations in accordance with the waste hierarchy as defined by Article 4 of Directive 2008/98/EC. The economic operator shall disclose that information on a freely accessible website or otherwise make it publicly available, until a delegated act adopted pursuant to paragraph 3 starts applying to the category of unsold consumer products discarded by the operator in question.	4R/Waste Hierarchy Business Models/Supply side indicator/measurement/monitoring Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Re-use/redistribute Recover Recycle Refurbish/Remanufacture waste

16:43	EU5: Ecodesign requirements for sustainable products	EU	When placing products covered by a delegated act adopted pursuant to Article 4 on the market or putting them into service, manufacturers shall ensure that: (a) those products have been designed and manufactured in accordance with the requirements set out in Article 6 and the delegated acts adopted pursuant to Article 4; (b) those products are accompanied by the information required by the Article 7 and the delegated acts adopted pursuant to Article 4; (c) a product passport is available in accordance with Article 8 and the delegated acts adopted pursuant to Article 4.	Business Models/Supply side indicator/measurement/monitoring Instrument Type: Information Instrument Type: Regulation Instrument: Design Features product design
16:44	EU5: Ecodesign requirements for sustainable products	EU	Manufacturers shall ensure that their products bear a type, batch or serial number or other element allowing their identification, or, where the size or nature of the product does not allow so, that the required information is provided on the packaging or in a document accompanying the product.	Business Models/Supply side Instrument Type: Information Instrument Type: Regulation Instrument: Design Features labelling product design
16:45	EU5: Ecodesign requirements for sustainable products	EU	Manufacturers shall ensure that that a product covered by a delegated act adopted pursuant to Article 4 is accompanied by instructions that enable consumers and other end-users to safely assemble, install, operate, store, maintain, repair and dispose of the product in a language that can be easily understood by consumers and other endusers, as determined by the Member State concerned. Such instructions shall be clear, understandable and legible and include at least the information specified in the delegated acts adopted pursuant to Article 4 and pursuant to Article 7(2)(b), point (ii).	Business Models/Supply side Consumers/Demand side dismantle/reassemble Instrument Type: Information Instrument: Design Features Repair/Maintain waste
17:5	EU6: Green Deal	EU	Achieving a climate neutral and circular economy requires the full mobilisation of industry. It takes 25 years – a generation – to transform an industrial sector and all the value chains. To be ready in 2050, decisions and actions need to be taken in the next five years.	Business Models/Supply side Objective: Carbon reduction Time
17:9	EU6: Green Deal	EU	The circular economy action plan will include a ‘sustainable products’ policy to support the circular design of all products based on a common methodology and principles. It will prioritise reducing and reusing materials before recycling them. It will foster new business models and set minimum requirements to prevent environmentally harmful products from being placed on the EU market. Extended producer responsibility will also be strengthened.	4R/Waste Hierarchy Business Models/Supply side product design Recycle Reduce
17:11	EU6: Green Deal	EU	The circular economy action plan will also include measures to encourage businesses to offer, and to allow consumers to choose, reusable, durable and repairable products. It will analyse the need for a ‘right to repair’, and curb the built-in obsolescence of devices, in particular for electronics. Consumer policy will help to empower consumers to make informed choices and play an active role in the ecological transition. New business models based on renting and sharing goods and services will play a role as long as they are truly sustainable and affordable.	Business Models/Supply side Consumers/Demand side electronics Instrument Type: Information Re-use/redistribute Repair/Maintain

ID	Document	Document Groups	Quotation Content	Codes
1:51	EU1: EU action plan for the circular economy	EU	chemicals	Chemicals
1:129	EU1: EU action plan for the circular economy	EU	Another very important issue for the development of secondary raw materials markets is the link with legislation on chemicals. A growing number of chemical substances are identified as being of concern for health or the environment and become subject to restrictions or prohibitions. However, these substances may be present in products sold before the restrictions applied, some of which have a long lifetime, and therefore chemicals of concern can sometimes be found in recycling streams. Such substances can be costly to detect or remove, creating obstacles in particular for small recyclers.	Chemicals health Objective: Environmental Quality Objective: Social Equity Recycle
1:130	EU1: EU action plan for the circular economy	EU	The promotion of non-toxic material cycles and better tracking of chemicals of concern in products will facilitate recycling and improve the uptake of secondary raw materials.	Chemicals Instrument Type: Information limit: information Recycle
1:139	EU1: EU action plan for the circular economy	EU	The presence of hazardous chemical additives can pose technical difficulties and the emergence of innovative types of plastics raises new questions, e.g. as regards plastics biodegradability.	biobased Chemicals limit
1:168	EU1: EU action plan for the circular economy	EU	The bio-based sector has also shown its potential for innovation in new materials, chemicals and processes, which can be an integral part of the circular economy.	Chemicals Objective: Innovation
4:39	C5: Circular Economy Promotion Law of the PRC	China	The state adopts a key supervision and administration system to key enterprises in the high energy or water consuming industries such as steel, non-ferrous metal, coal, electric power, petroleum processing, chemical industry, building materials, building construction, paper-making, printing and dyeing.	Business Models/Supply side Chemicals coal construction/demolition energy Level: Macro metals oil paper water
4:48	C5: Circular Economy Promotion Law of the PRC	China	Enterprises engaging in the design of products, equipment, products and packages shall, in accordance with the requirement of reducing the consumption of resources and the generation of wastes, give preference to the materials which are recyclable, dismountable, degradable, innocuous, harmless or slightly harmful or poisonous, and the compulsory requirements in the relevant state standards shall be satisfied.	best practice biobased Business Models/Supply side Chemicals dismantle/reassemble Instrument Type: Regulation product design Recycle Reduce waste
4:49	C5: Circular Economy Promotion Law of the PRC	China	For any electric apparatus or electronic product that may cause environmental pollution in the process of dismantling and disposal, it is prohibited to use any poisonous or harmful substance. The directory of poisonous and harmful substances prohibited from use in electric apparatus and electronic products shall be worked out by the administrative department of circular economy development under the State Council together with the environmental protection department and other competent departments Translation by lawinfochina.com 5 under the State Council.	Chemicals dismantle/reassemble electronics Instrument Type: Regulation Instrument: Design Features Level: Macro Objective: Pollution
4:55	C5: Circular Economy Promotion Law of the PRC	China	Enterprises in such industries as electric power, oil processing, chemical industry, steel, non-ferrous metal and building materials must replace fuel oil with clean energy, e.g., clean coal, petroleum coke, natural gas, etc. within the scope and time limit prescribed by the state, and must stop using fuel generator sets and oil boilers that fail to satisfy the relevant state provisions.	Business Models/Supply side Chemicals coal construction/demolition energy Instrument Type: Regulation Instrument: Design Features Level: Macro metals oil
4:60	C5: Circular Economy Promotion Law of the PRC	China	The state encourages the use of innocuous and harmless solid wastes to produce building materials, the use of bulk cement and the use of ready-mixed concrete and ready-mixed mortar.	Chemicals construction/demolition
4:62	C5: Circular Economy Promotion Law of the PRC	China	The people's governments at or above the county level and the agricultural departments and other competent departments thereunder shall promote the intensive use of land, encourage agricultural producers to take advanced water-saving, fertilizer-saving and pesticide-saving planting, cultivating and irrigating technologies, improve the energy efficiency of agricultural machinery and give priority to the development of ecological agriculture.	Business Models/Supply side Chemicals energy fertiliser Instrument Type: Regulation land-use Level: Macro Level: Meso Level: Micro water

4:67	C5: Circular Economy Promotion Law of the PRC	China	Enterprises in the catering, entertainment, hotel and other service industries shall use energy-saving, water-saving, material-saving and environment-friendly products and reduce or stop using energy-waste or contaminating products. Enterprises in the catering, entertainment, hotel and other service industries which are established after this Law comes into effect shall use energy-saving, water-saving, material-saving and environmentfriendly technologies, equipment and facilities.	Business Models/Supply side Chemicals food Objective: Resource efficieny/scarcity product design Reduce water
4:105	C5: Circular Economy Promotion Law of the PRC	China	Where any enterprise designs the use of any poisonous and harmful substance listed in the prohibited category of the state in any electric apparatus, electronic product or other product which may cause environmental pollution in the process of dismantlement or disposal, the product quality control department of the local people's government at or above the county level shall order it to Translation by lawinfochina.com 11 correct within a certain time limit, impose a fine of not more than 200,000 yuan but not less than 20,000 yuan upon it if it refuses to correct within the time limit, and, if the circumstances are serious, notify the administrative department for industry and commerce of the situation and the latter shall revoke the business license of the enterprise according to law.	Business Models/Supply side Chemicals electronics Instrument Type: Regulation Instrument: Design Features Level: Macro Level: Meso Level: Micro Objective: Environmental Quality Objective: Pollution
4:106	C5: Circular Economy Promotion Law of the PRC	China	Where any enterprise in electric power, petroleum processing, chemical industry, steel, non-ferrous metal or building materials, as in violation of this Law, fails to stop using a fuel generator set or oil boiler which fails to meet the prescribed standards of the state within a prescribed scope or time limit, the administrative department of circular economy development under the local people's government at or above the county level shall order it to correct within a certain time limit, and, if it fails to correct within the time limit, order it to dismantle the fuel generator set or oil boiler, and impose a fine of not more than 500,000 yuan but not less than 50,000 yuan upon it.	Business Models/Supply side Chemicals energy Instrument Type: Regulation Instrument: Design Features metals oil
5:51	C3: 13th 5YP	China	We will implement a demonstration project for circular agriculture through integrated planting and breeding, and promote the recovery of resources and safe disposal of waste materials from planting and breeding industries.	agriculture Chemicals demonstration/experimentation Objective: Resource efficieny/scarcity Re-use/redistribute Recycle waste
5:68	C3: 13th 5YP	China	6. Agricultural Agricultural Agricultural Agricultural product product product product quality quality quality quality and safety § Make a serious push to reduce pesticide and chemical fertilizer use in the production of agricultural products;	agriculture Chemicals Reduce
7:23	C2: 14th 5YP	China	We will pursue the clean and efficient use of coal and other fossil energy sources and the green transformation of industries such as steel, petrochemical, and building materials.	Chemicals coal construction/demolition energy metals Reduce
7:35	C2: 14th 5YP	China	Reduction of air pollution emissions □ Put in place clean production facilities for 850 million metric tons of cement clinkers, 460 million metric tons of coking capacity, and about 4,000 non-ferrous metal furnaces; □ Realize ultra-low emissions for 530 million metric tons of steel capacity; □ Transform treatment practices for volatile organic compounds in petrochemicals, chemicals, painting, medicine, packaging and printing, and other key industries; □ Eliminate the use of bulk coal in key areas aff ected by heavy air pollution.	Business Models/Supply side Chemicals coal construction/demolition indicator/measurement/monitoring metals Objective: Environmental Quality Objective: Pollution
7:37	C2: 14th 5YP	China	03 Soil contamination prevention and control and safe use of land □ Carry out demonstrations on the safe use of agricultural lands in 100 counties with large areas of contaminated soil; □ Implement 100 projects to control soil contamination at the source with a focus on chemical and non-ferrous metal industries.	agriculture Chemicals demonstration/experimentation indicator/measurement/monitoring land-use Level: Meso Level: Micro metals Objective: Environmental Quality Objective: Pollution

7:39	C2: 14th 5YP	China	05 Medical and hazardous waste disposal and comprehensive utilization of solid waste Address weaknesses in medical waste disposal facilities by building a national technology center for hazardous waste risk prevention and control along with six regional centers, as well as 20 regional centers for the centralized disposal of special hazardous waste; Launch 100 demonstration projects for comprehensively using bulk solid waste with a focus on tailings, associated minerals, coal gangue, fly ash, and construction refuse.	Chemicals coal construction/demolition demonstration/experimentation health Level: Meso Level: Micro mining waste
10:28	C6: 14th 5YP CE	China	Promote the green design of key products. Improve the policy mechanism for green design of products, and guide enterprises to use environmentally friendly raw materials such as non-toxic, lowtoxic, low-harm, and low (no) volatile organic compounds (VOCs) content in the production process. Promote product design solutions that are easy to disassemble, classify and recycle, and increase the proportion of alternative use of recycled raw materials. Promote the reduction of packaging and packaging printing. Accelerate the improvement of technical specifications for green design evaluation of key products, encourage industry associations to issue guidelines on green design of products, and promote cases of green design.	Business Models/Supply side Chemicals dismantle/reassemble Eco-Design Instrument Type: Regulation Instrument: Design Features Objective: Environmental Quality product design Recycle Reduce
10:29	C6: 14th 5YP CE	China	Strengthen clean production in key industries. In accordance with the law, the "double over double high energy-consuming" industry to implement mandatory cleaner production audits, and guide other industries to carry out audits voluntarily. Further regulate the cleaner production audit behaviour and improve the quality of cleaner production audits. Promote petrochemical, chemical, coking, cement, non-ferrous metals, electroplating, printing and dyeing, packaging and printing and other key industries, "a line a policy" to develop cleaner production transformation and upgrading plans. Accelerate cleaner production technology innovation, transformation and standard system construction, establish and improve the differentiation of reward and punishment mechanism, and explore the development of regional, industrial parks and industry cleaner production audit pilot demonstration work as a whole.	Business Models/Supply side Chemicals construction/demolition demonstration/experimentation energy industrial symbiosis Instrument Type: Information Instrument Type: Regulation Instrument: Design Features metals Objective: Innovation
10:30	C6: 14th 5YP CE	China	3. Promote the development of recycling parks. Promote the cyclic production of enterprises and the cyclic combination of industries, promote the comprehensive utilisation of wastes, the gradual utilisation of energy and the recycling of water resources, promote the resourceful utilisation of industrial residual pressure and heat, wastewater, waste gas and waste liquids, realise the green, lowcarbon and recycling development, and actively promote the centralised supply of gas and heat. Encourage the parks to promote the construction of green factories to achieve the intensification of plants, harmlessness of raw materials, clean production, resourcefulness of waste, low-carbon energy and green building materials. It has formulated guidelines for the development of circularisation in parks, and promoted typical models of circular economy development in key industries such as iron and steel, non-ferrous metals, metallurgy, petrochemicals, equipment manufacturing and light industry. Encourage the creation of national eco-industrial demonstration parks.	Business Models/Supply side Chemicals demonstration/experimentation energy industrial symbiosis metals Objective: Carbon reduction Objective: Resource efficieny/scarcity Recycle waste water
10:32	C6: 14th 5YP CE	China	5. Promote the coordinated disposal of municipal waste. Improve policies, mechanisms and standards, promote coordinated disposal facilities with reference to the management of urban environmental infrastructure, and guarantee the continuous and stable operation of facilities. Determine the standard of payment for co-disposal of municipal waste through market-oriented methods, and orderly promote the co-disposal of medical waste, hazardous waste and domestic rubbish in cement kilns and smelting kilns, as well as the coordinated promotion of the co-disposal of medical waste in domestic rubbish incinerators in an emergency. Promote the co-ordinated co-disposal of food waste, garden waste, sewage plant sludge and other low-value organic waste.	biobased Chemicals construction/demolition food Instrument Type: Economic Instrument Type: Regulation Instrument: Design Features Recover waste

10:65	C6: 14th 5YP CE	China	(9) Special action on the whole chain management of plastic pollution Scientific and reasonable promotion of plastic source reduction, strictly prohibit the production of ultra-thin agricultural film, daily chemical products containing plastic microbeads and other products that endanger the environment and human health, and encourage the public to reduce the use of disposable plastic products. In-depth assessment of the resource and environmental impacts of various types of plastic substitutes throughout their life cycle. Promote degradable plastics according to local conditions, actively and steadily, improve the standard system, enhance inspection and testing capacity, and regulate the application and disposal of degradable plastics. Promote the application of standard films and improve the recycling level of used agricultural films. Strengthen the classification, recycling and reuse of plastic waste, accelerate the construction of domestic waste incineration and treatment facilities, and reduce the amount of plastic waste in landfills. Carry out plastic rubbish cleanup in rivers, lakes and coastlines, and implement special actions to clean up marine rubbish. Strengthen policy interpretation and publicity and guidance to create a good social atmosphere.	biobased Chemicals Consumers/Demand side health indicator/measurement/monitoring Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Objective: Environmental Quality Objective: Social Equity Objective: Waste reduction Plastics R&D / Science Re-use/redistribute Recover Recycle Reduce waste water
11:15	C7: The General Office of the State Council on accelerating the construction of	China	Guide local governments to strengthen the recycling of agricultural film, pesticide and fertilizer packaging, agricultural machinery, fishing nets and other waste agricultural materials.	agriculture Chemicals fertiliser Level: Meso Level: Micro Plastics Recycle waste
11:55	C7: The General Office of the State Council on accelerating the construction of	China	Elaborate the environmental protection standards and requirements for the storage or disposal of solid waste, comprehensively consider the environmental hazards of solid waste, environmental protection standards, tax collection and management foundation and other factors, improve the policy implementation caliber of solid waste environmental protection tax, and increase collection and management Efforts should be made to guide the priority recycling of industrial solid waste.	Chemicals Instrument Type: Economic Instrument Type: Regulation Objective: Environmental Quality Recycle waste
12:60	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Build a circular economic chain for power generation and related industries. Construction of power generation - fly ash - building materials, road construction, construction projects, power generation - high alumina fly ash - alumina, power generation - desulfurization gypsum - building materials and decorative materials, power generation - waste heat - seawater desalination - concentrated seawater salt production - salt chemical industry , coal gangue, garbage, sludge-power generation-ash-building materials and other industrial chains.	Chemicals construction/demolition industrial symbiosis waste water
12:67	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the use of coking by-products such as tar, coke oven gas, and crude benzene to produce chemical products.	Chemicals Re-use/redistribute
12:82	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Construction of mining and processing - tailings - valuable components - smelting - non-ferrous metals, smelting - waste slag - non-ferrous metals, smelting - slag - building materials, smelting - tail gas - phosphorus, sulfur - chemical products, smelting - waste heat - power generation, smelting - non-ferrous metals Metal-recycled metal-smelting and other industrial chains.	Chemicals construction/demolition energy industrial symbiosis Re-use/redistribute Recycle
12:94	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Construct oil and gas extraction-oil sand, oil shale-refining, refining-waste catalyst-rare and precious metals, refining-waste gas-sulfur-chemical products, refining-waste gas-heating and power generation, refining-waste heat and pressure-power generation and other industrial chains.	Chemicals energy industrial symbiosis

12:105	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Section 6 Chemical Industry Promote the comprehensive development and utilization of phosphorus, sulfur, potassium and other mineral resources. Strengthen the development and utilization of medium and low-grade phosphate ore, pyrite, boronite, potassium ore and other resources. Promote the comprehensive utilization of associated resources such as fluorine and iodine in phosphate rocks, iron in pyrite and boronite, and lithium, potassium, sodium, boron, and magnesium in salt lakes. Promote energy conservation and consumption reduction. The synthetic ammonia industry implements the strategy of "increasing the large and suppressing the small" to eliminate backward production capacity, focusing on promoting advanced coal gasification, energy-saving and efficient desulfurization and decarbonization, low-energy waste heat absorption refrigeration and other technologies. The caustic soda industry should gradually phase out the diaphragm caustic soda process and increase the proportion of the ion membrane caustic soda process. The soda ash industry focuses on promoting multi-stage steam utilization and conversion gas alkali production technology, and actively promotes the application of new salting out crystallizers and circulating pumps. The calcium carbide industry should accelerate the adoption of large-scale closed calcium carbide furnaces and focus on promoting energy-saving technologies such as gas utilization of calcium carbide furnaces and hollow electrodes. The coal chemical industry encourages the use of recycled water, mine water and waste heat recovery for power generation. Promote the resource utilization of "three wastes". The soda ash industry focuses on promoting the use of ammonia-alkali waste residue for boiler flue gas wet desulfurization and comprehensive utilization of ammonia evaporation waste liquid. The chlor-alkali chemical industry focuses on promoting the use of calcium carbide	Chemicals
12:114	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage cement kilns to use collaborative resources to process urban domestic waste, sewage plant sludge, hazardous waste, waste plastics and other wastes, replace some raw materials and fuels, and promote the circular link between the cement industry and related industries and social systems.	Chemicals industrial symbiosis Plastics Re-use/redistribute waste
12:129	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	The meat and aquatic product processing industry focuses on promoting the use of fur, viscera, blood and other by-products to produce medicines, biochemical products, etc.	Chemicals Re-use/redistribute
12:136	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the use of biodegradable slurries and clean gas-phase thermal oil to reduce the use of toxic and harmful substances from the source.	biobased Chemicals Reduce renewable
12:140	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the recovery of dyeing chemicals and auxiliaries from printing and dyeing wastewater, and recover alkali from waste printing and dyeing alkali liquor.	Chemicals Recycle water
12:144	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Construct printing and dyeing - waste liquid - alkali, chemical fiber production - waste gas - acid production, textile - waste water, waste gas - heat energy - textile, textile - scraps - textile, textile - waste textile - reused finished products - textile, textile - waste textile - thermal insulation Materials, waste polyester-chemical fiber-textiles and other industrial chains.	Chemicals construction/demolition energy industrial symbiosis Re-use/redistribute water
12:149	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	The heavy chemical industry must realize park-like development and build an industrial chain in accordance with the principles of "horizontal coupling, vertical extension, and circular links" to form an integration of mutual supply of raw materials (products) and resource sharing among park enterprises.	Chemicals
12:160	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Vigorously promote the technology of soil testing and formulated fertilization, use chemical fertilizers scientifically, encourage farmers to apply more organic fertilizers, and reduce the unreasonable amount of chemical fertilizers.	biobased Chemicals fertiliser indicator/measurement/monitoring Reduce

12:161	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Eliminate outdated pesticide application machinery and promote the use of high-efficiency, low-toxicity, and low-residue pesticides.	Chemicals
12:169	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Construct forestry - "three leftovers", sub-small firewood - boards, forestry processing - sawdust - edible fungi - culture medium - feed, fertilizer, bamboo industry - 'three leftovers' - bamboo charcoal, activated carbon, bamboo industry - 'three leftovers' "Things" - vinegar liquid - vinegar powder - medicines, health products, bamboo industry - bamboo chips - profiles, forest bamboo - pulping - paper making and other industrial chains.	Chemicals energy fertiliser food industrial symbiosis
12:172	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage the use of livestock and poultry blood, organs, bone tissue, fur, eggshells, etc. to produce medicines, health care products, daily necessities, etc., to increase the added value of livestock and poultry processing.	biobased Chemicals Re-use/redistribute
12:174	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Build an industrial chain of livestock and poultry manure - biogas - power generation, livestock and poultry manure - biogas - biogas residue, biogas slurry - harmless treatment - fertilizers, pesticides - agricultural and forestry crops, livestock and poultry processing - by-products - biochemical products.	biobased Chemicals energy fertiliser industrial symbiosis
12:179	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the effective connection between the aquaculture industry and the planting industry to achieve coordinated development of fish, grain, fruits and vegetables. Encourage the use of fish, shrimps, crabs, shellfish and aquatic product processing by-products to produce amino acids, condiments, health care products and other products.	agriculture Chemicals food industrial symbiosis Re-use/redistribute
12:199	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the catering and accommodation industry to carry out energy-saving transformation of lighting, air conditioning and boiler systems, use energy-saving and water-saving products and phosphorus-free highefficiency detergents, classify the discharge of domestic waste, and classify and store food and kitchen waste.	Chemicals energy food Objective: Resource efficieny/scarcity Reduce waste water
12:215	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Innovate recycling methods, strengthen supervision and management, promote the recycling of waste electrical and electronic products, scrapped cars, waste tires, packaging materials, and waste textiles, and promote the recycling of waste lead-acid batteries, waste cadmium-nickel batteries, waste mercury-containing fluorescent lamps, waste thermometers, and waste pesticide packaging recycling of hazardous waste.	Chemicals electronics Objective: Innovation Plastics Recycle transport
12:227	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Actively utilize the existing renewable resource recycling network to recycle computer servers, toner cartridges, ink cartridges and other easily recyclable products.	Chemicals Recycle renewable
12:273	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Build 2-3 red mud comprehensive utilization demonstration bases, 3-5 highaluminum fly ash comprehensive utilization bases, and implement a number of gypsum comprehensive utilization projects for industrial by-products such as smelting waste residue, chemical waste residue, desulfurization gypsum and phosphogypsum.	Chemicals demonstration/experimentation waste
12:278	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	support the transformation of 60 comprehensive parks and parks concentrated in heavy chemical industry to promote horizontal coupling, vertical extension and circular links between industries;	Chemicals demonstration/experimentation industrial symbiosis
12:339	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Implement circular economy technology industrialization demonstration projects, focusing on supporting the comprehensive development and recycling of associated mines and tailings, waste resource utilization, recyclable materials, replacement of toxic and harmful raw materials, remanufacturing, high-value utilization of renewable resources, and extending the industrial chain Link with related industries and demonstrate the industrialization of key technologies and equipment such as “zero emission”.	Chemicals demonstration/experimentation industrial symbiosis mining Objective: Carbon reduction Objective: Pollution Objective: Resource efficieny/scarcity Recycle Refurbish/Remanufacture renewable waste

13:23	EU2: A new Circular Economy Action Plan 2020	EU	improving product durability, reusability, upgradability and reparability, addressing the presence of hazardous chemicals in products, and increasing their energy and resource efficiency;	Chemicals energy Objective: Resource efficieny/scarcity product design Re-use/redistribute Reduce Repair/Maintain
13:56	EU2: A new Circular Economy Action Plan 2020	EU	review of EU rules on restrictions of hazardous substances in electrical and electronic equipment23 and provide guidance to improve coherence with relevant legislation, including REACH24 and Ecodesign.	Chemicals
13:75	EU2: A new Circular Economy Action Plan 2020	EU	restricting intentionally added microplastics and tackling pellets taking into account the opinion of the European Chemicals Agency;	Chemicals Instrument Type: Regulation Instrument: Design Features Plastics
13:84	EU2: A new Circular Economy Action Plan 2020	EU	ecodesign measures to ensure that textile products are fit for circularity, ensuring the uptake of secondary raw materials, tackling the presence of hazardous chemicals, and empowering business and private consumers to choose sustainable textiles and have easy access to re-use and repair services;	Chemicals Consumers/Demand side Eco-Design Objective: Economic Prosperity/Growth Objective: Sustainability product design Re-use/redistribute Repair/Maintain
13:108	EU2: A new Circular Economy Action Plan 2020	EU	EU chemicals policy and legislation, in particular REACH, encourage a shift to ‘safe-bydesign chemicals’ through the progressive substitution of hazardous substances to better protect citizens and the environment.	Chemicals Instrument Type: Regulation
13:109	EU2: A new Circular Economy Action Plan 2020	EU	support the development of solutions for high-quality sorting and removing contaminants from waste, including those resulting from incidental contamination;	Chemicals waste
13:110	EU2: A new Circular Economy Action Plan 2020	EU	develop methodologies to minimise the presence of substances that pose problems to heatlh or the environment in recycled materials and articles made thereof;	Chemicals health Objective: Environmental Quality Recycle
13:111	EU2: A new Circular Economy Action Plan 2020	EU	harmonised systems to track and manage information on substances identified as being of very high concern and other relevant substances,	Chemicals Instrument Type: Information
13:112	EU2: A new Circular Economy Action Plan 2020	EU	propose amending the annexes to the Regulation on Persistent Organic Pollutants,	Chemicals Instrument Type: Regulation Objective: Pollution
13:113	EU2: A new Circular Economy Action Plan 2020	EU	improve the classification and management of hazardous waste so as to maintain clean recycling streams, including through further alignment with the classification of chemical substances and mixtures where necessary.	Chemicals Instrument Type: Regulation Recycle waste
13:114	EU2: A new Circular Economy Action Plan 2020	EU	Chemicals Strategy for Sustainability will further address the interface between chemicals, products and waste legislation and strengthen synergies with the circular economy.	Chemicals Instrument Type: Regulation waste
13:136	EU2: A new Circular Economy Action Plan 2020	EU	Horizon Europe will support the development of indicators and data, novel materials and products, substitution and elimination of hazardous substances based on “safe by design” approach, circular business models, and new production and recycling technologies, including exploring the potential of chemical recycling, keeping in mind the role of digital tools to achieve circular objectives.	Business Models/Supply side Chemicals indicator/measurement/monitoring Product safety R&D / Science Recycle
15:41	EU4: Regulation proposal Critical Rawmaterials Act	EU	A precondition for effective magnet recycling is for recyclers to have access to the necessary information on the amount, type and chemical composition of magnets in a product, their location and the coating, glues and additives used, as well as information on how to remove the permanent magnets from the product. In addition, to ensure a business case for magnet recycling, permanent magnets incorporated in products placed on the Union market should, over time, contain an increasing amount of recycled materials. While providing transparency on the recycled content in a first stage, a minimum content of recycled content should be set after a dedicated assessment of the appropriate level and likely impacts.	Chemicals dismantle/reassemble Instrument Type: Information Instrument: Design Features Recycle

15:44	EU4: Regulation proposal Critical Rawmaterials Act	EU	The Environmental Footprint methods constitute a relevant basis for the development of the calculation rules. They rely on scientifically sound assessment methods which EN 15 EN take into account developments on international level and cover environmental impacts, including climate change and impacts related to water, air, soil, resources, land use and toxicity.	Chemicals critical raw materials indicator/measurement/monitoring labelling land-use Objective: Carbon reduction Objective: Environmental Quality Objective: Pollution Objective: Resource efficieny/scarcity R&D / Science water
16:5	EU5: Ecodesign requirements for sustainable	EU	the presence of substances of concern in products;	Chemicals
16:20	EU5: Ecodesign requirements for sustainable products	EU	negatively affects the re-use and recycling of materials in the product in which it is present;	Chemicals Definition Re-use/redistribute Recycle
16:30	EU5: Ecodesign requirements for sustainable products	EU	The information requirements referred to in paragraph 1 shall: (a) include, as a minimum, requirements related to the product passport referred to in Chapter III and requirements related to substances of concern referred to in paragraph 5; and (b) as appropriate, require products to be accompanied by: (i) information on the performance of the product in relation to the product parameters referred to in Annex I; (ii) information for consumers and other end-users on how to install, use, maintain and repair the product in order to minimise its impact on the environment and to ensure optimum durability, as well as on how to return or dispose of the product at end-of-life; (iii) information for treatment facilities on disassembly, recycling, or disposal at end-of-life; (iv) other information that may influence the way the product is handled by parties other than the manufacturer in order to improve performance in relation to product parameters referred to in Annex I.	Chemicals dismantle/reassemble indicator/measurement/monitoring Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Objective: Environmental Quality product design Recycle Repair/Maintain waste
16:31	EU5: Ecodesign requirements for sustainable products	EU	The information requirements referred to in paragraph 1 shall enable the tracking of all substances of concern throughout the life cycle of products, unless such tracking is already enabled by another delegated act adopted pursuant to Article 4 covering the products concerned, and shall include at least the following: EN 53 EN (a) the name of the substances of concern present in the product; (b) the location of the substances of concern within the product; (c) the concentration, maximum concentration or concentration range of the substances of concern, at the level of the product, its main components, or spare parts; (d) relevant instructions for the safe use of the product; (e) information relevant for disassembly.	Chemicals indicator/measurement/monitoring Instrument Type: Information Instrument: Design Features
17:7	EU6: Green Deal	EU	Energy-intensive industries, such as steel, chemicals and cement, are indispensable to Europe's economy, as they supply several key value chains.	Chemicals construction/demolition metals

ID	Document	Document Groups	Quotation Content	Codes
1:54	EU1: EU action plan for the circular economy	EU	construction	construction/demolition
1:156	EU1: EU action plan for the circular economy	EU	5.4. Construction and demolition In volume terms, construction and demolition are among the biggest sources of waste in Europe. Many of the materials are recyclable or can be reused, but reuse and recycling rates vary widely across the EU. The construction sector also plays a role in the environmental performance of buildings and infrastructure throughout their life. The recycling of construction and demolition waste is encouraged by an EU-wide mandatory target41, but challenges on the ground still have to be addressed if waste management in this sector is to improve. For example, valuable materials are not always identified, collected separately, or adequately recovered. The Commission will develop targeted guidelines for use on demolition sites for that purpose, including on the treatment of hazardous waste, and is promoting sorting systems for construction and demolition waste in the revised proposals on waste. It will help to spread best practices by developing voluntary recycling protocols based 39 Such as rare earths in electronic displays or precious metals in printed circuit boards 40 http://ec.europa.eu/environment/waste/weee/index_en.htm 41 http://ec.europa.eu/environment/waste/construction_demolition.htm 17 on the highest common standards for each waste stream. The Commission is also currently conducting a study to identify the obstacles to, and drivers for, the recycling of construction and demolition waste, and best practices in this area. Given the long lifetime of buildings, it is essential to encourage design improvements that will reduce their environmental impacts and increase the durability and recyclability of their components. The Commission will develop indicators to assess environmental performance throughout the lifecycle of a building42, and promote their use for building projects through large demonstration projects and guidance on GPP	construction/demolition
4:31	C5: Circular Economy Promotion Law of the PRC	China	A local people's government at or above the county level shall plan and adjust the industrial structure of this administrative region according to the indicators on the discharge of major pollutants, the land used for construction and the total volume of water consumption as assigned by the people's government at the next higher level so as to promote the development of circular economy.	construction/demolition indicator/measurement/monitoring land-use Level: Meso Level: Micro Objective: Pollution waste water
4:32	C5: Circular Economy Promotion Law of the PRC	China	Construction projects shall be built, rebuilt or enlarged in accordance with the requirements of the indicators on the discharge of major pollutants, the land used for construction and the total volume of water consumption of this administrative region.	construction/demolition indicator/measurement/monitoring Objective: Pollution waste water
4:39	C5: Circular Economy Promotion Law of the PRC	China	The state adopts a key supervision and administration system to key enterprises in the high energy or water consuming industries such as steel, non-ferrous metal, coal, electric power, petroleum processing, chemical industry, building materials, building construction, paper-making, printing and dyeing.	Business Models/Supply side Chemicals coal construction/demolition energy Level: Macro metals oil paper water
4:52	C5: Circular Economy Promotion Law of the PRC	China	Any newly built, rebuilt or enlarged construction project shall have water-saving facilities, which shall be planned, built and put into use simultaneously with the main body of the project.	construction/demolition Instrument Type: Regulation Instrument: Design Features Objective: Resource efficieny/scarcity Reduce water
4:55	C5: Circular Economy Promotion Law of the PRC	China	Enterprises in such industries as electric power, oil processing, chemical industry, steel, non-ferrous metal and building materials must replace fuel oil with clean energy, e.g., clean coal, petroleum coke, natural gas, etc. within the scope and time limit prescribed by the state, and must stop using fuel generator sets and oil boilers that fail to satisfy the relevant state provisions.	Business Models/Supply side Chemicals coal construction/demolition energy Instrument Type: Regulation Instrument: Design Features Level: Macro metals oil
4:59	C5: Circular Economy Promotion Law of the PRC	China	Entities in architectural design and construction industry shall, according to the relevant state provisions and standards, use energy-saving, water-saving, land-saving and material-saving technologies and techniques as well as small, light and recyclable products for construction. Areas shall, where possible, make sufficient utilization of solar energy, geothermal energy, wind energy and other renewable energy resources.	Business Models/Supply side construction/demolition energy Instrument Type: Regulation land-use Objective: Resource efficieny/scarcity Recycle Reduce Renewable Energy water

4:60	C5: Circular Economy Promotion Law of the PRC	China	The state encourages the use of innocuous and harmless solid wastes to produce building materials, the use of bulk cement and the use of ready-mixed concrete and ready-mixed mortar.	Chemicals construction/demolition
4:61	C5: Circular Economy Promotion Law of the PRC	China	It is prohibited to damage or destroy arable land to bake bricks. It is prohibited to produce, sell or use clay bricks within the time limit or areas prescribed by the State Council or the people's government of a province, autonomous region or municipality directly under the Central Government.	construction/demolition Instrument Type: Regulation Instrument: Design Features land-use Level: Macro Level: Meso Level: Micro
4:66	C5: Circular Economy Promotion Law of the PRC	China	The people's governments and the owners or users of buildings in cities shall take measures to better maintain and manage buildings and prolong their life. For any building which meets the urban planning and the construction standards and is in the reasonable service life, a city people's government may not make a decision to dismantle it unless it does so for public interests.	construction/demolition Instrument Type: Regulation Level: Macro Level: Meso Level: Micro
4:79	C5: Circular Economy Promotion Law of the PRC	China	A construction entity shall make comprehensive utilization of the construction wastes generated in the construction process. Where any construction entity does not have the conditions for comprehensive utilization, it shall entrust a producer or operator with such conditions to make comprehensive utilization or harmless disposal of construction wastes.	Business Models/Supply side construction/demolition waste
5:2	C3: 13th 5YP	China	We will work to move leading development regions toward the higher end of production and greater efficiency, improve the structure of spatial development, cut annually the amount of land designated for construction purposes, and bring about more efficient land use.	Business Models/Supply side construction/demolition Geography land-use Objective: Resource efficieny/scarcity
5:9	C3: 13th 5YP	China	We will promote society-wide energy conservation, make comprehensive efforts to promote energy conservation in industry, construction, transportation, public institutions, and other areas, and launch projects to upgrade boilers, furnaces, lighting products, and electric motors and recover waste heat for household heating.	construction/demolition energy Recover Reduce transport
5:12	C3: 13th 5YP	China	We will work to raise building energy efficiency and initiate ecofriendliness across the entire construction chain.	construction/demolition
5:22	C3: 13th 5YP	China	We will strictly control the amount of additional land designated for construction projects and bring under effective control the disorderly expansion of new cities, new districts, and development areas.	construction/demolition Instrument Type: Regulation Level: Micro
5:23	C3: 13th 5YP	China	We will redevelop urban land that is being used inefficiently, develop and utilize hilly slope land, promote the multipurpose development of land designated for construction and its aboveground and belowground vertical overall development, and facilitate the reutilization of idle resources such as vacant buildings and factories.	construction/demolition Objective: Resource efficieny/scarcity Re-use/redistribute Refurbish/Remanufacture
5:24	C3: 13th 5YP	China	We will strictly control the amount of rural land designated for collective construction projects, explore the establishment of a rural land purchase and reserve system, and put idle rural land designated for construction to better use.	construction/demolition Instrument Type: Economic Instrument Type: Regulation Public procurement
5:25	C3: 13th 5YP	China	We will carry out inspections and evaluations concerning the economical and intensive use of land designated for construction. We will work to lower the area of land used for construction per unit of GDP by 20%.	construction/demolition indicator/measurement/monitoring Instrument Type: Regulation
5:34	C3: 13th 5YP	China	We will facilitate the recovery and utilization of mineral resources from urban waste, ensure that resources from industrial solid waste and other types of mass refuse are recycled and reused, accelerate the establishment of systems for the recycling or safe disposal of urban kitchen waste, construction refuse, and textile waste, and develop remanufacturing in line with standards.	construction/demolition Instrument Type: Regulation mining Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Refurbish/Remanufacture waste
5:43	C3: 13th 5YP	China	We will impose binding limits on the total consumption and the intensity of consumption of energy and water resources as well as on the amount of land designated for construction purposes.	construction/demolition Consumers/Demand side energy Instrument Type: Regulation land-use water

5:62	C3: 13th 5YP	China	Achieve an overall improvement in the quality of the environment and ecosystems Our modes of production and ways of life will become more eco- friendly and low-carbon. We will extract and use energy and resources with much greater efficiency. Aggregate energy and water consumption, the total amount of land used for construction, and aggregate carbon emissions will be effectively controlled, and aggregate emissions of major pollutants will be significantly reduced. We will basically complete functional zoning and the building of protective barriers for eco-security.	Business Models/Supply side construction/demolition Consumers/Demand side energy land-use mining Objective: Carbon reduction Objective: Environmental Quality Objective: Pollution Objective: Resource efficieny/scarcity Reduce water
7:4	C2: 14th 5YP	China	Prioritizing energy conservation, we will enhance conservation efforts in industry, construction, transportation, and public institutions, boost energy efficiency in emerging domains like 5G networks and big data centers, and strengthen energy conservation management for major energy consumers.	construction/demolition energy Reduce transport
7:11	C2: 14th 5YP	China	No more than 1.97 million hectares of land will be newly designated for construction, and steady steps will be taken to lower the total area of land allotted to construction per unit of GDP.	construction/demolition indicator/measurement/monitoring Instrument Type: Regulation land-use
7:23	C2: 14th 5YP	China	We will pursue the clean and efficient use of coal and other fossil energy sources and the green transformation of industries such as steel, petrochemical, and building materials.	Chemicals coal construction/demolition energy metals Reduce
7:35	C2: 14th 5YP	China	Reduction of air pollution emissions □ Put in place clean production facilities for 850 million metric tons of cement clinkers, 460 million metric tons of coking capacity, and about 4,000 non-ferrous metal furnaces; □ Realize ultra-low emissions for 530 million metric tons of steel capacity; □ Transform treatment practices for volatile organic compounds in petrochemicals, chemicals, painting, medicine, packaging and printing, and other key industries; □ Eliminate the use of bulk coal in key areas aff ected by heavy air pollution.	Business Models/Supply side Chemicals coal construction/demolition indicator/measurement/monitoring metals Objective: Environmental Quality Objective: Pollution
7:39	C2: 14th 5YP	China	05 Medical and hazardous waste disposal and comprehensive utilization of solid waste □ Address weaknesses in medical waste disposal facilities by building a national technology center for hazardous waste risk prevention and control along with six regional centers, as well as 20 regional centers for the centralized disposal of special hazardous waste; □ Launch 100 demonstration projects for comprehensively using bulk solid waste with a focus on tailings, associated minerals, coal gangue, fly ash, and construction refuse.	Chemicals coal construction/demolition demonstration/experimentation health Level: Meso Level: Micro mining waste
9:3	C4: 12th 5YP V1	China	There is a need to promote clean production, and promote clean production demonstration at agricultural, industrial, construction, commerce and trade service, and other key sectors.	agriculture construction/demolition demonstration/experimentation
9:6	C4: 12th 5YP V1	China	We will promote the recovery and utilization of bulk industrial solid waste, construction waste, roadside waste, agricultural and forestry waste.	agriculture construction/demolition Recover Recycle waste
9:16	C4: 12th 5YP V1	China	We encourage consumers to buy energy-saving and water-saving products, energy-saving and environment-friendly cars and energy-saving and land-saving houses, reduce the utilization of disposable products, restrict excessive packing, and control irrational consumption.	construction/demolition energy land-use Objective: Environmental Quality Objective: Resource efficieny/scarcity Reduce transport waste water
9:31	C4: 12th 5YP V1	China	Particular stress should be placed on doing a good job on energy conservation at industrial, construction, and traffic sectors as well as at public institutions.	construction/demolition transport
9:50	C4: 12th 5YP V1	China	In line with the principle of conserving, intensifying, and of controlling the overall volume of land, we will rationally define the scale, structure, and time order of the newly increase in the land for construction use.	construction/demolition indicator/measurement/monitoring Instrument Type: Regulation land-use Reduce
9:52	C4: 12th 5YP V1	China	We will reduce land for construction per unit of GDP by 30 percent.	construction/demolition indicator/measurement/monitoring land-use Objective: Resource efficieny/scarcity Reduce

10:8	C6: 14th 5YP CE	China	The utilization capacity of renewable resources has been significantly strengthened, with the comprehensive utilization rate of construction waste reaching 50% by 2020; the utilization of waste paper reaching 54.9 million tons; the utilization of waste steel reaching 260 million tons, and the substitution of 62% grade iron ore concentrate reaching 410 million tons; and the output of renewable non-ferrous metals reaching 14.5 million tons, accounting for 23.5% of the total output of ten types of non-ferrous metals in the country, of which the output of renewable copper, renewable aluminium, and renewable lead is 3.25 million tons, 7.4 million tons, 7.4 million tons, and 7.4 million tons, respectively.	construction/demolition indicator/measurement/monitoring metals mining waste
10:27	C6: 14th 5YP CE	China	By 2025, the output rate of major resources will be about 20% higher than that of 2020, energy consumption and water consumption per unit of GDP will be about 13.5% and 16% lower than that of 2020, the comprehensive utilisation rate of agricultural straw will be maintained at more than 86%, the comprehensive utilisation rate of bulk solid waste will reach 60%, the comprehensive utilisation rate of construction waste will be 60%, the utilisation of waste paper will reach 60 million tonnes, and the utilisation of waste steel will reach 320 million tonnes. The utilization of waste paper has reached 60 million tons, the utilization of waste steel has reached 320 million tons, the output of renewable nonferrous metals has reached 20 million tons, of which the output of renewable copper, renewable aluminium and renewable lead has reached 4 million tons, 11.5 million tons and 2.9 million tons, respectively, and the output value of the resource recycling industry has reached 5 trillion yuan.	agriculture construction/demolition energy indicator/measurement/monitoring metals Recycle renewable waste water
10:29	C6: 14th 5YP CE	China	Strengthen clean production in key industries. In accordance with the law, the "double over double high energy-consuming" industry to implement mandatory cleaner production audits, and guide other industries to carry out audits voluntarily. Further regulate the cleaner production audit behaviour and improve the quality of cleaner production audits. Promote petrochemical, chemical, coking, cement, non-ferrous metals, electroplating, printing and dyeing, packaging and printing and other key industries, "a line a policy" to develop cleaner production transformation and upgrading plans. Accelerate cleaner production technology innovation, transformation and standard system construction, establish and improve the differentiation of reward and punishment mechanism, and explore the development of regional, industrial parks and industry cleaner production audit pilot demonstration work as a whole.	Business Models/Supply side Chemicals construction/demolition demonstration/experimentation energy industrial symbiosis Instrument Type: Information Instrument Type: Regulation Instrument: Design Features metals Objective: Innovation
10:31	C6: 14th 5YP CE	China	4. Strengthen the comprehensive utilisation of resources. Strengthen the comprehensive utilisation of low-grade ores, co-associated ores, difficult metallurgical ores and tailings, and promote the efficient extraction and utilisation of valuable components. Further broaden the comprehensive utilisation channels of fly ash, coal gangue, metallurgical slag, industrial by-product gypsum, construction waste and other bulk solid wastes, and expand the scale of utilisation in the fields of ecological restoration, green mining, green building materials and traffic engineering. Strengthen the research and development of technology for the large-scale utilisation of complex and difficult-to-use industrial solid wastes such as red mud, phosphogypsum, electrolytic manganese slag and steel slag. Promote the use of mine water for supplementary water sources in mining areas and for production and ecological water use in neighbouring areas. Strengthen the comprehensive utilisation of waterway dredging soil and dredging sand.	coal construction/demolition metals mining Objective: Environmental Quality Objective: Resource efficieny/scarcity R&D / Science Reduce transport waste water
10:32	C6: 14th 5YP CE	China	5. Promote the coordinated disposal of municipal waste. Improve policies, mechanisms and standards, promote coordinated disposal facilities with reference to the management of urban environmental infrastructure, and guarantee the continuous and stable operation of facilities. Determine the standard of payment for co-disposal of municipal waste through market-oriented methods, and orderly promote the co-disposal of medical waste, hazardous waste and domestic rubbish in cement kilns and smelting kilns, as well as the coordinated promotion of the co-disposal of medical waste in domestic rubbish incinerators in an emergency. Promote the co-ordinated co-disposal of food waste, garden waste, sewage plant sludge and other low-value organic waste.	biobased Chemicals construction/demolition food Instrument Type: Economic Instrument Type: Regulation Instrument: Design Features Recover waste

10:60	C6: 14th 5YP CE	China	Construction of 50 demonstration cities for resource utilisation of construction waste. Promote the reduction of construction waste at source, establish a management system for the classification of construction waste, and regulate the construction and operation and management of places for dumping, transferring and resource utilisation of construction waste. Improve the policy on recycling and utilisation of construction waste and the certification standard system for recycled products, promote the resourceful utilisation of engineering residue, engineering slurry, demolition waste, engineering rubbish and renovation rubbish, and enhance the scale of market use of recycled products. Cultivate backbone enterprises in the construction waste resource utilisation industry, and accelerate the development, application and integration of new technologies, new techniques and new equipment for the resource utilisation of construction waste.	Business Models/Supply side construction/demolition demonstration/experimentation Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Level: Meso Level: Micro Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Reduce waste
10:76	C6: 14th 5YP CE	China	Improve the standard system of circular economy, improve the standards and norms for green design, clean production, remanufacturing, recycled raw materials, green packaging, wasteful building materials, etc., and deepen the pilot work of national standardisation of circular economy.	Business Models/Supply side construction/demolition Eco-Design Instrument Type: Regulation Recycle Refurbish/Remanufacture waste
11:7	C7: The General Office of the State Council on accelerating the construction of	China	The annual utilization of bulk solid waste such as tailings, fly ash, coal gangue, smelting slag, industrial by-product gypsum, construction waste, and straw has reached 4 billion tons, and the comprehensive utilization rate of new bulk solid waste has reached 60%.	coal construction/demolition indicator/measurement/monitoring mining waste
11:18	C7: The General Office of the State Council on accelerating the construction of	China	Revise construction waste management regulations and improve the construction waste management system.	construction/demolition Instrument Type: Regulation waste
11:23	C7: The General Office of the State Council on accelerating the construction of	China	Further expand the comprehensive utilization channels of bulk solid waste, and on the premise of meeting environmental quality standards and requirements, strengthen the promotion and application of comprehensive utilization products in the construction field, unblock underground filling, ecological restoration, roadbed materials and other utilization and consumption channels, and promote tailings, smelting, etc.	construction/demolition Objective: Environmental Quality waste
12:50	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Build a coal-based circular economy industrial chain. Promote coal gangue, washed coal, coal slime power generation, coal gangue brick making and cement production, and build a coalelectricity-building materials industry chain.	construction/demolition energy industrial symbiosis
12:58	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the comprehensive utilization of fly ash and desulfurization gypsum. Encourage the use of fly ash to produce building materials, promote the application of fly ash in municipal construction, road construction and other projects, orderly promote the extraction of alumina from high-aluminum fly ash, and support the ultra-fine processing of fly ash for papermaking , rubber and other filling materials. Encourage the use of desulfurized gypsum to 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 12/47 produce gypsum boards, high-end decorative building materials and improve saline-alkali soil.	construction/demolition metals Re-use/redistribute waste
12:60	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Build a circular economic chain for power generation and related industries. Construction of power generation - fly ash - building materials, road construction, construction projects, power generation - high alumina fly ash - alumina, power generation - desulfurization gypsum - building materials and decorative materials, power generation - waste heat - seawater desalination - concentrated seawater salt production - salt chemical industry , coal gangue, garbage, sludge-power generation-ash-building materials and other industrial chains.	Chemicals construction/demolition industrial symbiosis waste water
12:63	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	extraction and utilization of metals associated with iron tailings, low-cost reprocessing of iron-rich old 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 13/47 tailings, and high-value overall utilization of low-iron and silicon-rich tailings. Encourage the use of tailings sand to produce building materials, conduct underground filling, and carry out ecological environment management.	construction/demolition mining Re-use/redistribute

12:66	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage converter slag, iron-containing dust sludge, and iron oxide scale to be recycled and sintered, and use blast furnace slag and converter slag to produce cement and other building materials products.	construction/demolition Re-use/redistribute Recycle
12:73	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Build a circular economy industrial chain in the steel industry. Construction of coking, smelting - by-product gas, waste heat and pressure - power generation, smelting - waste slag - building materials, smelting - iron dust and sludge - sintering, coking - tar, gas - chemical products, smelting - iron and steel products - scrap steel - electric furnace steelmaking and other industrial chains.	construction/demolition energy industrial symbiosis
12:82	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Construction of mining and processing - tailings - valuable components - smelting - non-ferrous metals, smelting - waste slag - non-ferrous metals, smelting - slag - building materials, smelting - tail gas - phosphorus, sulfur - chemical products, smelting - waste heat - power generation, smelting - non-ferrous metals Metal-recycled metal-smelting and other industrial chains.	Chemicals construction/demolition energy industrial symbiosis Re-use/redistribute Recycle
12:99	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	The chlor-alkali chemical industry focuses on promoting the use of calcium carbide slag to produce cement or for desulfurization, strengthening the recycling and utilization of calcium carbide slag supernatant liquid, and the comprehensive utilization of carbon monoxide and hydrogen in the exhaust gas of calcium carbide furnaces.	construction/demolition Re-use/redistribute Recycle waste
12:100	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	he phosphorus chemical industry focuses on promoting the production 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 18/47 of building materials from phosphogypsum, the decomposition of acid to produce cement, the recovery of yellow phosphorus furnace exhaust gas to produce carbon-chemicals and the recovery and utilization of heat energy.	construction/demolition energy Re-use/redistribute
12:102	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	The coal chemical industry focuses on promoting the use of waste residues in the production of cement and other building materials products, promoting the recycling of coal-to-olefin water, treatment of phenol-containing wastewater through pressurized gasification of crushed powder, reclaimed water reuse, treatment of highly concentrated brine, utilization of low-temperature waste heat, and utilization of high-temperature gas heat.	coal construction/demolition Re-use/redistribute Recycle waste water
12:103	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Construction of phosphate rock - phosphate fertilizer - phosphogypsum - building materials, phosphogypsum - acid production - waste residue - cement, phosphate rock - phosphate fertilizer - tail gas - phosphoric acid, calcium carbide - polyvinyl chloride - calcium carbide slag - cement, synthetic ammonia - gas making slag - building materials, coking -Waste residue-cement and other industrial chains.	construction/demolition fertiliser industrial symbiosis

12:117	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Section 7 Building Materials Industry Strengthen energy conservation and consumption reduction. Focus on promoting energysaving renovation of thermal equipment such as kilns. Continue to promote large-scale new dry 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 19/47 process cement production lines and promote energy-saving transformation such as cement grinding and clinker production. Promote kiln waste heat cascade utilization technologies such as pure low-temperature waste heat power generation, and promote low-temperature waste heat power generation in glass production lines. Strengthen dust recycling. Further expand the ban on the production and use of solid clay bricks. Promote the large-scale development of waste-recycling building materials. Promote the use of bulk solid waste such as slag, gangue, fly ash, tailings, industrial by-product gypsum, construction waste and waste road materials to produce building materials. In areas with large volumes of solid waste generation and storage, priority will be given to the development of high-grade, high-volume waste-recycling new building materials products. Promote the recycling of waste glass, waste fiberglass, waste ceramics, waste composite materials, waste gravel and stone powder and produce building materials products. Cultivate leading enterprises in the waste-recycling building materials industry. Develop green building materials products. Encourage the development of green building materials products. Focus on accelerating the development of new materials such as energy-saving glass, solar glass, composite multi-functional wall materials, and wood-plastic composite materials. Increase the application proportion of high-	construction/demolition
12:119	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage the recovery of alkali from pulping black liquor, use the organic matter in the black liquor to generate electricity, and promote the use of by-product white mud for the production of cement or calcium oxide.	construction/demolition energy Re-use/redistribute Recycle
12:126	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Construct pulping-black 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 21/47 liquor-white mud-cement, pulping-black liquor-white mud-calcium oxide-alkali-pulping, pulpingblack liquor-white mud-refined calcium carbonate filler-paper making, paper pulp-black liquor, etc. Organic matter - combustion waste heat - thermoelectricity - pulping, papermaking, pulping, papermaking - waste liquid - biogas - thermal energy, power generation - pulping, papermaking, pulping, papermaking - solid waste - fuel - thermoelectricity - pulping, papermaking, waste paper —Pulping-papermaking and other industrial chains.	construction/demolition energy industrial symbiosis
12:133	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Construct rice processing - rice husk - rice husk carbon, biomass energy, rice processing - rice bran - rice bran oil, rice bran protein, wheat processing - wheat germ, bran - wheat germ oil, dietary fiber, meat processing - skin, offal, Blood - medicines, biochemical products, etc., fermentation/winemaking - distiller's grains, residues - harmless treatment - organic fertilizer, feed, fermentation/winemaking - waste liquid - biogas, sugarcane sugar production - bagasse - papermaking, building materials, bagasse - power generation - ash Residue - harmless treatment - organic fertilizer, sugar production - waste molasses - alcohol, fruit and vegetable processing - pomace - feed, tea processing - tea residue - harmless treatment - fertilizer and other industrial chains.	construction/demolition energy fertiliser industrial symbiosis waste
12:143	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Taking the recycling of waste professional clothing as a breakthrough, we will improve the social waste textile recycling system. Choose an economical and reasonable technical route for recycling waste textiles, promote the classification and safe and environmentally friendly processing of waste textiles, and encourage the use of waste textiles to produce products such as building insulation materials.	construction/demolition Recycle
12:144	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Construct printing and dyeing - waste liquid - alkali, chemical fiber production - waste gas - acid production, textile - waste water, waste gas - heat energy - textile, textile - scraps - textile, textile - waste textile - reused finished products - textile, textile - waste textile - thermal insulation Materials, waste polyester-chemical fiber-textiles and other industrial chains.	Chemicals construction/demolition energy industrial symbiosis Re-use/redistribute water

12:184	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Facility construction must adopt energy-saving and environmentally friendly products, actively utilize renewable energy, and build supporting systems for sewage recycling, rainwater collection, and harmless garbage disposal. Support the use of energy-saving and environmentally friendly means of transportation in tourist attractions, develop green tourism products, scientifically set up garbage classification and recycling devices, and promote waste classification, recycling and resource utilization.	construction/demolition energy Objective: Environmental Quality product design R&D / Science Re-use/redistribute Recycle Reduce Renewable Energy transport waste water
12:192	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote existing commercial buildings to carry out thermal insulation and thermal insulation renovations, carry out energy-saving renovations on heating, refrigeration, ventilation, lighting, refrigeration and other systems, and adopt energy-saving equipment and technologies such as automatic control escalators.	construction/demolition energy Reduce
12:234	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	In northern heating areas, the focus is on building envelope, heat metering, and pipe network heat balance. In areas with hot summers and cold winters, the focus is on building doors and windows, external shading, and natural ventilation to accelerate the implementation of energy-saving renovations. Vigorously promote energy-saving renovation of heating, air conditioning, ventilation, lighting and other large public buildings and office buildings.	construction/demolition energy Geography Reduce
12:235	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Strictly control the design process, strengthen the review of construction drawings, and ensure that 100% of the urban building design stages meet energy-saving standards. Strengthen construction supervision and inspection to ensure project quality and safety, and the implementation rate of energy-saving standards during the construction phase has reached more than 95%. Strictly implement special energy-saving acceptance inspections. Those that fail to meet energy-saving standards will not pass the completion acceptance and will be forced to make rectifications. Encourage qualified regions to improve building energy efficiency standards.	construction/demolition energy indicator/measurement/monitoring Instrument Type: Regulation Instrument: Design Features product design Reduce
12:236	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Focus on promoting the implementation of green building standards in party and government agencies, schools, hospitals, theaters, museums, science and technology museums, gymnasiums and other buildings.	construction/demolition Instrument Type: Regulation Instrument: Design Features Public procurement
12:238	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the centralized treatment and graded utilization of construction waste to produce high-performance recycled concrete, concrete blocks and other building materials products. Build construction waste resource utilization and processing bases according to local conditions.	construction/demolition Recycle waste
12:239	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	During the "Twelfth Five-Year Plan" period, more than 400 million square meters of heat metering and energy-saving renovations of existing residential buildings were completed in northern heating regions, and more than 50 million square meters of energy-saving renovations of existing residential buildings in hot summer and cold winter areas were completed. Public buildings and public office areas 120 million square meters of building energy-saving renovations and 800 million square meters of new green buildings. By 2015, more than 15% of new urban buildings will meet green building standards.	construction/demolition energy Geography indicator/measurement/monitoring
12:240	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	New airports, stations, and wharves will strictly implement building energysaving standards,	construction/demolition energy Reduce transport
12:242	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage the recycling of road asphalt and the use of fly ash to build roads and bridges.	construction/demolition Re-use/redistribute Recycle

12:245	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Accelerate the energy- and water-saving renovation of existing airports, stations, and ports.	construction/demolition energy Reduce transport water
12:248	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Improve the urban transportation system, strengthen the construction of urban walking and bicycle transportation systems, accelerate the development of rail transportation, and promote seamless connections between different public transportation systems and between the city's bus system and railways, highways, airports, etc.	construction/demolition transport
12:285	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Give full play to the waste consumption functions of the building materials, steel, electricity and other industries, and cultivate about 60 collaborative resource-based waste processing demonstration enterprises to consume chromium slag, sludge, domestic garbage, hazardous waste, etc.	construction/demolition demonstration/experimentation metals waste
12:304	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Research pricing policies that encourage collaborative resource utilization in the production process to process waste. Study and establish a charging system for construction waste discharge, reform the charging method for domestic waste treatment, and increase the collection rate. Study and establish a charging system for food waste disposal.	construction/demolition food industrial symbiosis Instrument Type: Economic R&D / Science waste
12:308	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Increase the special fund for new wall materials to support the development of new wall materials.	construction/demolition Investment
12:321	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Accelerate the formulation of product standards for degradable products, recycled products, kitchen waste resource products, waste-recycling building materials and agricultural machinery prohibition and scrapping 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 43/47 standards, and improve energy-saving, water-saving, and comprehensive resource utilization product standards. Improve standards for excessively packaged goods.	agriculture biobased construction/demolition energy food Instrument Type: Regulation Objective: Resource efficieny/scarcity Re-use/redistribute Recycle water
12:331	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Further progress will be made to ban the production and use of solid clay bricks.	construction/demolition Instrument Type: Regulation
12:332	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Establish an evaluation mechanism for inefficient land use, and standardize and promote the reclamation and utilization of rural construction land and abandoned industrial and mining land.	construction/demolition indicator/measurement/monitoring Instrument Type: Regulation Instrument: Design Features land-use mining
13:73	EU2: A new Circular Economy Action Plan 2020	EU	To increase uptake of recycled plastics and contribute to the more sustainable use of plastics, the Commission will propose mandatory requirements for recycled content and waste reduction measures for key products such as packaging, construction materials and vehicles, also taking into account the activities of the Circular Plastics Alliance.	construction/demolition Instrument Type: Regulation Instrument: Design Features Objective: Sustainability Objective: Waste reduction Plastics Recycle transport waste
13:88	EU2: A new Circular Economy Action Plan 2020	EU	The built environment has a significant impact on many sectors of the economy, on local jobs and quality of life. It requires vast amounts of resources and accounts for about 50% of all extracted material. The construction sector is responsible for over 35% of the EU's total waste generation32. Greenhouse gas emissions from material extraction, manufacturing of construction products, construction and renovation of buildings are estimated at 5-12% of total national GHG emissions33. Greater material efficiency could save 80% of those emissions34 .	construction/demolition indicator/measurement/monitoring Objective: Carbon reduction Objective: Economic Prosperity/Growth Objective: Employment Objective: Resource efficieny/scarcity Objective: Social Equity Objective: Waste reduction Reduce waste

13:89	EU2: A new Circular Economy Action Plan 2020	EU	Strategy for a Sustainable Built Environment. This Strategy will ensure coherence across the relevant policy areas such as climate, energy and resource efficiency, management of construction and demolition waste, accessibility, digitalisation and skills.	construction/demolition energy Instrument Type: Regulation Objective: Carbon reduction Objective: Resource efficieny/scarcity waste
13:90	EU2: A new Circular Economy Action Plan 2020	EU	revision of the Construction Product Regulation35 , including the possible introduction of recycled content requirements for certain construction products, taking into account their safety and functionality;	construction/demolition Instrument Type: Regulation product design Product safety Recycle
13:91	EU2: A new Circular Economy Action Plan 2020	EU	promoting measures to improve the durability and adaptability of built assets in line with the circular economy principles for buildings design36 and developing digital logbooks for buildings;	construction/demolition Instrument Type: Information
13:93	EU2: A new Circular Economy Action Plan 2020	EU	considering a revision of material recovery targets set in EU legislation for construction and demolition waste and its material-specific fractions;	construction/demolition indicator/measurement/monitoring Instrument Type: Regulation Recycle waste
13:127	EU2: A new Circular Economy Action Plan 2020	EU	Carbon removals can be nature based, including through restoration of ecosystems, forest protection, afforestation, sustainable forest management and carbon farming sequestration, or based on increased circularity, for instance through long term storage in wood construction, re-use and storage of carbon in products such as mineralisation in building material.	construction/demolition Objective: Carbon reduction Re-use/redistribute
14:9	EU3: A Green Deal Industrial Plan for the Net-Zero Age	EU	Modelled on the European Battery Alliance Academy34, the Commission will propose to establish Net-Zero Industry Academies to roll out up-skilling and re-skilling programmes in strategic industries for the green transition, such as raw materials, hydrogen and solar technologies, The Commission will initiate an Academy to offer onand offline trainings for sustainable construction with a focus on the use of biobased materials, circularity and digital technologies.	biobased construction/demolition critical raw materials Instrument Type: Information Objective: Carbon reduction Objective: Sustainability Renewable Energy
17:7	EU6: Green Deal	EU	Energy-intensive industries, such as steel, chemicals and cement, are indispensable to Europe's economy, as they supply several key value chains.	Chemicals construction/demolition metals
17:8	EU6: Green Deal	EU	While the circular economy action plan will guide the transition of all sectors, action will focus in particular on resource-intensive sectors such as textiles, construction, electronics and plastics.	construction/demolition electronics Plastics

ID	Document	Document Groups	Quotation Content	Codes
1:26	EU1: EU action plan for the circular economy	EU	Economic actors, such as business and consumers, are key in driving this process.	Business Models/Supply side Consumers/Demand side
1:28	EU1: EU action plan for the circular economy	EU	The aim is to ensure that the right regulatory framework is in place for the development of the circular economy in the single market, and to give clear signals to economic operators and society at large on the way forward with long term waste targets as well as a concrete, broad and ambitious set of actions, to be carried out before 2020	Business Models/Supply side Consumers/Demand side Instrument Type: Information Instrument Type: Regulation Objective: Waste reduction Time
1:41	EU1: EU action plan for the circular economy	EU	consumption	Consumers/Demand side
1:46	EU1: EU action plan for the circular economy	EU	Making the circular economy a reality will however require long-term involvement at all levels, from Member States, regions and cities, to businesses and citizens	Business Models/Supply side Consumers/Demand side Level: Macro Level: Meso Level: Micro
1:49	EU1: EU action plan for the circular economy	EU	This action plan will be instrumental in reaching the Sustainable Development Goals (SDGs) by 2030, in particular Goal 12 of ensuring sustainable consumption and production patterns.	Business Models/Supply side Consumers/Demand side SDG
1:62	EU1: EU action plan for the circular economy	EU	current market signals appear insufficient to make this happen, in particular because the interests of producers, users and recyclers are not aligned	Business Models/Supply side Consumers/Demand side limit: market functioning limit: unaligned interest
1:64	EU1: EU action plan for the circular economy	EU	Electrical and electronic products are particularly significant in this context. Their reparability can be important to consumers, and they can contain valuable materials that should be made easier to recycle (e.g. rare earth elements in electronic devices)	Consumers/Demand side critical raw materials electronics Objective: Resource efficieny/scarcity Recycle Repair/Maintain
1:85	EU1: EU action plan for the circular economy	EU	Consumption The choices made by millions of consumers can support or hamper the circular economy. These choices are shaped by the information to which consumers have access, the range and prices of existing products, and the regulatory framework. This phase is also crucial for preventing and reducing the generation of household waste. Faced with a profusion of labels or environmental claims, EU consumers often find it difficult to differentiate between products and to trust the information available. Green claims may not always meet legal requirements for reliability, accuracy and clarity.15 The Commission is working with stakeholders to make green claims more trustworthy, and will ensure better enforcement of the rules in place, including through updated guidance on unfair commercial practices16. It is testing the Product Environmental Footprint,17 a methodology for measuring environmental performance, and will explore its use to measure or communicate environmental information. The voluntary EU Ecolabel identifies products that have a reduced environmental impact throughout their lifecycle. The Commission will examine how to increase its effectiveness and contribution to the circular economy.18 Earlier this year, the Commission proposed an improved labelling system for the energy performance of household appliances and other energy-related products, which will help consumers choose the most efficient products.19 The proposed system will also allow for the displaying to consumers of information on the environmental performance, including durability, of energy-related products20 . Price is a key factor affecting purchasing decisions, both in the value chain and for final consumers. Member States are therefore encouraged to provide incentives and use economic instruments, such as taxation, to ensure that product prices better reflect	Consumers/Demand side
1:133	EU1: EU action plan for the circular economy	EU	A key factor in creating a dynamic market for secondary raw materials is sufficient demand, driven by the use of recycled materials in products and infrastructure.	Business Models/Supply side Consumers/Demand side Recycle
1:148	EU1: EU action plan for the circular economy	EU	Awareness campaigns are needed to change behaviour. The Commission supports awareness raising at national, regional and local levels and the dissemination of good practices in food waste prevention36 .	best practice Consumers/Demand side Instrument Type: Information Level: Macro Level: Meso Level: Micro limit: information
1:151	EU1: EU action plan for the circular economy	EU	Another area where action might be needed concerns date marking, in particular the "best before" date. This can be wrongly interpreted as an expiry date and lead to the discarding of safe, edible food. The Commission will examine ways of promoting a better use and understanding of date marking by the various actors of the food chain. The EU has also adopted measures to prevent edible fish being thrown back into the sea from fishing vessels.37	Consumers/Demand side Instrument Type: Information Instrument Type: Regulation Instrument: Design Features limit: information

4:11	C5: Circular Economy Promotion Law of the PRC	China	The development of a circular economy shall be propelled by the government, led by the market, effected by enterprises and participated in by the public.	Business Models/Supply side Consumers/Demand side Instrument Type: Economic Instrument Type: Regulation
4:23	C5: Circular Economy Promotion Law of the PRC	China	Citizens shall enhance their awareness of resources conservation and protecting the environment, consume resources in a reasonable way and save resources	Consumers/Demand side Objective: Environmental Quality Objective: Resource efficieny/scarcity Reduce
4:24	C5: Circular Economy Promotion Law of the PRC	China	The state encourages and guides citizens to use products that save energy, water, and materials as well as environment-friendly products and recycled products so as to reduce the production and discharge of wastes	Consumers/Demand side energy Objective: Resource efficieny/scarcity Objective: Waste reduction Recycle Reduce water
4:25	C5: Circular Economy Promotion Law of the PRC	China	Citizens have the right to report acts of wasting resources and damaging the environment, and have the right to access to government information about the development of circular economy and propose their opinions and suggestions	Consumers/Demand side Instrument Type: Information Instrument: Design Features
4:37	C5: Circular Economy Promotion Law of the PRC	China	For products or packages listed in the catalogue of articles subject to compulsory recycle, consumers shall deliver the deserted ones to the producers or the distributors or other organizations entrusted by Translation by lawinfochina.com 4 the producers for recycle.	Business Models/Supply side Consumers/Demand side Instrument Type: Regulation Instrument: Design Features Recycle
4:89	C5: Circular Economy Promotion Law of the PRC	China	The people's governments at or above the county level shall make overall plans on building facilities for the sorting collection and recycle of domestic wastes in urban and rural areas, and set up a sorting collection and recycling system and constantly improve it so as to improve the rate of recycling domestic wastes.	Consumers/Demand side Level: Micro waste
5:8	C3: 13th 5YP	China	We will move ahead with the revolution in energy consumption.	Consumers/Demand side
5:18	C3: 13th 5YP	China	We will tighten oversight over major water consumers, and encourage the reuse of water as well as the differentiated use of water according to its quality.	Consumers/Demand side Instrument Type: Regulation Re-use/redistribute
5:32	C3: 13th 5YP	China	We will implement a plan for guiding circular development, encourage the circular use of resources between production and society, and accelerate efforts to recycle resources from refuse.	Business Models/Supply side Consumers/Demand side Objective: Resource efficieny/scarcity Recycle
5:37	C3: 13th 5YP	China	Frugal Lifestyles Lifestyles Lifestyles Lifestyles We will advocate reasonable consumption while opposing waste and extravagance. We will work to see that economy is practiced throughout all stages— from production to distribution, storage, and consumption. We will exercise effective control over the abuse of public funds, take action against over-packaging, food waste, and overconsumption, and work to see that frugality becomes a social norm. We will promote green transport services such as bicycling and public transport. We will restrict the use of single-use disposable products.	Consumers/Demand side Objective: Social Equity waste
5:43	C3: 13th 5YP	China	We will impose binding limits on the total consumption and the intensity of consumption of energy and water resources as well as on the amount of land designated for construction purposes.	construction/demolition Consumers/Demand side energy Instrument Type: Regulation land-use water
5:62	C3: 13th 5YP	China	Achieve an overall improvement in the quality of the environment and ecosystems Our modes of production and ways of life will become more eco- friendly and low-carbon. We will extract and use energy and resources with much greater efficiency. Aggregate energy and water consumption, the total amount of land used for construction, and aggregate carbon emissions will be effectively controlled, and aggregate emissions of major pollutants will be significantly reduced. We will basically complete functional zoning and the building of protective barriers for eco-security.	Business Models/Supply side construction/demolition Consumers/Demand side energy land-use mining Objective: Carbon reduction Objective: Environmental Quality Objective: Pollution Objective: Resource efficieny/scarcity Reduce water
7:5	C2: 14th 5YP	China	We will implement key projects to optimize energy systems and upgrade energy-saving technologies, and accelerate the formulation and revision of mandatory national standards for energy consumption quotas and energy efficiency of products and equipment.	Consumers/Demand side demonstration/experimentation energy Instrument Type: Regulation Reduce
7:28	C2: 14th 5YP	China	Extensive campaigns will be carried out to promote eco-friendly lifestyles.	Consumers/Demand side Instrument Type: Information Objective: Environmental Quality

7:40	C2: 14th 5YP	China	06 Economical use of resources Implement major demonstration projects for industrial application of energyconserving and low-carbon technologies; Carry out major demonstration projects for near-zero energy consumption buildings, near-zero carbon emissions, and carbon capture, utilization and storage (CCUS); Develop systems for recycling waste and used materials in 60 large and medium cities.	Consumers/Demand side demonstration/experimentation energy Level: Meso Level: Micro Objective: Carbon reduction Objective: Economic Prosperity/Growth Objective: Resource efficieny/scarcity Re-use/redistribute Recycle waste
7:44	C2: 14th 5YP	China	Notable progress will be made in the transition to eco-friendly work practices and lifestyles.	Business Models/Supply side Consumers/Demand side
9:1	C4: 12th 5YP V1	China	In line with the principle of reduction, of re-utilization, and of resources recovery, with reduction as priority and with the rise in resources output efficiency as objective, we will promote the development of circular economy at various links of production, distribution, and consumption, and accelerate the building of a resources circular utilization system that covers the entire society.	Business Models/Supply side Consumers/Demand side Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Reduce
9:14	C4: 12th 5YP V1	China	3. Promote Green Consumption Model We will advocate civilized, thrift, green, and low-carbon consumption concept, and promote the formation of a green lifestyle and consumption model that are adapted to China's national conditions. We encourage consumers to buy energy-saving and water-saving products, energy-saving and environment-friendly cars and energy-saving and land-saving houses, reduce the utilization of disposable products, restrict excessive packing, and control irrational consumption. We will urge government organs to carry out green procurement, and gradually raise the ratio of procuring energy-saving and water-saving products and recycled products.	Consumers/Demand side
9:28	C4: 12th 5YP V1	China	We will implement the strategy of giving priority to conservation, comprehensively implement the policy of exercising control over the total volume of resources utilization, of making bi-directional readjustment of supply and demand, and of carrying out differentiated management. There will be big rise in energy and resources utilization efficiency and in the degree of protection over various types of resources.	Business Models/Supply side Consumers/Demand side energy Instrument Type: Regulation Objective: Resource efficieny/scarcity Re-use/redistribute Reduce
9:40	C4: 12th 5YP V1	China	Drives on saving energy and reducing emissions will be promoted in-depth among the populace.	Consumers/Demand side Instrument Type: Information Objective: Carbon reduction
9:46	C4: 12th 5YP V1	China	There is a need to promote water conservation technology in key water-using sectors and citizens' conservation of water in their daily lives.	Business Models/Supply side Consumers/Demand side
10:13	C6: 14th 5YP CE	China	Domestically, during the "14th Five-Year Plan" period, China will focus on building a new development pattern with the domestic macro-cycle as the main body and the domestic and international doublecycle promoting each other, releasing the potential of domestic demand, expanding the consumption of the population, upgrading the level of consumption, and constructing a super-large-scale domestic market, and the demand for resources and energy will still be rigidly growing, while some of China's major resources have a high degree of dependence on the outside world, and there is a contradiction between supply and demand. At the same time, some of China's major resources have a high degree of dependence on foreign countries, the contradiction between supply and demand is prominent, the efficiency of resource and energy utilisation is still not high in general, the mode of production and life of mass production, mass consumption and mass emission has not yet been fundamentally reversed, and the security of resources is under greater pressure. The need to develop a circular economy and to improve the efficiency of resource use and the level of renewable resources utilisation is very urgent, and there is enormous room for it.	Business Models/Supply side Consumers/Demand side energy Level: Macro limit: unaligned interest Objective: Economic Prosperity/Growth Objective: Pollution Objective: Resource efficieny/scarcity renewable Renewable Energy security/dependency

10:65	C6: 14th 5YP CE	China	(9) Special action on the whole chain management of plastic pollution Scientific and reasonable promotion of plastic source reduction, strictly prohibit the production of ultra-thin agricultural film, daily chemical products containing plastic microbeads and other products that endanger the environment and human health, and encourage the public to reduce the use of disposable plastic products. In-depth assessment of the resource and environmental impacts of various types of plastic substitutes throughout their life cycle. Promote degradable plastics according to local conditions, actively and steadily, improve the standard system, enhance inspection and testing capacity, and regulate the application and disposal of degradable plastics. Promote the application of standard films and improve the recycling level of used agricultural films. Strengthen the classification, recycling and reuse of plastic waste, accelerate the construction of domestic waste incineration and treatment facilities, and reduce the amount of plastic waste in landfills. Carry out plastic rubbish cleanup in rivers, lakes and coastlines, and implement special actions to clean up marine rubbish. Strengthen policy interpretation and publicity and guidance to create a good social atmosphere.	biobased Chemicals Consumers/Demand side health indicator/measurement/monitoring Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Objective: Environmental Quality Objective: Social Equity Objective: Waste reduction Plastics R&D / Science Re-use/redistribute Recover Recycle Reduce waste water
10:77	C6: 14th 5YP CE	China	It will study and improve the statistical system of circular economy, gradually establish a statistical system including the consumption and recycling of important resources, optimise the statistical accounting methods, and enhance the supporting capacity of statistical data for the work on circular economy. Improve the evaluation index system for the development of circular economy, improve the evaluation system of circular economy, and encourage third-party evaluation.	Consumers/Demand side indicator/measurement/monitoring Instrument Type: Information Recycle
11:2	C7: The General Office of the State Council on accelerating the construction of	China	To accelerate the construction of a waste recycling system, we must be guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, thoroughly implement the spirit of the 20th National Congress of the Party, comprehensively implement Xi Jinping Thought on Ecological Civilization, fully, accurately and comprehensively implement the new development concept, and accelerate the construction of a new development pattern, strive to promote high-quality development, follow the circular economy concept of reduction, reuse, and resource utilization, aim to improve resource utilization efficiency, and take fine waste management, effective recycling, and efficient utilization as the path to cover all aspects of production and life.	3R Business Models/Supply side Consumers/Demand side Objective: Economic Prosperity/Growth Objective: Resource efficieny/scarcity Re-use/redistribute Recycle Reduce
11:65	C7: The General Office of the State Council on accelerating the construction of	China	Establish government green procurement demand standards and include more qualified recycled materials and products into the scope of government green procurement.	Consumers/Demand side Instrument Type: Information Public procurement Recycle
11:68	C7: The General Office of the State Council on accelerating the construction of	China	Integrate circular economy knowledge concepts into relevant education and training systems. At important time nodes such as National Ecology Day, National Energy Conservation Week, National Low Carbon Day, and Environment Day, we carry out various publicity and education activities to vigorously promote the importance of waste recycling and related policies and measures. Timely summarize and promote advanced experiences and typical practices.	Consumers/Demand side energy indicator/measurement/monitoring Instrument Type: Information Instrument: Design Features Objective: Carbon reduction Objective: Environmental Quality Recycle waste
12:35	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	popularization of green consumption models,	Consumers/Demand side
12:197	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Give full play to the role of the retail and wholesale industry as a bridge connecting production and consumption, support the retail and wholesale industry in purchasing energy-saving and environmentally friendly products, encourage trade and circulation enterprises to open green product sales areas, counters, etc., promote green products to consumers, expand the consumption of green products, and promote green products. Product production. Actively cultivate the development of the rental industry and used goods industry, and promote product reuse.	Business Models/Supply side Consumers/Demand side energy Objective: Environmental Quality product design Re-use/redistribute Reduce
12:212	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage residents to store and place food waste separately,	Consumers/Demand side food Recycle waste

12:228	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Carry out the work of consumers returning old parts and purchasing remanufactured products at replacement prices (exchanging old parts for new ones)	Consumers/Demand side Instrument Type: Economic Refurbish/Remanufacture
12:249	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Guide residents 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 35/47 to take public transportation more and drive less private cars when going out. Explore the implementation of carpooling in areas where conditions permit, promote taxi hailing by phone and online, and reduce the empty taxi rate.	Consumers/Demand side transport
12:251	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the establishment of a standardized collection, sealed transportation, and centralized processing system for food waste in catering enterprises and unit canteens, and gradually establish a household food waste collection and transportation system.	Consumers/Demand side food waste
12:256	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the whole society to establish and practice the concept of civilized, frugal, green, low-carbon, and circular consumption, guide frugal and moderate consumption, and oppose extravagance and waste. Carry forward the fine tradition of diligence and thrift, abandon the bad habits of ostentation, ostentation, luxury and waste, and raise the whole society's awareness of energy saving, water saving, material saving and food saving.	Consumers/Demand side energy food Objective: Carbon reduction Objective: Resource efficieny/scarcity Refuse Rethink water
12:257	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Consumers are encouraged to purchase and use energy-saving and environmentally friendly products, energy-saving and land-saving residences, and reduce the use of disposable items. It is encouraged to bring your own shopping bags, and the use of ultra-thin plastic shopping bags is prohibited. Strengthen the construction of regulations and standards, restrict companies from over-packaging goods, and guide consumers to boycott over-packaged goods.	Consumers/Demand side energy Instrument Type: Regulation land-use Objective: Environmental Quality Plastics product design Reduce
12:258	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage moderate ordering and packing when dining out, and simple arrangements for weddings, funerals and other weddings and funerals.	Consumers/Demand side Reduce
12:259	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage online shopping, video conferencing, paperless offices, and cherish wildlife.	Consumers/Demand side
13:7	EU2: A new Circular Economy Action Plan 2020	EU	Building on the single market and the potential of digital technologies, the circular economy can strengthen the EU's industrial base and foster business creation and entrepreneurship among SMEs. Innovative models based on a closer relationship with customers, mass customisation, the sharing and collaborative economy, and powered by digital technologies, such as the internet of things, big data, blockchain and artificial intelligence, will not only accelerate circularity but also the dematerialisation of our economy and make Europe less dependent on primary materials.	Consumers/Demand side Instrument Type: Economic Objective: Economic Prosperity/Growth Objective: Innovation security/dependency
13:8	EU2: A new Circular Economy Action Plan 2020	EU	For citizens, the circular economy will provide high-quality, functional and safe products, which are efficient and affordable, last longer and are designed for reuse, repair, and high-quality recycling.	Consumers/Demand side Objective: Resource efficieny/scarcity Objective: Social Equity product design product guarantee Product safety Re-use/redistribute Recycle Reduce Repair/Maintain
13:10	EU2: A new Circular Economy Action Plan 2020	EU	The plan presents a set of interrelated initiatives to establish a strong and coherent product policy framework that will make sustainable products, services and business models the norm and transform consumption patterns so that no waste is produced in the first place.	Business Models/Supply side Consumers/Demand side Eco-Design Objective: Sustainability Objective: Waste reduction product design waste

13:36	EU2: A new Circular Economy Action Plan 2020	EU	To enhance the participation of consumers in the circular economy, the Commission will propose a revision of EU consumer law to ensure that consumers receive trustworthy and relevant information on products at the point of sale, including on their lifespan and on the availability of repair services, spare parts and repair manuals. The Commission will also consider further strengthening consumer protection against green washing and premature obsolescence, setting minimum requirements for sustainability labels/logos and for information tools.	Consumers/Demand side Instrument Type: Information Instrument Type: Regulation labelling Repair/Maintain
13:58	EU2: A new Circular Economy Action Plan 2020	EU	rules on recycled content and measures to improve the collection and recycling rates of all batteries, ensure the recovery of valuable materials and provide guidance to consumers;	Consumers/Demand side critical raw materials electronics Recycle
13:80	EU2: A new Circular Economy Action Plan 2020	EU	use of biodegradable or compostable plastics, based on an assessment of the applications where such use can be beneficial to the environment, and of the criteria for such applications. It will aim to ensure that labelling a product as 28 COM(2018) 28 final. 10 'biodegradable' or 'compostable' does not mislead consumers to dispose of it in a way that causes plastic littering or pollution due to unsuitable environmental conditions or insufficient time for degradation.	biobased Consumers/Demand side Instrument Type: Regulation labelling Objective: Pollution Objective: Waste reduction Plastics renewable waste
13:84	EU2: A new Circular Economy Action Plan 2020	EU	ecodesign measures to ensure that textile products are fit for circularity, ensuring the uptake of secondary raw materials, tackling the presence of hazardous chemicals, and empowering business and private consumers to choose sustainable textiles and have easy access to re-use and repair services;	Chemicals Consumers/Demand side Eco-Design Objective: Economic Prosperity/Growth Objective: Sustainability product design Re-use/redistribute Repair/Maintain
13:106	EU2: A new Circular Economy Action Plan 2020	EU	Other aspects that facilitate consumer involvement will also be considered, such as common bin colours, harmonised symbols for key waste types, product labels, information campaigns and economic instruments.	Consumers/Demand side Instrument Type: Information labelling waste
14:7	EU3: A Green Deal Industrial Plan for the Net-Zero Age	EU	To further stimulate the demand for net-zero products at large scale, various forms of public action such as public procurement, concessions and incentives to business and end users to use net-zero technologies based on sustainability and circularity can play a big role.	Consumers/Demand side Instrument Type: Economic Objective: Sustainability Public procurement
16:27	EU5: Ecodesign requirements for sustainable products	EU	(a) there shall be no significant negative impact on the functionality of the product, from the perspective of the user; (b) there shall be no adverse effect on the health and safety of persons; (c) there shall be no significant negative impact on consumers in terms of the affordability of relevant products, also taking into account access to secondhand products, durability and the life cycle cost of products;	Consumers/Demand side health Objective: Economic Prosperity/Growth Objective: Social Equity Product safety
16:33	EU5: Ecodesign requirements for sustainable products	EU	The requirements referred to in paragraph 2 shall: (a) ensure that actors along the value chain, in particular consumers, economic operators and competent national authorities, can access product information relevant to them; (b) facilitate the verification of product compliance by competent national authorities; and (c) improve traceability of products along the value chain.	Consumers/Demand side indicator/measurement/monitoring Instrument Type: Regulation Instrument: Design Features
16:35	EU5: Ecodesign requirements for sustainable products	EU	Where an information requirement entails the inclusion in a label of the class of performance of a product as referred to in Article 7(4), the layout of the label referred to in paragraph 1, point (b), shall enable customers to easily compare product performance in relation to the relevant product parameter and to choose better performing products.	Consumers/Demand side labelling
16:38	EU5: Ecodesign requirements for sustainable products	EU	The Commission shall ensure that when it conducts its activities, it observes a balanced participation of Member States' representatives and all interested parties involved with the product or product group in question, such as industry, including SMEs and craft industry, trade unions, traders, retailers, importers, environmental protection groups and consumer organisations.	Business Models/Supply side Consumers/Demand side SME

16:45	EU5: Ecodesign requirements for sustainable products	EU	Manufacturers shall ensure that that a product covered by a delegated act adopted pursuant to Article 4 is accompanied by instructions that enable consumers and other end-users to safely assemble, install, operate, store, maintain, repair and dispose of the product in a language that can be easily understood by consumers and other endusers, as determined by the Member State concerned. Such instructions shall be clear, understandable and legible and include at least the information specified in the delegated acts adopted pursuant to Article 4 and pursuant to Article 7(2)(b), point (ii).	Business Models/Supply side Consumers/Demand side dismantle/reassemble Instrument Type: Information Instrument: Design Features Repair/Maintain waste
17:11	EU6: Green Deal	EU	The circular economy action plan will also include measures to encourage businesses to offer, and to allow consumers to choose, reusable, durable and repairable products. It will analyse the need for a 'right to repair', and curb the built-in obsolescence of devices, in particular for electronics. Consumer policy will help to empower consumers to make informed choices and play an active role in the ecological transition. New business models based on renting and sharing goods and services will play a role as long as they are truly sustainable and affordable.	Business Models/Supply side Consumers/Demand side electronics Instrument Type: Information Re-use/redistribute Repair/Maintain
17:12	EU6: Green Deal	EU	Reliable, comparable and verifiable information also plays an important part in enabling buyers to make more sustainable decisions and reduces the risk of 'green washing'. Companies making 'green claims' should substantiate these against a standard methodology to assess their impact on the environment. The Commission will step up its regulatory and non-regulatory efforts to tackle false green claims. Digitalisation can also help improve the availability of information on the characteristics of products sold in the EU. For instance, an electronic product passport could provide information on a product's origin, composition, repair and dismantling possibilities, and end of life handling.	Consumers/Demand side dismantle/reassemble electronics Instrument Type: Information limit: information Repair/Maintain

ID	Document	Document Groups	Quotation Content	Codes
1:37	EU1: EU action plan for the circular economy	EU	plastics, food waste, construction, critical raw materials, industrial and mining waste, consumption and public procurement.	critical raw materials
1:60	EU1: EU action plan for the circular economy	EU	help to save precious resources	critical raw materials Objective: Resource efficieny/scarcity
1:64	EU1: EU action plan for the circular economy	EU	Electrical and electronic products are particularly significant in this context. Their reparability can be important to consumers, and they can contain valuable materials that should be made easier to recycle (e.g. rare earth elements in electronic devices)	Consumers/Demand side critical raw materials electronics Objective: Resource efficieny/scarcity Recycle Repair/Maintain
1:152	EU1: EU action plan for the circular economy	EU	5.3. Critical raw materials Critical raw materials are both of high economic importance for the EU and vulnerable to supply disruption38; in certain cases, their extraction also causes significant environmental 36 http://ec.europa.eu/food/safety/food_waste/stop/index_en.htm 37 Article15 of Regulation(EU) N° 1380/2013 on the common fisheries policy 38 The European Commission has listed critical raw materials here: http://ec.europa.eu/enterprise/policies/rawmaterials/critical/index_en.htm. They include, for example, rare earth elements and other precious metals, but also phosphorus. 16 impacts. They are often present in electronic devices39. The current very low rate of recycling of these materials means that significant economic opportunities are lost. For all these reasons, increasing the recovery of critical raw materials is one of the challenges that must be addressed in the move to a more circular economy. Existing EU legislation encourages the recycling of electronic waste, including through mandatory targets40; but only high-quality recycling can ensure the recovery of critical raw materials. One of the challenges is collecting, dismantling and recycling products that contain such materials. It will be essential to improve the recyclability of electronic devices through product design (see section 1.1), thus improving the economic viability of the recycling process. The Commission is encouraging Member States to promote recycling of critical raw materials in its revised proposals on waste. Other barriers include insufficient information exchange between manufacturers and recyclers of electronic products, the absence of recycling standards, and a lack of data for economic operators on the potential for recycled critical raw materials. Such materials could also be recovered in landfills (e.g. from discarded electronic devices) or in	critical raw materials
12:76	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Strengthen the comprehensive development and utilization of rare and precious metal mineral resources and complex and refractory precious metal symbiotic ores.	critical raw materials
12:79	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote the extraction of valuable components from smelting waste residue, extract and recover iron, precious metals, alkali, etc. from red mud, extract rare precious metals from copper smelting slag and anode mud, and extract cadmium, germanium, iron, etc. from lead and zinc smelting waste residue. Extract copper, silver, lead, etc. from gold slag and cyanide 12.03.24, 11:08 Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan https://www.gov.cn/zwgk/2013-02/05/content_2327562.htm 15/47 tailings. Promote the comprehensive utilization of smelting waste liquid, recover gallium, scandium, etc. from alumina mother liquor, and recover nickel, etc. from electrolyte. Promote the recovery of lead, zinc, copper, antimony, bismuth, sulfur, phosphorus, etc. from smelting waste gas.	critical raw materials Recycle
12:81	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Promote high-value utilization of recycled metals such as recycled copper and recycled aluminum, and increase the proportion of non-ferrous metal production. It supports the extraction of waste acid and lead from waste leadacid batteries, the extraction of zinc from waste galvanized steel sheets, the extraction of silver from waste photosensitive materials, the extraction of platinum group elements and rare earth materials from waste catalysts, and the extraction of precious metals from waste electronic products. Support the use of overseas scrap nonferrous metal resources that can be used as raw materials.	critical raw materials electronics Recycle
12:89	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	China	Encourage the extraction of rare precious metals such as cobalt, rhodium, and palladium from waste petroleum refining catalysts.	critical raw materials Recycle waste

13:58	EU2: A new Circular Economy Action Plan 2020	EU	rules on recycled content and measures to improve the collection and recycling rates of all batteries, ensure the recovery of valuable materials and provide guidance to consumers;	Consumers/Demand side critical raw materials electronics Recycle
14:8	EU3: A Green Deal Industrial Plan for the Net-Zero Age	EU	Second, the Commission will propose a Critical Raw Materials Act. The manufacturing of EU net-zero technologies is only possible if access to relevant critical raw materials is ensured, including by diversifying sourcing and by recycling raw materials to lower the EU's dependence on highly concentrated supplies from third countries and boost quality jobs and growth in the circular economy. This act will aim to provide the EU security of supply, including by strengthening international engagement, facilitating extraction (where relevant), processing and recycling, while ensuring high environmental standards and continuing research and innovation, e.g. to reduce material use and to develop bio-based substitutes. There have already been tangible successes: today, some EU companies are using lignin stemming from wood in batteries, instead of graphite.	biobased critical raw materials Level: Macro Objective: Economic Prosperity/Growth Objective: Employment Objective: Environmental Quality Objective: Innovation Objective: Resource efficieny/scarcity R&D / Science Recycle Reduce security/dependency
14:9	EU3: A Green Deal Industrial Plan for the Net-Zero Age	EU	Modelled on the European Battery Alliance Academy34, the Commission will propose to establish Net-Zero Industry Academies to roll out up-skilling and re-skilling programmes in strategic industries for the green transition, such as raw materials, hydrogen and solar technologies, The Commission will initiate an Academy to offer onand offline trainings for sustainable construction with a focus on the use of biobased materials, circularity and digital technologies.	biobased construction/demolition critical raw materials Instrument Type: Information Objective: Carbon reduction Objective: Sustainability Renewable Energy
14:11	EU3: A Green Deal Industrial Plan for the Net-Zero Age	EU	The InvestEU Programme is well placed to boost net-zero investments in the EU. InvestEU is the Union's instrument for catalysing private investments in EU priority areas. Through the EIB, the EIF, the EBRD and 14 other implementing partners, the EU supports public and private investments in net-zero tech and industrial innovation. Examples of projects that can be supported are RDI of battery technologies, critical raw materials recycling, demonstration plants for manufacturing materials in the supply chain of electric vehicle batteries, hydrogen propulsion technologies, innovative advanced biofuels plants, advanced manufacturing technology equipment in steel processing. InvestEU can mobilise over EUR 372 billion of financing – public, but mainly private - through the backing of the EU budget guarantee of EUR 26.2 billion.	critical raw materials Investment Recycle
15:7	EU4: Regulation proposal Critical Rawmaterials Act	EU	Third, legislation on waste management does not create enough incentives to improve the circularity of critical raw materials ('their circularity') or for the development of a market in secondary raw materials.	critical raw materials Instrument Type: Regulation limit: market functioning limit: policy waste
15:9	EU4: Regulation proposal Critical Rawmaterials Act	EU	Second, the EU's waste framework governs the collection, reduction, recycling and treatment of waste, including of waste streams containing critical raw materials. The Extractive Waste Directive9 requires any operator responsible for managing extractive waste (i.e. the waste generated by mining operations) to obtain a permit. This proposal will complement this by requiring operators (for waste facilities currently operating) and Member States (for closed and abandoned waste facilities) to analyse the CRMs recovery potential in extractive waste.	critical raw materials indicator/measurement/monitoring Instrument Type: Regulation mining waste
15:10	EU4: Regulation proposal Critical Rawmaterials Act	EU	The Waste Framework Directive10 targets waste in general and obliges Member States to take measures to prevent the generation of waste, targeting products containing CRMs in particular.	critical raw materials Instrument Type: Regulation Objective: Waste reduction waste

15:12	EU4: Regulation proposal Critical Rawmaterials Act	EU	A joint review is being carried out of the End-of-Life Vehicles Directive 2000/53/EC12, in conjunction with Directive 3 Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification) (OJ L 26, 28.1.2012, p. 1–21) 4 Directive 2010/75/EU of the European Parliament and Of The Council Of 24 November 2010 On Industrial Emissions (Integrated Pollution Prevention And Control) (Oj L 334, 17.12.2010, P. 17–119) 5 Council Directive 92/43/Eec Of 21 May 1992 on the Conservation Of Natural Habitats And Of Wild Fauna And Flora (Oj L 206, 22.7.1992, P. 7–50) 6 Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ L 20, 26.1.2010, p. 7–25) 7 Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1–73) 8 Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (OJ L 164, 25.6.2008, p. 19–40) 9 Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC - Statement by the European Parliament, the Council and the Commission (OJ L 102, 11.4.2006, p. 15–34) 10 Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (OJ L 312, 22.11.2008, p. 3–30) 11 Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) (recast) Text with EEA relevance (OJ L 197, 24.7.2012, p. 38–71) 12 Directive 2000/53/EC of the European Parliament and of the Council of	critical raw materials Instrument Type: Regulation Objective: Waste reduction Re-use/redistribute Recycle transport waste
15:13	EU4: Regulation proposal Critical Rawmaterials Act	EU	Most critical raw materials are metals, which can be in principle endlessly recycled, albeit with sometimes deteriorating qualities. This offers the potential to move to a truly circular economy in the context of the green transition. After an initial phase of rapid growth of demand for critical raw material for new technologies, where primary extraction and processing will still constitute the predominant source, recycling should become increasingly important and reduce the need for primary extraction and its associated impacts. Today, however, recycling rates of most critical raw materials are low, and recycling systems and technologies are often not adapted to the specificities of these raw materials. Action addressing the different factors holding back the circularity potential is thus required.	critical raw materials limit limit: market functioning metals Recycle
15:14	EU4: Regulation proposal Critical Rawmaterials Act	EU	Member States retain important competences in the field of circularity, for example in the area of waste collection and treatment systems. These should be used to increase collection and recycling rates for waste streams with a high potential for recovery of critical raw materials, making use for example of financial incentives such as discounts, monetary rewards or deposit-refund systems.	critical raw materials Instrument Type: Economic Level: Macro Recycle waste
15:15	EU4: Regulation proposal Critical Rawmaterials Act	EU	Member State authorities should also make a difference as buyers of critical raw materials and of products containing them,	critical raw materials Public procurement
15:16	EU4: Regulation proposal Critical Rawmaterials Act	EU	national research and innovation programmes provide significant resources to increase the state of knowledge and technology for critical raw materials circularity as well as material efficiency.	critical raw materials Investment Objective: Innovation Objective: Resource efficieny/scarcity R&D / Science
15:17	EU4: Regulation proposal Critical Rawmaterials Act	EU	Finally, Member States should promote the recovery of critical raw materials from extractive waste by improving the availability of information and by addressing legal, economic and technical barriers. One possible solution that Member States should look into are risk-sharing mechanisms between operators and the Member State to promote recovery from closed waste facilities.	Business Models/Supply side critical raw materials Eco-Design Instrument Type: Economic Instrument Type: Information Instrument Type: Regulation Instrument: Design Features Level: Macro limit limit: information limit: market functioning limit: policy Recycle waste

15:18	EU4: Regulation proposal Critical Rawmaterials Act	EU	The Union has, in many of its regions, a legacy of raw materials extraction and thus substantial amounts of extractive waste on closed facilities which, due to their only recent rise in economic importance, have generally not been analysed for critical raw materials potential. The recovery of critical raw materials from extractive waste facilities has the potential to create economic value and employment in historical mining regions, which are often affected by deindustrialisation and decline. The lack of attention to, and information on critical raw materials content, especially on closed waste facilities, constitutes a key barrier to greater use of the critical raw materials potential of extractive waste.	critical raw materials Geography limit limit: information mining Objective: Economic Prosperity/Growth Objective: Employment waste
15:19	EU4: Regulation proposal Critical Rawmaterials Act	EU	Operators of extractive waste facilities, both existing and new, should perform a preliminary economic assessment study regarding the recovery of critical raw materials from extractive waste present on the site and from such waste being generated.	Business Models/Supply side critical raw materials indicator/measurement/monitoring mining waste
15:20	EU4: Regulation proposal Critical Rawmaterials Act	EU	In line with the waste hierarchy established in Directive 2008/98/EC of the European Parliament and of the Council46, priority should be given to preventing the generation of waste containing critical raw materials, by extracting critical raw materials from the extracted volume prior to it becoming waste.	4R/Waste Hierarchy critical raw materials Instrument Type: Regulation Objective: Waste reduction waste
15:21	EU4: Regulation proposal Critical Rawmaterials Act	EU	In elaborating this study, operators should gather the necessary information, including concentrations and quantities of critical raw materials in the extractive waste, and perform an assessment of multiple options regarding processes, operations or business arrangements that could enable an economically viable recovery of critical raw materials. This obligation comes in addition to obligations laid down in Directive 2006/21/EC and the national laws transposing it and is directly applicable. In its implementation, operators and competent authorities should seek to minimise administrative burden and integrate procedures to the extent possible.	critical raw materials indicator/measurement/monitoring Instrument Type: Regulation Instrument: Design Features
15:23	EU4: Regulation proposal Critical Rawmaterials Act	EU	Permanent magnets are incorporated in a wide variety of products, with wind turbines and electric vehicles being the most important and fastest-growing applications but also other products, including magnet resonance imaging devices, industrial robots, light means of transport, cooling generators, heat pumps, electric motors, industrial electric pumps, automatic washing machines, tumble driers, microwaves, vacuum cleaners and dishwashers containing significant amounts worth recovering. Most permanent magnets, especially the most performant types, contain critical raw materials, such as neodymium, praseodymium, dysprosium and terbium, boron, samarium, nickel or cobalt. Their recycling is possible but today only performed in the Union at a small scale or in the context of research projects. Permanent magnets should therefore be a priority product for increasing circularity.	critical raw materials Recycle
15:25	EU4: Regulation proposal Critical Rawmaterials Act	EU	increase the collection of waste with high critical raw materials recovery potential and ensure their introduction into the appropriate recycling system, EN 39 EN with a view to maximising the availability and quality of recyclable material as an input to critical raw material recycling facilities;	critical raw materials Objective: Resource efficieny/scarcity Recycle waste
15:26	EU4: Regulation proposal Critical Rawmaterials Act	EU	increase the re-use of products and components with high critical raw materials recovery potential;	critical raw materials Re-use/redistribute Recycle
15:27	EU4: Regulation proposal Critical Rawmaterials Act	EU	increase the use of secondary critical raw materials in manufacturing, including, where appropriate, by taking recycled content into account in award criteria related to public procurement;	critical raw materials Public procurement Recycle
15:29	EU4: Regulation proposal Critical Rawmaterials Act	EU	ensure that their workforce is equipped with the skills needed to support circularity of the critical raw materials value chain.	critical raw materials Instrument Type: Information
15:31	EU4: Regulation proposal Critical Rawmaterials Act	EU	introduction of financial incentives, such as discounts, monetary rewards or depositrefund systems, to encourage the re-use of products with high critical raw materials recovery potential and the collection of waste from such products.	critical raw materials Instrument Type: Economic Re-use/redistribute Recycle waste
15:32	EU4: Regulation proposal Critical Rawmaterials Act	EU	Each Member State shall by [OP please insert: 4 years after the date of entry into force of this Regulation] adopt and implement measures to promote the recovery of critical raw materials from extractive waste, in particular from closed waste facilities identified in the database created in accordance with Article 26 as containing potentially economically recoverable critical raw materials.	critical raw materials Level: Macro mining Recycle Time waste

15:33	EU4: Regulation proposal Critical Rawmaterials Act	EU	When reporting to the Commission the data concerning the quantities of waste electrical and electronic equipment recycled, pursuant to Article 16(6) of Directive 2012/19/EU on waste electrical and electronic equipment, Member States shall identify separately, and report, the quantities of components containing relevant amounts of critical raw materials removed from such waste equipment and the quantities of critical raw materials recovered from the waste electrical and electronic equipment.	critical raw materials electronics indicator/measurement/monitoring Recycle waste
15:34	EU4: Regulation proposal Critical Rawmaterials Act	EU	In drawing up this list, the Commission shall take account of: (a) the total amount of critical raw materials recoverable from those products, components and waste streams: (b) the extent to which those products, components and waste streams are covered by Union legislation; (c) regulatory gaps; (d) particular challenges affecting their collection and waste treatment; (e) existing systems of collection and waste treatment applying to them.	critical raw materials Instrument Type: Regulation Instrument: Design Features Recycle waste
15:35	EU4: Regulation proposal Critical Rawmaterials Act	EU	Operators obliged to submit waste management plans in accordance with Article 5 of Directive 2006/21/EC shall provide to the competent authority as defined in Article 3 of Directive 2006/21/EC a preliminary economic assessment study regarding the potential recovery of critical raw materials from: (a) the extractive waste stored in the facility; and (b) the extractive waste being generated or, where considered more effective, from the extracted volume prior to it becoming waste.	Business Models/Supply side critical raw materials indicator/measurement/monitoring Recycle waste
15:36	EU4: Regulation proposal Critical Rawmaterials Act	EU	Operators of existing waste facilities shall submit the study referred to in paragraph 1 to the competent authority as defined in Article 3 of Directive 2006/21/EC by [OP please insert: 3 years after the date of entry into force of this Regulation]. Operators of new waste facilities shall submit this study to the competent authority when submitting their waste management plans in accordance with Article 5 of Directive 2006/21/EC.	critical raw materials indicator/measurement/monitoring Instrument Type: Regulation Instrument: Design Features Time
15:37	EU4: Regulation proposal Critical Rawmaterials Act	EU	Member States shall establish a database of all closed waste facilities, including abandoned waste facilities, located on their territory. This database shall contain information on: (a) the location, areal extent and waste volume of the waste facility; (b) the operator or former operator of the waste facility and, where applicable, their legal successor; (c) the approximate quantities and concentrations of all raw materials contained in the extractive waste and, where available, in the original mineral deposit, in accordance with paragraph 6 of this Article; EN 41 EN (d) any additional information considered relevant by the Member State to enable the recovery of critical raw materials from a waste facility. 5. The database referred to in paragraph 4 shall be put in place by [OP please insert: 1 year after the date of entry into force of this Regulation] and all information completed by [OP please insert: 3 years after the date of entry into force of this Regulation]. It shall be made available in a publicly accessible and digital form and updated at least every 2 years to incorporate additional available information and newly closed or newly identified facilities.	Business Models/Supply side critical raw materials Geography indicator/measurement/monitoring Level: Macro Recycle Time waste
15:42	EU4: Regulation proposal Critical Rawmaterials Act	EU	The Commission should be empowered to adopt implementing acts recognising certification schemes that should be considered comprehensive and trustworthy, providing a common basis for authorities and market participants for assessing the sustainability of critical raw materials. Recognition should be given only to certification schemes that cover a broad range of sustainability aspects, including environmental protection, human rights including labour rights and business transparency, and which contain provisions for independent third party verification and monitoring of compliance.	critical raw materials indicator/measurement/monitoring Instrument Type: Information Instrument Type: Regulation Instrument: Design Features labelling Objective: Employment Objective: Environmental Quality Objective: Social Equity Objective: Sustainability
15:43	EU4: Regulation proposal Critical Rawmaterials Act	EU	Commission should be empowered to develop a system for the calculation of the environmental footprint of critical raw materials, including a verification process, to ensure that critical raw materials placed on the Union market publicly display information on such footprint. The system should be based on taking into account scientifically sound assessment methods and relevant international standards in the area of life cycle assessment.	critical raw materials indicator/measurement/monitoring Instrument Type: Information Instrument: Design Features R&D / Science

15:44	EU4: Regulation proposal Critical Rawmaterials Act	EU	The Environmental Footprint methods constitute a relevant basis for the development of the calculation rules. They rely on scientifically sound assessment methods which EN 15 EN take into account developments on international level and cover environmental impacts, including climate change and impacts related to water, air, soil, resources, land use and toxicity.	Chemicals critical raw materials indicator/measurement/monitoring labelling land-use Objective: Carbon reduction Objective: Environmental Quality Objective: Pollution Objective: Resource efficieny/scarcity R&D / Science water
15:45	EU4: Regulation proposal Critical Rawmaterials Act	EU	establishing rules for the calculation and verification of the share of neodymium, dysprosium, praseodymium, terbium, boron, samarium, nickel and cobalt recovered from manufacturing waste or post-consumer waste present in the permanent magnets incorporated in the products referred to in paragraph 1.	critical raw materials indicator/measurement/monitoring waste
15:47	EU4: Regulation proposal Critical Rawmaterials Act	EU	The general objective of this Regulation is to improve the functioning of the internal market by establishing a framework to ensure the Union's access to a secure and sustainable supply of critical raw materials.	critical raw materials Objective: Economic Prosperity/Growth Objective: Resource efficieny/scarcity security/dependency
15:48	EU4: Regulation proposal Critical Rawmaterials Act	EU	Union recycling capacity, including for all intermediate recycling steps, is able to produce at least 15% of the Union's annual consumption of strategic raw materials.	critical raw materials indicator/measurement/monitoring Objective: Economic Prosperity/Growth Recycle
15:49	EU4: Regulation proposal Critical Rawmaterials Act	EU	Union extraction capacity is able to extract the ores, minerals or concentrates needed to produce at least 10% of the Union's annual consumption of strategic raw materials, to the extent that the Union's reserves allow for this; (ii) Union processing capacity, including for all intermediate processing steps, is able to produce at least 40% of the Union's annual consumption of strategic raw materials;	critical raw materials indicator/measurement/monitoring Objective: Economic Prosperity/Growth Objective: Resource efficieny/scarcity
15:50	EU4: Regulation proposal Critical Rawmaterials Act	EU	diversify the Union's imports of strategic raw materials with a view to ensure that, by 2030, the Union's annual consumption of each strategic raw material at any relevant stage of processing can rely on imports from several third countries, none of which provide more than 65% of the Union's annual consumption; (c) improve the Union's ability to monitor and mitigate the supply risk related to critical raw materials;	critical raw materials indicator/measurement/monitoring security/dependency
15:51	EU4: Regulation proposal Critical Rawmaterials Act	EU	ensure the free movement of critical raw materials and products containing critical raw materials placed on the Union market while ensuring a high level of environmental protection, by improving their circularity and sustainability	critical raw materials Objective: Environmental Quality Objective: Sustainability
15:52	EU4: Regulation proposal Critical Rawmaterials Act	EU	The measures on monitoring leave Member States responsible for identifying and monitoring key market operators. The burden on companies to provide information is limited as it only captures large companies active in extraction, refining or recycling of CRMs.	Business Models/Supply side critical raw materials indicator/measurement/monitoring mining
15:54	EU4: Regulation proposal Critical Rawmaterials Act	EU	(b) 12 months for Strategic Projects only involving processing or recycling.	critical raw materials Instrument Type: Regulation Instrument: Design Features Recycle Time
15:55	EU4: Regulation proposal Critical Rawmaterials Act	EU	(b) 9 months for Strategic Projects only involving processing or recycling.	critical raw materials Instrument Type: Regulation Instrument: Design Features Recycle Time
15:56	EU4: Regulation proposal Critical Rawmaterials Act	EU	The stress tests referred to in the first subparagraph shall consist of an assessment of the vulnerability of the Union's supply chain of the relevant strategic raw material to supply disruptions by estimating the impact of different scenarios that may cause such disruptions and their potential effects, taking into account at least the following elements: (a) where the raw material concerned is extracted, processed or recycled; (b) the capacities of economic operators along the value chain as well as the market structure; (c) factors that might affect supply, including but not limited to the geopolitical situation, logistics, energy supply, workforce or natural disasters; (d) the availability of alternative supply sources and of substitute materials; (e) the users of the relevant raw material along the value chain and their share of demand, with special attention to the manufacturing of technologies relevant for the green and digital transitions as well as defence and space applications.	critical raw materials indicator/measurement/monitoring Recycle security/dependency

C Analysis Results

Excel-file with analysis results: Appendix C – Analysis results.xlsx

China			EU			Statement/Theme				
ID	Document	Quotation content	ID	Document	Quotation content					
			1:9	EU1: EU action plan for the circular economy	EU's efforts to develop a sustainable, low carbon, resource efficient and competitive economy	Improve competitiveness				
			1:11	EU1: EU action plan for the circular economy	generate new and sustainable competitive advantages for Europe					
			1:15	EU1: EU action plan for the circular economy	sustainable, low carbon, resource efficient and competitive economy					
			1:16	EU1: EU action plan for the circular economy	EU's competitiveness by protecting businesses against scarcity of resources and volatile prices, helping to create new business opportunities and innovative, more efficient ways of producing and consuming.					
			1:172	EU1: EU action plan for the circular economy	Hence, support of research and innovation will be a major factor in encouraging the transition; it will also contribute to the competitiveness and modernisation of EU industry.					
			1:173	EU1: EU action plan for the circular economy	The Horizon 2020 work programme 2016-2017 includes a major initiative: "Industry 2020 in the circular economy", which will grant over €650 million for innovative demonstration projects that support the objectives of the circular economy and industrial competitiveness in the EU in a wide range of industrial and service activities, including process industries, manufacturing, and new business models. It also explores a pilot approach to help innovators facing regulatory obstacles (e.g. ambiguous legal provisions), by setting up agreements with stakeholders and public authorities ('innovation deals').					
			13:2	EU2: A new Circular Economy Action Plan 2020	As half of total greenhouse gas emissions and more than 90% of biodiversity loss and water stress come from resource extraction and processing, the European Green Deal launched a concerted strategy for a climate-neutral, resource-efficient and competitive economy. Scaling up the circular economy from front-runners to the mainstream economic players will make a decisive contribution to achieving climate neutrality by 2050 and decoupling economic growth from resource use, while ensuring the longterm competitiveness of the EU and leaving no one behind.					
			13:4	EU2: A new Circular Economy Action Plan 2020	For business, working together on creating the framework for sustainable products will provide new opportunities in the EU and beyond. This progressive, yet irreversible transition to a sustainable economic system is an indispensable part of the new EU industrial strategy.					
			13:83	EU2: A new Circular Economy Action Plan 2020	The strategy will aim at strengthening industrial competitiveness and innovation in the sector, boosting the EU market for sustainable and circular textiles, including the market for textile reuse, addressing fast fashion and driving new business models.					
			17:1	EU6: Green Deal	The European Green Deal is a response to these challenges. It is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.					
5:33	C3: 13th 5YP	We will make coordinated plans for industrial layouts based on material flow and industrial linkage, encourage industrial parks to adopt a more circular operational flow, establish hybrid industry-agriculture circular economy demonstration zones, and promote the coupled growth of enterprises, industrial parks, and industries.	1:24	EU1: EU action plan for the circular economy	Action on the circular economy therefore ties in closely with key EU priorities, including jobs and growth, the investment agenda, climate and energy, the social agenda and industrial innovation, and with global efforts on sustainable development.					
5:74	C3: 13th 5YP	In fostering new areas of economic growth, we will spur innovation and industrial application in emerging, cutting-edge fields such as advanced semi-conductivity, robotics, additive manufacturing, intelligent systems, next generation aviation equipment, comprehensive service systems for space technologies, smart transportation, precision medicine, systems for high-efficiency energy storage and distributed energy, smart materials, efficient energy conservation, environmental protection, virtual reality, and interactive movies and television	1:34	EU1: EU action plan for the circular economy	By stimulating sustainable activity in key sectors and new business opportunities, the plan will help to unlock the growth and jobs potential of the circular economy					

7:1	C2: 14th 5YP	Expediting the Transition to a Green Growth Model	13:2	EU2: A new Circular Economy Action Plan 2020	As half of total greenhouse gas emissions and more than 90% of biodiversity loss and water stress come from resource extraction and processing, the European Green Deal launched a concerted strategy for a climate-neutral, resource-efficient and competitive economy. Scaling up the circular economy from front-runners to the mainstream economic players will make a decisive contribution to achieving climate neutrality by 2050 and decoupling economic growth from resource use, while ensuring the longterm competitiveness of the EU and leaving no one behind.	Aim for economic growth				
7:2	C2: 14th 5YP	In continuing to give priority to the environment and green development, we will promote the total consumption control, judicious allocation, comprehensive conservation, and circular use of resources, so as to achieve both high-quality economic growth and a high-standard of environmental protection.	13:3	EU2: A new Circular Economy Action Plan 2020	To fulfil this ambition, the EU needs to accelerate the transition towards a regenerative growth model that gives back to the planet more than it takes, advance towards keeping its resource consumption within planetary boundaries, and therefore strive to reduce its consumption footprint and double its circular material use rate in the coming decade.					
12:4	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	As industrialization, urbanization and agricultural modernization continue to advance, our country's demand for energy resources will increase rigidly, the amount of waste generated will continue to increase, and the relationship between economic growth and resources and the environment will continue to increase. The contradictions have become more prominent and the requirement to develop a circular economy has become more urgent.	13:6	EU2: A new Circular Economy Action Plan 2020	A recent study estimates that applying circular economy principles across the EU economy has the potential to increase EU GDP by an additional 0.5% by 2030 creating around 700 000 new jobs5 . There is a clear business case for individual companies too: since manufacturing firms in the EU spend on average about 40% on materials, closed loop models can increase their profitability, while sheltering them from resource price fluctuations.					
			14:8	EU3: A Green Deal Industrial Plan for the Net-Zero Age	Second, the Commission will propose a Critical Raw Materials Act. The manufacturing of EU net-zero technologies is only possible if access to relevant critical raw materials is ensured, including by diversifying sourcing and by recycling raw materials to lower the EU's dependence on highly concentrated supplies from third countries and boost quality jobs and growth in the circular economy. This act will aim to provide the EU security of supply, including by strengthening international engagement, facilitating extraction (where relevant), processing and recycling, while ensuring high environmental standards and continuing research and innovation, e.g. to reduce material use and to develop bio-based substitutes. There have already been tangible successes: today, some EU companies are using lignin stemming from wood in batteries, instead of graphite.					
			17:1	EU6: Green Deal	The European Green Deal is a response to these challenges. It is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.					
			17:4	EU6: Green Deal	This upfront investment is also an opportunity to put Europe firmly on a new path of sustainable and inclusive growth.					
			17:6	EU6: Green Deal	The transition is an opportunity to expand sustainable and job-intensive economic activity. There is significant potential in global markets for low-emission technologies, sustainable products and services. Likewise, the circular economy offers great potential for new activities and jobs.					
			13:10 3	EU2: A new Circular Economy Action Plan 2020	Despite efforts at EU and national level, the amount of waste generated is not going down. Annual waste generation from all economic activities in the EU amounts to 2.5 billion tonnes, or 5 tonnes per capita a year, and each citizen produces on average nearly half a tonne of municipal waste. The decoupling of waste generation from economic growth will require considerable effort across the whole value chain and in every home.	Aim for decoupling of economic growth from resource use / waste generation				
			13:2	EU2: A new Circular Economy Action Plan 2020	As half of total greenhouse gas emissions and more than 90% of biodiversity loss and water stress come from resource extraction and processing, the European Green Deal launched a concerted strategy for a climate-neutral, resource-efficient and competitive economy. Scaling up the circular economy from front-runners to the mainstream economic players will make a decisive contribution to achieving climate neutrality by 2050 and decoupling economic growth from resource use, while ensuring the longterm competitiveness of the EU and leaving no one behind.					

			13:149	EU2: A new Circular Economy Action Plan 2020	Indicators on resource use, including consumption and material footprints to account for material consumption and environmental impacts associated to our production and consumption patterns will also be further developed and will be linked to monitoring and assessing the progress towards decoupling economic growth from resource use and its impacts in the EU and beyond.					
12:150	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Industrial and agricultural complex industrial parks should promote the deep processing and utilization of agricultural and sideline products, extend the industrial chain, and increase added value.	13:6	EU2: A new Circular Economy Action Plan 2020	A recent study estimates that applying circular economy principles across the EU economy has the potential to increase EU GDP by an additional 0.5% by 2030 creating around 700 000 new jobs5 . There is a clear business case for individual companies too: since manufacturing firms in the EU spend on average about 40% on materials, closed loop models can increase their profitability, while sheltering them from resource price fluctuations.	Target economic growth of the industrial sector				
			13:7	EU2: A new Circular Economy Action Plan 2020	Building on the single market and the potential of digital technologies, the circular economy can strengthen the EU's industrial base and foster business creation and entrepreneurship among SMEs. Innovative models based on a closer relationship with customers, mass customisation, the sharing and collaborative economy, and powered by digital technologies, such as the internet of things, big data, blockchain and artificial intelligence, will not only accelerate circularity but also the dematerialisation of our economy and make Europe less dependent on primary materials.					
			14:4	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The starting point for the Plan is the need to massively increase the technological development, manufacturing production and installation of net-zero products and energy supply in the next decade, and the value added of an EU-wide approach to meet this challenge together.					
			13:83	EU2: A new Circular Economy Action Plan 2020	The strategy will aim at strengthening industrial competitiveness and innovation in the sector, boosting the EU market for sustainable and circular textiles, including the market for textile reuse, addressing fast fashion and driving new business models.	Target economic growth of the textile sector				
			15:18	EU4: Regulation proposal Critical Rawmaterials Act	The Union has, in many of its regions, a legacy of raw materials extraction and thus substantial amounts of extractive waste on closed facilities which, due to their only recent rise in economic importance, have generally not been analysed for critical raw materials potential. The recovery of critical raw materials from extractive waste facilities has the potential to create economic value and employment in historical mining regions, which are often affected by deindustrialisation and decline. The lack of attention to, and information on critical raw materials content, especially on closed waste facilities, constitutes a key barrier to greater use of the critical raw materials potential of extractive waste.	Target economic growth of the mining sector				
4:58	C5: Circular Economy Promotion Law of the PRC	A mining enterprise shall, at the same time of mining the major mineral resources, make comprehensive exploitation and reasonable utilization of the intergrown and associated ores which have industrial values, and take protection measures against the minerals which must be mined simultaneously but may not be used temporarily as well as the tailings which have useful components so as to prevent the loss of resources and damage to the ecological environment.	1:72	EU1: EU action plan for the circular economy	nefficient use of resources in production processes can lead to lost business opportunities and significant waste generation.					
			1:115	EU1: EU action plan for the circular economy	Another barrier to higher recycling rates is the illegal transport of waste, both within the EU and to non-EU countries, which often results in economically sub-optimal and environmentally unsound treatment. A revised regulation on waste shipment was adopted in 201430 which will facilitate the detection of these illegal shipments; the Commission will take further measures to help ensure that it is properly implemented. High-value waste streams, such as end-of-life vehicles, will be targeted specifically, to prevent raw materials leakage.					
			1:126	EU1: EU action plan for the circular economy	Water scarcity has worsened in some parts of the EU in recent decades, with damaging effects on our environment and economy.					
			1:143	EU1: EU action plan for the circular economy	Discarding food that is still edible increases these impacts, and causes financial loss for consumers and the economy.	Prevent loss of economic value				

			1:153	EU1: EU action plan for the circular economy	Critical raw materials are both of high economic importance for the EU and vulnerable to supply disruption; in certain cases, their extraction also causes significant environmental impacts. They are often present in electronic devices. The current very low rate of recycling of these materials means that significant economic opportunities are lost. For all these reasons, increasing the recovery of critical raw materials is one of the challenges that must be addressed in the move to a more circular economy.					
			13:118	EU2: A new Circular Economy Action Plan 2020	In the past decade, millions of tonnes of European waste has been exported to non-EU countries, often without sufficient consideration of proper waste treatment. In many cases, waste exports result both in negative environmental and health impacts in the countries of destination, and in loss of resources and economic opportunities for the recycling industry in the EU.					
			17:14	EU6: Green Deal	A sustainable product policy also has the potential to reduce waste significantly. Where waste cannot be avoided, its economic value must be recovered and its impact on the environment and on climate change avoided or minimised. This requires new legislation, including targets and measures for tackling over-packaging and waste generation.					
			1:108	EU1: EU action plan for the circular economy	The revised waste proposals also includes increased recycling targets for packaging materials27, which will reinforce the targets on municipal waste and improve the management of packaging waste in the commercial and industrial sectors. More packaging waste (from households and industrial/commercial sources) has been recycled in the EU since the introduction of EU-wide targets for paper, glass, plastics, metal and wood packaging28, and there is potential for more recycling, with both economic and environmental benefits.	recycling has economic benefits				
			1:117	EU1: EU action plan for the circular economy	When waste cannot be prevented or recycled, recovering its energy content is in most cases preferable to landfilling it, in both environmental and economic terms. 'Waste to energy' can therefore play a role and create synergies with EU energy and climate policy, but guided by the principles of the EU waste hierarchy. The Commission will examine how this role can be optimised, without compromising the achievement of higher reuse and recycling rates, and how the corresponding energy potential can best be exploited. To that end, the Commission will adopt a 'waste to energy' initiative in the framework of the Energy Union.	recovering has economic benefits				
5:1	C3: 13th 5YP	To improve the quality of the environment and resolve serious ecological and environmental problems, we will step up ecosystem and environmental protection efforts, ensure that resources are used more efficiently and that more quality ecological goods are available to the public, and simultaneously help the people become prosperous, help the country grow stronger, and build a Beautiful China.	14:1	EU3: A Green Deal Industrial Plan for the Net-Zero Age	This decade will be decisive for the world to limit the rise in global temperatures and to take the necessary steps towards net-zero. The stakes are high and the challenges complex – but there is a once in a generation opportunity to use this imperative to act as a catalyst to invest in the clean energy economy and industry of the net-zero age.	Target economic prosperity (general)				
			14:3	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The European Green Deal sets in stone our green transition ambitions, including our climate targets towards net-zero by 2050. The Fit for 55 package provides a concrete plan to put the European economy firmly on track, with the REPowerEU Plan accelerating the move away from fossil fuels. Alongside the Circular Economy Action Plan, this sets the framework for the transformation of the EU's industry for the net-zero age.					
8:2	C4: 12th 5YP V2	In transforming the economic development mode, the importance of building a resource-saving and environment-friendly society should be stressed to save energy, reduce greenhouse emissions and actively tackle global climate change. We should develop circular economy and low carbon technologies Through striking a balance between economic development and population growth, sustainable development will be enhanced.								
9:21	C4: 12th 5YP V1	We need to persist in building a society that conserves resources and that is friendly to environment as an important effort to accelerate the pace of the transformation of economic and social development model. There is a need to implement in depth the basic national policy of conserving resources and of protecting the environment.								
10:1	C6: 14th 5YP CE	The development of a circular economy is a major strategy for China's economic and social development.								

10:13	C6: 14th 5YP CE	Domestically, during the "14th Five-Year Plan" period, China will focus on building a new development pattern with the domestic macro-cycle as the main body and the domestic and international doublecycle promoting each other, releasing the potential of domestic demand, expanding the consumption of the population, upgrading the level of consumption, and constructing a super-large-scale domestic market, and the demand for resources and energy will still be rigidly growing, while some of China's major resources have a high degree of dependence on the outside world, and there is a contradiction between supply and demand. At the same time, some of China's major resources have a high degree of dependence on foreign countries, the contradiction between supply and demand is prominent, the efficiency of resource and energy utilisation is still not high in general, the mode of production and life of mass production, mass consumption and mass emission has not yet been fundamentally reversed, and the security of resources is under greater pressure. The need to develop a circular economy and to improve the efficiency of resource use and the level of renewable resources utilisation is very urgent, and there is enormous room for it.				CE as a (part of a) new development mode				
10:18	C6: 14th 5YP CE	Whether from the perspective of global green development trend and requirements for addressing climate change, or from the perspective of domestic resource demand and utilisation level, China must vigorously develop circular economy, focus on solving the outstanding contradictions and problems, realise efficient resource utilisation and recycling, and promote high-quality economic and social development.								
10:19	C6: 14th 5YP CE	Guided by Xi Jinping's thought of socialism with Chinese characteristics in the new era, deeply implement the spirit of the 19th CPC National Congress and the 2nd, 3rd, 4th and 5th Plenary Sessions of the 19th CPC Central Committee and the State Council in accordance with the decision-making and deployment of the CPC Central Committee and the State Council, based on the new stage of development, implement the new development concept, build a new pattern of development, adhere to the basic national policy of resource conservation and environmental protection, and follow the principle of "reduce, reuse and resource", focusing on the development of circular economy and the efficient use of resources								
11:2	C7: The General Office of the State Council on accelerating the construction of	To accelerate the construction of a waste recycling system, we must be guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, thoroughly implement the spirit of the 20th National Congress of the Party, comprehensively implement Xi Jinping Thought on Ecological Civilization, fully, accurately and comprehensively implement the new development concept, and accelerate the construction of a new development pattern, strive to promote high-quality development, follow the circular economy concept of reduction, reuse, and resource utilization, aim to improve resource utilization efficiency, and take fine waste management, effective recycling, and efficient utilization as the path to cover all aspects of production and life.								
11:9	C7: The General Office of the State Council on accelerating the construction of	The annual output value of the resource recycling industry reaches 5 trillion yuan.				indicator				
			16:27	EU5: Ecodesign requirements for sustainable products	(a) there shall be no significant negative impact on the functionality of the product, from the perspective of the user; (b) there shall be no adverse effect on the health and safety of persons; (c) there shall be no significant negative impact on consumers in terms of the affordability of relevant products, also taking into account access to secondhand products, durability and the life cycle cost of products;	Create positive economic effect for consumers				
			16:28	EU5: Ecodesign requirements for sustainable products	(d) there shall be no disproportionate negative impact on the competitiveness of economic actors, at least of SMEs; (e) there shall be no proprietary technology imposed on manufacturers or other economic actors; (f) there shall be no disproportionate administrative burden on manufacturers or other economic actors.	Create positive economic effect for producers				

China			EU			Statement/Theme			
ID	Document	Quotation content	ID	Document	Quotation content				
10:3	C6: 14th 5YP CE	Vigorously developing the circular economy, promoting the economical and intensive use of resources, building a resource recycling-based industrial system and waste material recycling system is of great significance to safeguard the security of national resources, promote the realization of carbon peak, carbon neutrality, and promote the construction of ecological civilisation.	13:2	EU2: A new Circular Economy Action Plan 2020	As half of total greenhouse gas emissions and more than 90% of biodiversity loss and water stress come from resource extraction and processing, the European Green Deal launched a concerted strategy for a climate-neutral, resource-efficient and competitive economy. Scaling up the circular economy from front-runners to the mainstream economic players will make a decisive contribution to achieving climate neutrality by 2050 and decoupling economic growth from resource use, while ensuring the longterm competitiveness of the EU and leaving no one behind.	CE serves carbon neutrality			
10:18	C6: 14th 5YP CE	Whether from the perspective of global green development trend and requirements for addressing climate change, or from the perspective of domestic resource demand and utilisation level, China must vigorously develop circular economy, focus on solving the outstanding contradictions and problems, realise efficient resource utilisation and recycling, and promote high-quality economic and social development.	13:13	EU2: A new Circular Economy Action Plan 2020	This plan aims also at ensuring that the circular economy works for people, regions and cities, fully contributes to climate neutrality and harnesses the potential of research, innovation and digitalisation.				
11:1	C7: The General Office of the State Council on accelerating the construction of	Building a waste recycling system is an important measure to implement a comprehensive conservation strategy, ensure national resource security, actively and steadily promote carbon peak and carbon neutrality, and accelerate the green transformation of development methods.	13:88	EU2: A new Circular Economy Action Plan 2020	The built environment has a significant impact on many sectors of the economy, on local jobs and quality of life. It requires vast amounts of resources and accounts for about 50% of all extracted material. The construction sector is responsible for over 35% of the EU's total waste generation. Greenhouse gas emissions from material extraction, manufacturing of construction products, construction and renovation of buildings are estimated at 5-12% of total national GHG emissions. Greater material efficiency could save 80% of those emissions.				
			13:126	EU2: A new Circular Economy Action Plan 2020	In order to achieve climate neutrality, the synergies between circularity and reduction of greenhouse gas emissions need to be stepped up. The Commission will: □ analyse how the impact of circularity on climate change mitigation and adaptation can be measured in a systematic way; □ improve modelling tools to capture the benefits of the circular economy on greenhouse gas emission reduction at EU and national levels; □ promote strengthening the role of circularity in future revisions of the National Energy and Climate Plans and, where appropriate, in other climate policies.				
			13:127	EU2: A new Circular Economy Action Plan 2020	Carbon removals can be nature based, including through restoration of ecosystems, forest protection, afforestation, sustainable forest management and carbon farming sequestration, or based on increased circularity, for instance through long term storage in wood construction, re-use and storage of carbon in products such as mineralisation in building material.				
10:10	C6: 14th 5YP CE	From an international perspective, on the one hand, green, low-carbon and recycling development has become a global consensus, and the world's major economies have generally taken the development of recycling economy as a basic path to break the resource and environmental constraints, cope with climate change, and cultivate new points of economic growth.				Carbon neutrality is global consensus and trend			
12:28	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Green development has become an international trend. In recent years, in response to the international financial crisis and the challenges of global climate change, developed countries have accelerated the development of green industries as an important way to promote economic growth and transformation. Some countries have used technological advantages to create green barriers in international trade. In the new round of economic and technological competition, taking a green, low-carbon, cyclic development path is an inevitable choice.							

11:68	C7: The General Office of the State Council on accelerating the construction of	Integrate circular economy knowledge concepts into relevant education and training systems. At important time nodes such as National Ecology Day, National Energy Conservation Week, National Low Carbon Day, and Environment Day, we carry out various publicity and education activities to vigorously promote the importance of waste recycling and related policies and measures. Timely summarize and promote advanced experiences and typical practices.				Target public promotion of carbon reduction			
9:40	C4: 12th 5YP V1	Drives on saving energy and reducing emissions will be promoted in-depth among the populace.							
12:146	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	In accordance with the requirements of "layout optimization, enterprise clusters, industrial chains, material circulation, and intensive development", promote the park-based and agglomerated development of newly built and relocated enterprises and projects, promote the implementation of circular transformation of various industrial parks, and build a circular economy industrial chain , realize the circular links between enterprises and industries, improve the degree of industrial correlation and recycling, and promote the green, low-carbon and circular development of the park.	14:6	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The Plan will complement ongoing efforts to transform industry under the European Green Deal and the EU Industrial strategy, in particular the Circular Economy Action Plan. Modernising and decarbonising energy-intensive industries also remains a top priority, as does ensuring job transitions and quality job creation through training and education.	Target carbon reduction in industry			
10:30	C6: 14th 5YP CE	3. Promote the development of recycling parks. Promote the cyclic production of enterprises and the cyclic combination of industries, promote the comprehensive utilisation of wastes, the gradual utilisation of energy and the recycling of water resources, promote the resourceful utilisation of industrial residual pressure and heat, wastewater, waste gas and waste liquids, realise the green, lowcarbon and recycling development, and actively promote the centralised supply of gas and heat. Encourage the parks to promote the construction of green factories to achieve the intensification of plants, harmlessness of raw materials, clean production, resourcefulness of waste, low-carbon energy and green building materials. It has formulated guidelines for the development of circularisation in parks, and promoted typical models of circular economy development in key industries such as iron and steel, non-ferrous metals, metallurgy, petrochemicals, equipment manufacturing and light industry. Encourage the creation of national eco-industrial demonstration parks.	17:5	EU6: Green Deal	Achieving a climate neutral and circular economy requires the full mobilisation of industry. It takes 25 years – a generation – to transform an industrial sector and all the value chains. To be ready in 2050, decisions and actions need to be taken in the next five years.				
12:339	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement circular economy technology industrialization demonstration projects, focusing on supporting the comprehensive development and recycling of associated mines and tailings, waste resource utilization, recyclable materials, replacement of toxic and harmful raw materials, remanufacturing, high-value utilization of renewable resources, and extending the industrial chain Link with related industries and demonstrate the industrialization of key technologies and equipment such as “zero emission”.							
11:64	C7: The General Office of the State Council on accelerating the construction of	Conduct research on carbon footprint accounting standards and methods for key recycled materials.	13:21	EU2: A new Circular Economy Action Plan 2020	In order to make products fit for a climate-neutral, resource-efficient and circular economy, reduce waste and ensure that the performance of front-runners in sustainability progressively becomes the norm, the Commission will propose a sustainable product policy legislative initiative.	Target carbon reduction in product footprint accounting			
			13:26	EU2: A new Circular Economy Action Plan 2020	reducing carbon and environmental footprints;				
			14:4	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The starting point for the Plan is the need to massively increase the technological development, manufacturing production and installation of net-zero products and energy supply in the next decade, and the value added of an EU-wide approach to meet this challenge together.				

			15:44	EU4: Regulation proposal Critical Rawmaterials Act	The Environmental Footprint methods constitute a relevant basis for the development of the calculation rules. They rely on scientifically sound assessment methods which take into account developments on international level and cover environmental impacts, including climate change and impacts related to water, air, soil, resources, land use and toxicity.	accounting.			
			16:36	EU5: Ecodesign requirements for sustainable products	When prioritising products to be covered by ecodesign requirements in accordance with this Regulation, the Commission shall take into account their potential contribution to achieving Union climate, environmental and energy efficiency objectives, as well as the following criteria:				
11:41	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling of used power batteries. Strengthen the traceability management of new energy vehicle power batteries. Organize and carry out producer recycling target responsibility system actions. Establish and improve standard systems for power battery ecological design and carbon footprint accounting, actively participate in the formulation of international standards for power battery recycling, and promote international cooperation and mutual recognition of standards and specifications. Vigorously promote the quality certification of power battery cascade utilization products, and study and formulate technical specifications for waste power battery recycling and dismantling enterprises. Carry out a joint special inspection operation of "workshopstyle recycling" of used power batteries.	14:10	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The new EU regulatory framework for batteries is a crucial element in the EU's transition to a climate neutral economy, by securing competitive and resilient value chains for battery production, reuse and recycling in the EU. Going forward, the Ecodesign for Sustainable Products Regulation10 will apply to a broader range of products and further expand the range of sustainability requirements, in which EU industry excels. The Commission will give a high priority to work on net-zero technologies under the existing and future Ecodesign working plans.	Target carbon reduction in product footprint accounting of batteries			
			13:60	EU2: A new Circular Economy Action Plan 2020	sustainability and transparency requirements for batteries taking account of, for instance, the carbon footprint of battery manufacturing, ethical sourcing of raw materials and security of supply, and facilitating reuse, repurposing and recycling.				
5:13	C3: 13th 5YP	We will promote energy-conserving, low-carbon electric power dispatching.	14:4	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The starting point for the Plan is the need to massively increase the technological development, manufacturing production and installation of net-zero products and energy supply in the next decade, and the value added of an EU-wide approach to meet this challenge together.	Target carbon reduction in the energy system			
5:76	C3: 13th 5YP	We will make a strong push to advance the energy revolution, giving impetus to a transformation in the way energy is produced and used, improving the energy supply mix, and elevating the efficiency of energy utilization. We will build a modern energy system that is clean, low-carbon, safe, and efficient, and will safeguard the country's energy security.							
5:62	C3: 13th 5YP	Achieve an overall improvement in the quality of the environment and ecosystems Our modes of production and ways of life will become more eco-friendly and low-carbon. We will extract and use energy and resources with much greater efficiency. Aggregate energy and water consumption, the total amount of land used for construction, and aggregate carbon emissions will be effectively controlled, and aggregate emissions of major pollutants will be significantly reduced. We will basically complete functional zoning and the building of protective barriers for eco-security.				Promote low-carbon lifestyles			
9:15	C4: 12th 5YP V1	We will advocate civilized, thrift, green, and low-carbon consumption concept, and promote the formation of a green lifestyle and consumption model that are adapted to China's national conditions. We encourage consumers to buy energy-saving and water-saving products, energy-sav							
12:256	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the whole society to establish and practice the concept of civilized, frugal, green, low-carbon, and circular consumption, guide frugal and moderate consumption, and oppose extravagance and waste. Carry forward the fine tradition of diligence and thrift, abandon the bad habits of ostentation, ostentation, luxury and waste, and raise the whole society's awareness of energy saving, water saving, material saving and food saving.							

7:46	C2: 14th 5YP	Energy consumption and carbon dioxide emissions will be reduced by 13.5% and 18% per unit of GDP respectively.				indicator			
8:9	C4: 12th 5YP V2	Decrease in CO2 emissions per unit of GDP (%) 17 binding							
8:2	C4: 12th 5YP V2	In transforming the economic development mode, the importance of building a resource-saving and environment-friendly society should be stressed to save energy, reduce greenhouse emissions and actively tackle global climate change. We should develop circular economy and low carbon technologies Through striking a balance between economic development and population growth, sustainable development will be enhanced.	13:141	EU2: A new Circular Economy Action Plan 2020	The EU can only succeed if its efforts drive also the global transition to a just, climateneutral, resource-efficient and circular economy. There is a growing need to advance discussions on defining a "Safe Operating Space' whereby the use of various natural resources does not exceed certain local, regional or global thresholds and environmental impacts remain within planetary boundaries.	Aim for carbon reduction (general)			
9:22	C4: 12th 5YP V1	We should conserve energy; reduce greenhouse effect; develop a circular economy; promote low-carbon technologies; actively deal with global climate change; promote the mutual coordination between economic and social development and population, resources, and the environment; and take the path of sustainable development.	14:1	EU3: A Green Deal Industrial Plan for the Net-Zero Age	This decade will be decisive for the world to limit the rise in global temperatures and to take the necessary steps towards net-zero. The stakes are high and the challenges complex – but there is a once in a generation opportunity to use this imperative to act as a catalyst to invest in the clean energy economy and industry of the net-zero age.				
12:27	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	The pressure to deal with climate change is increasing. China is one of the countries most vulnerable to the effects of climate change. Climate change has led to increased instability in agricultural production, severe drought and high temperatures in some areas, reduced biodiversity, and increased ecosystem vulnerability. In recent years, China's greenhouse gas emissions have grown rapidly, per capita emissions have continued to rise, and the pressure to reduce emissions has continued to increase.	14:3	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The European Green Deal sets in stone our green transition ambitions, including our climate targets towards net-zero by 2050. The Fit for 55 package provides a concrete plan to put the European economy firmly on track, with the REPowerEU Plan accelerating the move away from fossil fuels. Alongside the Circular Economy Action Plan, this sets the framework for the transformation of the EU's industry for the net-zero age.				
			17:1	EU6: Green Deal	The European Green Deal is a response to these challenges. It is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.				
9:39	C4: 12th 5YP V1	Campaigns on energy saving and on practicing low carbon economy will be promoted among enterprises.				Promote carbon reduction in enterprises			
11:3	C7: The General Office of the State Council on accelerating the construction of	In the field of resource recycling, develop the resource recycling industry, improve the incentive and restraint mechanism, accelerate the construction of a comprehensive, efficient, standardized and orderly waste recycling system, lay a solid green and low-carbon foundation for highquality development, and help comprehensively build a beautiful China.				Carbon reduction serves development			
12:185	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously advocate low-carbon travel modes, strengthen ecological science publicity and education in tourist attractions, spread green and low-carbon concepts, reduce the use of disposable items, guide tourists to classify waste, and consciously protect the environment of scenic spots.				Target carbon reduction in transport / tourism			
			13:82	EU2: A new Circular Economy Action Plan 2020	Textiles are the fourth highest-pressure category for the use of primary raw materials and water, after food, housing and transport, and fifth for GHG emissions. It is estimated that less than 1% of all textiles worldwide are recycled into new textiles. The EU textile sector, predominantly composed of SMEs, has started to recover after a long period of restructuring, while 60% by value of clothing in the EU is produced elsewhere.	Target carbon reduction in textile production			
			13:88	EU2: A new Circular Economy Action Plan 2020	The built environment has a significant impact on many sectors of the economy, on local jobs and quality of life. It requires vast amounts of resources and accounts for about 50% of all extracted material. The construction sector is responsible for over 35% of the EU's total waste generation. Greenhouse gas emissions from material extraction, manufacturing of construction products, construction and renovation of buildings are estimated at 5-12% of total national GHG emissions. Greater material efficiency could save 80% of those emissions.	Target carbon reduction in construction			

			13:89	EU2: A new Circular Economy Action Plan 2020	Strategy for a Sustainable Built Environment. This Strategy will ensure coherence across the relevant policy areas such as climate, energy and resource efficiency, management of construction and demolition waste, accessibility, digitalisation and skills.				

China			EU			Statement/Theme				
ID	Document	Quotation content	ID	Document	Quotation content					
4:1	C5: Circular Economy Promotion Law of the PRC	improving the resource utilization efficiency	1:15	EU1: EU action plan for the circular economy	sustainable, low carbon, resource efficient and competitive economy	Use resources more efficiently				
5:6	C3: 13th 5YP	We will stay aware of the need for the economical, efficient, and circular use of resources, bring about a fundamental change in the way resources are utilized, and strengthen conservation management throughout the entire process of resource use, thus significantly raising resource utilization efficiency.	16:6	EU5: Ecodesign requirements for sustainable products	product energy and resource efficiency;					
5:62	C3: 13th 5YP	Achieve an overall improvement in the quality of the environment and ecosystems Our modes of production and ways of life will become more eco-friendly and low-carbon. We will extract and use energy and resources with much greater efficiency. Aggregate energy and water consumption, the total amount of land used for construction, and aggregate carbon emissions will be effectively controlled, and aggregate emissions of major pollutants will be significantly reduced. We will basically complete functional zoning and the building of protective barriers for eco-security.	17:1	EU6: Green Deal	The European Green Deal is a response to these challenges. It is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.					
7:45	C2: 14th 5YP	We will allocate our energy and resources more effectively and use them much more efficiently.								
9:4	C4: 12th 5YP V1	We will control the generation, discharge, emission of pollutants at the source and during the entire process, and reduce resources consumption								
9:22	C4: 12th 5YP V1	We should conserve energy; reduce greenhouse effect; develop a circular economy; promote low-carbon technologies; actively deal with global climate change; promote the mutual coordination between economic and social development and population, resources, and the environment; and take the path of sustainable development.								
9:23	C4: 12th 5YP V1	We will raise the resources utilization efficiency and the level of the development of circular economy.								
9:25	C4: 12th 5YP V1	We will enhance the sustainable development capabilities and further raise the utilization efficiency of energy, land, and sea space resources. Efforts will be intensified to treat environmental pollution and to ease the restrains caused by resources and environmental bottlenecks.								
9:28	C4: 12th 5YP V1	We will implement the strategy of giving priority to conservation, comprehensively implement the policy of exercising control over the total volume of resources utilization, of making bi-directional readjustment of supply and demand, and of carrying out differentiated management. There will be big rise in energy and resources utilization efficiency and in the degree of protection over various types of resources.								
10:3	C6: 14th 5YP CE	Vigorously developing the circular economy, promoting the economical and intensive use of resources, building a resource recycling-based industrial system and waste material recycling system is of great significance to safeguard the security of national resources, promote the realization of carbon peak, carbon neutral, and promote the construction of ecological civilisation.								
10:18	C6: 14th 5YP CE	Whether from the perspective of global green development trend and requirements for addressing climate change, or from the perspective of domestic resource demand and utilisation level, China must vigorously develop circular economy, focus on solving the outstanding contradictions and problems, realise efficient resource utilisation and recycling, and promote high-quality economic and social development.								

10:19	C6: 14th 5YP CE	Guided by Xi Jinping's thought of socialism with Chinese characteristics in the new era, deeply implement the spirit of the 19th CPC National Congress and the 2nd, 3rd, 4th and 5th Plenary Sessions of the 19th CPC Central Committee and the State Council in accordance with the decision-making and deployment of the CPC Central Committee and the State Council, based on the new stage of development, implement the new development concept, build a new pattern of development, adhere to the basic national policy of resource conservation and environmental protection, and follow the principle of "reduce, reuse and resource", focusing on the development of circular economy and the efficient use of resources								
10:20	C6: 14th 5YP CE	focus on building a resource recycling-based industrial system, accelerate the construction of waste materials recycling system, deepen the development of circular economy in agriculture, comprehensively improve the efficiency of resource use, enhance the level of renewable resources, establish and improve the green, low-carbon and recycling development of the economic system, to provide resources for the sustainable development of the economy and society.								
12:2	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	It is an important step to accelerate the transformation of economic development methods, build a resource-saving and environment-friendly society, and achieve sustainable development.								
12:29	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Guided by Deng Xiaoping Theory, the important thought of "Three Represents", and the Scientific Outlook on Development, we will implement the basic national policy of conserving resources and protecting the environment, and focus on improving resource output and follow the principles of "reduce, reuse, recycle,								
10:9	C6: 14th 5YP CE	Resource recycling has become an important way to guarantee China's resource security.	1:16	EU1: EU action plan for the circular economy	EU's competitiveness by protecting businesses against scarcity of resources and volatile prices, helping to create new business opportunities and innovative, more efficient ways of producing and consuming.	Prevent negative economic effects of resource scarcity				
10:13	C6: 14th 5YP CE	Domestically, during the "14th Five-Year Plan" period, China will focus on building a new development pattern with the domestic macro-cycle as the main body and the domestic and international doublecycle promoting each other, releasing the potential of domestic demand, expanding the consumption of the population, upgrading the level of consumption, and constructing a super-large-scale domestic market, and the demand for resources and energy will still be rigidly growing, while some of China's major resources have a high degree of dependence on the outside world, and there is a contradiction between supply and demand. At the same time, some of China's major resources have a high degree of dependence on foreign countries, the contradiction between supply and demand is prominent, the efficiency of resource and energy utilisation is still not high in general, the mode of production and life of mass production, mass consumption and mass emission has not yet been fundamentally reversed, and the security of resources is under greater pressure. The need to develop a circular economy and to improve the efficiency of resource use and the level of renewable resources utilisation is very urgent, and there is enormous room for it.	1:118	EU1: EU action plan for the circular economy	In a circular economy, materials that can be recycled are injected back into the economy as new raw materials thus increasing the security of supply. These "secondary raw materials" can be traded and shipped just like primary raw materials from traditional extractive resources.					
11:1	C7: The General Office of the State Council on accelerating the construction of	Building a waste recycling system is an important measure to implement a comprehensive conservation strategy, ensure national resource security, actively and steadily promote carbon peak and carbon neutrality, and accelerate the green transformation of development methods.	1:123	EU1: EU action plan for the circular economy	Recycled nutrients are a distinct and important category of secondary raw materials, for which the development of quality standards is necessary. They are present in organic waste material, for example, and can be returned to soils as fertilisers. Their sustainable use in agriculture reduces the need for mineral-based fertilisers, the production of which has negative environmental impacts, and depends on imports of phosphate rock, a limited resource.					

12:25	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Domestic resource supply cannot meet the needs of economic and social development. The shortage of energy, important minerals, water, land and other resources will further intensify. Important resources are exported to the outside world. Dependence will further increase, and sustainable development faces severe challenges restricted by energy resource bottlenecks.	14:8	EU3: A Green Deal Industrial Plan for the Net-Zero Age	Second, the Commission will propose a Critical Raw Materials Act. The manufacturing of EU net-zero technologies is only possible if access to relevant critical raw materials is ensured, including by diversifying sourcing and by recycling raw materials to lower the EU's dependence on highly concentrated supplies from third countries and boost quality jobs and growth in the circular economy. This act will aim to provide the EU security of supply, including by strengthening international engagement, facilitating extraction (where relevant), processing and recycling, while ensuring high environmental standards and continuing research and innovation, e.g. to reduce material use and to develop bio-based substitutes. There have already been tangible successes: today, some EU companies are using lignin stemming from wood in batteries, instead of graphite.					
			15:5	EU4: Regulation proposal Critical Rawmaterials Act	Substituting materials and increasing material efficiency and circularity can mitigate the projected rise in demand to a certain extent, but these steps are not expected to reverse the trend.					
10:11	C6: 14th 5YP CE	The United States, the European Union, Japan and other developed countries and regions have systematically deployed a new round of circular economy action plans to accelerate the layout of circular economy development and cope with the new challenges of global resources and environment.	1:48	EU1: EU action plan for the circular economy	Increased policy coherence in internal and external EU action in this field will be mutually reinforcing and essential for the implementation of global commitments taken by the Union and by EU Member States, notably the U.N. 2030 Agenda for Sustainable Development and the G7 Alliance on Resource Efficiency.	Target macro-level actions				
10:12	C6: 14th 5YP CE	On the other hand, the world pattern of profound adjustment, unilateralism, protectionism, superimposed on the impact of the global epidemic of new coronary pneumonia, the global industrial chain, value chain and supply chain by non-economic factors a serious impact on the international supply of resources, uncertainty, instability increased, the security of China's resources pose a major challenge.	13:141	EU2: A new Circular Economy Action Plan 2020	The EU can only succeed if its efforts drive also the global transition to a just, climateneutral, resource-efficient and circular economy. There is a growing need to advance discussions on defining a "Safe Operating Space' whereby the use of various natural resources does not exceed certain local, regional or global thresholds and environmental impacts remain within planetary boundaries.					
			13:145	EU2: A new Circular Economy Action Plan 2020	explore the feasibility of defining a 'Safe Operating Space' for natural resource use and consider initiating discussions on an international agreement on the management of natural resources;					
			1:60	EU1: EU action plan for the circular economy	help to save precious resources	Addressing economic value/preciousness of resources				
			1:64	EU1: EU action plan for the circular economy	Electrical and electronic products are particularly significant in this context. Their reparability can be important to consumers, and they can contain valuable materials that should be made easier to recycle (e.g. rare earth elements in electronic devices)					
			1:72	EU1: EU action plan for the circular economy	nefficient use of resources in production processes can lead to lost business opportunities and significant waste generation.					
			1:153	EU1: EU action plan for the circular economy	Critical raw materials are both of high economic importance for the EU and vulnerable to supply disruption; in certain cases, their extraction also causes significant environmental impacts. They are often present in electronic devices. The current very low rate of recycling of these materials means that significant economic opportunities are lost. For all these reasons, increasing the recovery of critical raw materials is one of the challenges that must be addressed in the move to a more circular economy.					
			13:98	EU2: A new Circular Economy Action Plan 2020	While the food value chain is responsible for significant resource and environmental pressures, an estimated 20% of the total food produced is lost or wasted in the EU.					
4:22	C5: Circular Economy Promotion Law of the PRC	Enterprises and public institutions shall set up management systems and take measures to reduce the consumption of resources, reduce the production and discharge of wastes and improve the reutilization and recycling level of wastes	1:72	EU1: EU action plan for the circular economy	inefficient use of resources in production processes can lead to lost business opportunities and significant waste generation.					
4:24	C5: Circular Economy Promotion Law of the PRC	The state encourages and guides citizens to use products that save energy, water, and materials as well as environment-friendly products and recycled products so as to reduce the production and discharge of wastes								

11:3	C7: The General Office of the State Council on accelerating the construction of	In the field of resource recycling, develop the resource recycling industry, improve the incentive and restraint mechanism, accelerate the construction of a comprehensive, efficient, standardized and orderly waste recycling system, lay a solid green and low-carbon foundation for highquality development, and help comprehensively build a beautiful China.				Resource efficiency serves waste reduction				
12:4	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	As industrialization, urbanization and agricultural modernization continue to advance, our country's demand for energy resources will increase rigidly, the amount of waste generated will continue to increase, and the relationship between economic growth and resources and the environment will continue to increase. The contradictions have become more prominent and the requirement to develop a circular economy has become more urgent.								
5:77	C3: 13th 5YP	We will move faster to improve water conservancy infrastructure networks and work to ensure the carefully-planned development, rational allocation, economical use, and efficient utilization of water resources so as to strengthen the country's capacity to ensure water security.	1:126	EU1: EU action plan for the circular economy	Water scarcity has worsened in some parts of the EU in recent decades, with damaging effects on our environment and economy.	Prevent water scarcity				
4:50	C5: Circular Economy Promotion Law of the PRC	Industrial enterprises shall use advanced or applicable water-saving technologies, techniques and equipment, work out and implement water-saving plans, strengthen water-saving management and exercise control over the use of water in the whole process of production.	1:127	EU1: EU action plan for the circular economy	In addition to water-efficiency measures, the reuse of treated wastewater in safe and cost-effective conditions is a valuable but under-used means of increasing water supply and alleviating pressure on over-exploited water resources in the EU.					
5:15	C3: 13th 5YP	Toward a Water-Conserving Society We will put into effect the strictest possible water resources management system and get everyone to conserve water. We will plan industrial production and urban development based on water resources and impose stricter control over industrial development and water quotas in regions affected by water scarcity. We will move more quickly toward water conservancy in agriculture, industry, and cities, make steady progress in the comprehensive price reform of water for agricultural purposes, and carry out demonstrations of comprehensive improvements in water-saving equipment and technologies. We will tighten oversight over major water consumers, and encourage the reuse of water as well as the differentiated use of water according to its quality. We will establish a water efficiency labeling system and promote the adoption of water-saving technologies and products. We will accelerate the utilization of alternative water resources and implement projects to make better use of rainwater, floodwater, and reclaimed water. We will ensure that China's total water usage stays below 670 billion cubic meters.	13:101	EU2: A new Circular Economy Action Plan 2020	The new Water Reuse Regulation will encourage circular approaches to water reuse in agriculture. The Commission will facilitate water reuse and efficiency, including in industrial processes.					

9:41	C4: 12th 5YP V1	2. Enhance Water Resources Conservation We will enforce the strictest water resources management system, strengthen control over the total volume of water utilization and the fixed rate management, enforce measures on protecting water resources, accelerate the formulation of the plans on the distribution of the water volume at various rivers, enhance the establishment of the water right system, and build a water conservation type society. There will be enhancement of compensated utilization of water resources, and regularization of the fee collection, utilization, and management of water resources. We will promote water conservation in agriculture, increase efficiency, promote highly efficient water saving irrigation technology including pipeline water transportation popularization and drip irrigation, increase 50 million mu of highly efficient water saving irrigation area, and support the construction of drought-resistant demonstration bases. On the premise of protecting irrigation area, of irrigation guarantee rate, and of the farmers' interest, we will establish a sound water right transfer mechanism for industrial and agricultural water utilization. It is necessary to enhance water conservation in urban areas and raise the efficiency of industry's water utilization. There is a need to promote water conservation technology in key water-using sectors and citizens' conservation of water in their daily lives. It is necessary to enhance the capability building for supervision of water volume and water quality. We will implement the underground water monitoring project, and strictly control the development of underground water. We will greatly promote the utilization of recycled water, mineral water, desalinated water, and brackish water.								
			1:153	EU1: EU action plan for the circular economy	Critical raw materials are both of high economic importance for the EU and vulnerable to supply disruption; in certain cases, their extraction also causes significant environmental impacts. They are often present in electronic devices. The current very low rate of recycling of these materials means that significant economic opportunities are lost. For all these reasons, increasing the recovery of critical raw materials is one of the challenges that must be addressed in the move to a more circular economy.	Target resource efficiency of CRM				
			15:11	EU4: Regulation proposal Critical Rawmaterials Act	o prevent the generation of waste, targeting products containing CRMs in particular. The Waste Electrical and Electronic Equipment Directive11 lays down rules to promote the preparation for re-use, recycling and other forms of recovery of waste from electrical and electronic equipment, to contribute to the efficient use of resources and to the retrieval of secondary raw materials, including critical ones.					
			15:47	EU4: Regulation proposal Critical Rawmaterials Act	The general objective of this Regulation is to improve the functioning of the internal market by establishing a framework to ensure the Union's access to a secure and sustainable supply of critical raw materials.					
5:1	C3: 13th 5YP	To improve the quality of the environment and resolve serious ecological and environmental problems, we will step up ecosystem and environmental protection efforts, ensure that resources are used more efficiently and that more quality ecological goods are available to the public, and simultaneously help the people become prosperous, help the country grow stronger, and build a Beautiful China.	13:2	EU2: A new Circular Economy Action Plan 2020	As half of total greenhouse gas emissions and more than 90% of biodiversity loss and water stress come from resource extraction and processing, the European Green Deal4 launched a concerted strategy for a climate-neutral, resource-efficient and competitive economy. Scaling up the circular economy from front-runners to the mainstream economic players will make a decisive contribution to achieving climate neutrality by 2050 and decoupling economic growth from resource use, while ensuring the longterm competitiveness of the EU and leaving no one behind.	Resource efficiency serves environmental quality				
5:2	C3: 13th 5YP	We will work to move leading development regions toward the higher end of production and greater efficiency, improve the structure of spatial development, cut annually the amount of land designated for construction purposes, and bring about more efficient land use.				Target resource efficiency on meso-level				

5:21	C3: 13th 5YP	Economical and Intensive Land Use We will strictly control the amount of additional land designated for construction projects and bring under effective control the disorderly expansion of new cities, new districts, and development areas. We will redevelop urban land that is being used inefficiently, develop and utilize hilly slope land, promote the multipurpose development of land designated for construction and its aboveground and belowground vertical overall development, and facilitate the reutilization of idle resources such as vacant buildings and factories. We will strictly control the amount of rural land designated for collective construction projects, explore the establishment of a rural land purchase and reserve system, and put idle rural land designated for construction to better use. We will carry out inspections and evaluations concerning the economical and intensive use of land designated for construction. We will work to lower the area of land used for construction per unit of GDP by 20%.				Target resource efficiency in land-use				
7:43	C2: 14th 5YP	Territorial space will be more effectively developed and protected.								
9:51	C4: 12th 5YP V1	It is necessary to enhance overall planning for land utilization and annual planning control, regularize utilization control, perfect land conservation standards, and strengthen accountability and evaluation of land utilization and land conservation.								
5:73	C3: 13th 5YP	We will transform and upgrade major manufacturing technologies and improve policies to support enterprises in emulating world-wide models in terms of techniques, processes, equipment, energy efficiency, and environmental protection, thereby helping key manufacturing sectors move into the medium-high end.				Resource efficiency is a modern production technology				
9:24	C4: 12th 5YP V1	We will energetically develop such strategic emerging industries as environmental protection, new generation of information technology, biology, high-end equipment manufacturing, new energies, new materials, and new energy car sectors. Industries related to energy conservation and environmental protection need to emphasize on developing key technologies, equipment, products and services that are highly efficient, that save energy, that is advanced, that protect the environment, and that can recycle resources.								
9:5	C4: 12th 5YP V1	It is necessary to enhance the comprehensive utilization of associated minerals and mineral tailings, and raise the comprehensive utilization level of resources.				Target resource efficiency in mining				
9:9	C4: 12th 5YP V1	We will raise resources output rate by 15 percent.	13:3	EU2: A new Circular Economy Action Plan 2020	To fulfil this ambition, the EU needs to accelerate the transition towards a regenerative growth model that gives back to the planet more than it takes, advance towards keeping its resource consumption within planetary boundaries, and therefore strive to reduce its consumption footprint and double its circular material use rate in the coming decade.	indicator				
9:52	C4: 12th 5YP V1	We will reduce land for construction per unit of GDP by 30 percent.	13:149	EU2: A new Circular Economy Action Plan 2020	Indicators on resource use, including consumption and material footprints to account for material consumption and environmental impacts associated to our production and consumption patterns will also be further developed and will be linked to monitoring and assessing the progress towards decoupling economic growth from resource use and its impacts in the EU and beyond.					
9:53	C4: 12th 5YP V1	It is necessary to develop green mining, enhance the conservation of mining resources and the comprehensive utilization of mining resources, and raise the repetitive exploitation rate of mining resources, the recycling rate of mine selection and the overall utilization rate.								
10:4	C6: 14th 5YP CE	with the output rate of major resources in 2020 increased by 26% compared with that in 2015,								
10:6	C6: 14th 5YP CE	water consumption per unit of GDP was reduced by 28%.								

12:37	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	substantial increase in resource output rate,								
12:243	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	systematically improve the utilization efficiency of land, energy, water and other resources.								
12:344	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Formulate a circular economy evaluation index system and use resource output rate as a comprehensive indicator to evaluate the effectiveness of circular economy development. Research and formulate an evaluation index system for circular economy demonstration cities (counties), parks, and enterprises. Research and establish a regional circular economy development effectiveness evaluation mechanism, and commend and reward units and individuals with outstanding achievements in the development of circular economy in accordance with the law.								
9:16	C4: 12th 5YP V1	We encourage consumers to buy energy-saving and water-saving products, energy-saving and environment-friendly cars and energy-saving and land-saving houses, reduce the utilization of disposable products, restrict excessive packing, and control irrational consumption.				Target resource efficiency on the consumption side				
12:256	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the whole society to establish and practice the concept of civilized, frugal, green, low-carbon, and circular consumption, guide frugal and moderate consumption, and oppose extravagance and waste. Carry forward the fine tradition of diligence and thrift, abandon the bad habits of, ostentation, luxury and waste, and raise the whole society's awareness of energy saving, water saving, material saving and food saving.								
9:21	C4: 12th 5YP V1	We need to persist in building a society that conserves resources and that is friendly to environment as an important effort to accelerate the pace of the transformation of economic and social development model. There is a need to implement in depth the basic national policy of conserving resources and of protecting the environment.				Resource efficiency is (part of) a new development mode				
10:24	C6: 14th 5YP CE	By 2025, the circular production mode will be fully implemented, green design and clean production will be generally promoted, the comprehensive utilisation of resources will be significantly enhanced, and a resource-cycling industrial system will be basically established.	13:3	EU2: A new Circular Economy Action Plan 2020	To fulfil this ambition, the EU needs to accelerate the transition towards a regenerative growth model that gives back to the planet more than it takes, advance towards keeping its resource consumption within planetary boundaries, and therefore strive to reduce its consumption footprint and double its circular material use rate in the coming decade.	time				
11:10	C7: The General Office of the State Council on accelerating the construction of	By 2030, a comprehensive, efficient, standardized and orderly waste recycling system will be established. The value of various waste resources will be fully exploited. The proportion of recycled materials in the supply of raw materials will further increase. The scale and quality of the resource recycling industry will be improved. Significant improvement, the overall level of waste recycling ranks among the best in the world.								

12:33	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Transform the stock and optimize the increment. Carry out circular transformation of existing industrial parks and key enterprises to increase resource output rates. Industrial parks, enterprises and projects must implement the requirements of circular economy from planning, design, construction, operation, management and other aspects. In accordance with the characteristics of the development and utilization of natural resources and the product production and manufacturing industry, that is, the arterial industry, coordinate the rational layout of industries related to waste resource utilization, that is, the venous industry, and promote the coordinated development of the arterial industry and the venous industry.				Target resource efficiency in industry				

China			EU			Statement/Theme				
ID	Document	Quotation content	ID	Document	Quotation content					
4:58	C5: Circular Economy Promotion Law of the PRC	A mining enterprise shall, at the same time of mining the major mineral resources, make comprehensive exploitation and reasonable utilization of the intergrown and associated ores which have industrial values, and take protection measures against the minerals which must be mined simultaneously but may not be used temporarily as well as the tailings which have useful components so as to prevent the loss of resources and damage to the ecological environment.	1:21	EU1: EU action plan for the circular economy	help avoid the irreversible damages caused by using up resources at a rate that exceeds the Earth's capacity to renew them in terms of climate and biodiversity, air, soil and water pollution.					
4:74	C5: Circular Economy Promotion Law of the PRC	An environmental impact assessment shall be conducted before any industrial park or zone is built or rebuilt, and measures for ecological protection and pollution control shall be taken to ensure that the environmental quality of that region reaches the prescribed standards.	1:115	EU1: EU action plan for the circular economy	Another barrier to higher recycling rates is the illegal transport of waste, both within the EU and to non-EU countries, which often results in economically sub-optimal and environmentally unsound treatment. A revised regulation on waste shipment was adopted in 201430 which will facilitate the detection of these illegal shipments; the Commission will take further measures to help ensure that it is properly implemented. High-value waste streams, such as end-of-life vehicles, will be targeted specifically, to prevent raw materials leakage.					
5:28	C3: 13th 5YP	We will support technological and process upgrading in mining enterprises, guide the merging and reorganization of small mines, and shut down mining activities that use outdated techniques or are environmentally undesirable.	1:123	EU1: EU action plan for the circular economy	Recycled nutrients are a distinct and important category of secondary raw materials, for which the development of quality standards is necessary. They are present in organic waste material, for example, and can be returned to soils as fertilisers. Their sustainable use in agriculture reduces the need for mineral-based fertilisers, the production of which has negative environmental impacts, and depends on imports of phosphate rock, a limited resource.					
12:183	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strengthen the protective development of tourism resources, strictly implement the environmental impact assessment system for tourism projects, and reasonably determine the tourist capacity of scenic spots.	1:126	EU1: EU action plan for the circular economy	Water scarcity has worsened in some parts of the EU in recent decades, with damaging effects on our environment and economy.					
			1:129	EU1: EU action plan for the circular economy	Another very important issue for the development of secondary raw materials markets is the link with legislation on chemicals. A growing number of chemical substances are identified as being of concern for health or the environment and become subject to restrictions or prohibitions. However, these substances may be present in products sold before the restrictions applied, some of which have a long lifetime, and therefore chemicals of concern can sometimes be found in recycling streams. Such substances can be costly to detect or remove, creating obstacles in particular for small recyclers.					
			1:161	EU1: EU action plan for the circular economy	Given the long lifetime of buildings, it is essential to encourage design improvements that will reduce their environmental impacts and increase the durability and recyclability of their components. The Commission will develop indicators to assess environmental performance throughout the lifecycle of a building42, and promote their use for building projects through large demonstration projects and guidance on GPP.					
			1:163	EU1: EU action plan for the circular economy	Bio-based materials, i.e. those based on biological resources (such as wood, crops or fibres) can be used for a wide range of products (construction, furniture, paper, food, textile, chemicals, etc...) and energy uses (e.g. biofuels). The bioeconomy hence provides alternatives to fossil-based products and energy, and can contribute to the circular economy. Bio-based materials can also present advantages linked to their renewability, biodegradability or compostability. On the other hand, using biological resources requires attention to their lifecycle environmental impacts and sustainable sourcing. The multiple possibilities for their use can also generate competition for them and create pressure on land-use. The Commission will examine the contribution of its 2012 a Bioeconomy Strategy to the circular economy and consider updating it if necessary.					
			13:26	EU2: A new Circular Economy Action Plan 2020	reducing carbon and environmental footprints;					

			13:96	EU2: A new Circular Economy Action Plan 2020	The circular economy can significantly reduce the negative impacts of resource extraction and use on the environment and contribute to restoring biodiversity and natural capital in Europe.					
			13:110	EU2: A new Circular Economy Action Plan 2020	develop methodologies to minimise the presence of substances that pose problems to heatlh or the environment in recycled materials and articles made thereof;					
			13:118	EU2: A new Circular Economy Action Plan 2020	In the past decade, millions of tonnes of European waste has been exported to non-EU countries, often without sufficient consideration of proper waste treatment. In many cases, waste exports result both in negative environmental and health impacts in the countries of destination, and in loss of resources and economic opportunities for the recycling industry in the EU.					
			13:121	EU2: A new Circular Economy Action Plan 2020	EU rules on waste shipments40. The review will also aim at restricting exports of waste that have harmful environmental and health impacts in third countries or can be treated domestically within the EU by focusing on countries of destination, problematic waste streams, types of waste operations that are source of concern, and enforcement to counteract illegal shipments. The Commission will also support measures at multilateral, regional and bilateral levels to combat environmental crime notably in the areas of illegal exports and illicit trafficking, strengthen controls of shipments of waste,					
			15:1	EU4: Regulation proposal Critical Rawmaterials Act	These critical raw materials (CRMs) are often indispensable inputs for a wide set of strategic sectors including renewable energy, the digital industry, the space and defence sectors and the health sector. At the same time, extraction and processing of CRMs can have negative environmental impacts, depending on the methods and processes used, as well as social impacts.					
			17:14	EU6: Green Deal	A sustainable product policy also has the potential to reduce waste significantly. Where waste cannot be avoided, its economic value must be recovered and its impact on the environment and on climate change avoided or minimised. This requires new legislation, including targets and measures for tackling over-packaging and waste generation.					
			17:18	EU6: Green Deal	The Farm to Fork Strategy will also contribute to achieving a circular economy. It will aim to reduce the environmental impact of the food processing and retail sectors by taking action on transport, storage, packaging and food waste.					
10:11	C6: 14th 5YP CE	The United States, the European Union, Japan and other developed countries and regions have systematically deployed a new round of circular economy action plans to accelerate the layout of circular economy development and cope with the new challenges of global resources and environment.	1:74	EU1: EU action plan for the circular economy	environmental and social impacts of their production, both in the EU and in non-EU countries.	Target environmental quality on macro-level				
10:10	C6: 14th 5YP CE	From an international perspective, on the one hand, green, low-carbon and recycling development has become a global consensus, and the world's major economies have generally taken the development of recycling economy as a basic path to break the resource and environmental constraints, cope with climate change, and cultivate new points of economic growth.								
4:2	C5: Circular Economy Promotion Law of the PRC	protecting and improving the environment	1:105	EU1: EU action plan for the circular economy	This principle aims to encourage the options that deliver the best overall environmental outcome.					
5:1	C3: 13th 5YP	To improve the quality of the environment and resolve serious ecological and environmental problems, we will step up ecosystem and environmental protection efforts, ensure that resources are used more efficiently and that more quality ecological goods are available to the public, and simultaneously help the people become prosperous, help the country grow stronger, and build a Beautiful China.	1:131	EU1: EU action plan for the circular economy	The Commission will therefore develop its analysis and propose options for action to overcome unnecessary barriers while preserving the high level of protection of human health and the environment. This work will feed into the future EU strategy for a non-toxic environment.32					

5:52	C3: 13th 5YP	Implement the household refuse treatment project, make comprehensive improvements to the environment in 130,000 administrative villages, implement showcase projects for agricultural waste recycling, develop sewage and refuse collection and treatment facilities, progressively promote the treatment of household wastewater, and ensure that the household refuse of 90% of administrative villages is treated;	1:164	EU1: EU action plan for the circular economy	In a circular economy, a cascading use of renewable resources, with several reuse and recycling cycles, should be encouraged where appropriate. Biobased materials, such as for example wood, can be used in multiple ways, and reuse and recycling can take place several times. This goes together with the application of the waste hierarchy (including for food - see section 5.2) and, more generally, options that result in the best overall environmental outcome.	Improve environmental quality (general)				
5:62	C3: 13th 5YP	Achieve an overall improvement in the quality of the environment and ecosystems Our modes of production and ways of life will become more eco-friendly and low-carbon. We will extract and use energy and resources with much greater efficiency. Aggregate energy and water consumption, the total amount of land used for construction, and aggregate carbon emissions will be effectively controlled, and aggregate emissions of major pollutants will be significantly reduced. We will basically complete functional zoning and the building of protective barriers for eco-security.	15:6	EU4: Regulation proposal Critical Rawmaterials Act	to ensure the free movement of critical raw materials on the single market while ensuring a high level of environmental protection, by improving their circularity and sustainability.					
7:2	C2: 14th 5YP	In continuing to give priority to the environment and green development, we will promote the total consumption control, judicious allocation, comprehensive conservation, and circular use of resources, so as to achieve both high-quality economic growth and a high-standard of environmental protection.	17:2	EU6: Green Deal	It also aims to protect, conserve and enhance the EU's natural capital, and protect the health and well-being of citizens from environment-related risks and impacts					
7:48	C2: 14th 5YP	The environment will steadily improve, and ecological security shields will be reinforced. The living environment in urban and rural areas will be significantly improved.								
8:3	C4: 12th 5YP V2	Resource conservation and environmental protection targets are striking.								
9:21	C4: 12th 5YP V1	We need to persist in building a society that conserves resources and that is friendly to environment as an important effort to accelerate the pace of the transformation of economic and social development model. There is a need to implement in depth the basic national policy of conserving resources and of protecting the environment.								
12:29	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Guided by Deng Xiaoping Theory, the important thought of "Three Represents", and the Scientific Outlook on Development, we will implement the basic national policy of conserving resources and protecting the environment, and focus on improving resource output and follow the principles of "reduce, reuse, recycle,								
7:49	C2: 14th 5YP	Section 4 Strengthening the Development of Water Conservancy Infrastructure Focusing on river basins as a whole and the balanced distribution of water resources, we will strengthen management, protection, and key project construction for river systems that span multiple administrative divisions and strengthen coordination and support between micro, small, medium, and large water conservancy facilities, so that we are better able to allocate water resources and manage floods and droughts. With water conservation as our top priority, we will improve the water resource allocation system through the construction of key projects and stronger development of key water sources and emergency and backup water sources for cities. We will implement projects to strengthen flood control, shore up weak links, and move ahead with key flood control initiatives. We will harness small and medium rivers, reinforce dilapidated reservoirs, and make comprehensive efforts to promote the construction of levees and flood detention basins. Efforts will be made to protect and restore water source conservation areas and to safeguard key rivers and lakes by putting them under comprehensive management, so that we can see that our water ecosystems fully recover and are endowed with clear waters and flourishing banks.	1:137	EU1: EU action plan for the circular economy	Large quantities of plastics also end up in the oceans, and the 2030 Sustainable Development Goals include a target to prevent and significantly reduce marine pollution of all kinds, including marine litter.	Improve environmental quality in water bodies				

7:36	C2: 14th 5YP	02 Water pollution prevention and control and water ecosystem restoration □ Consolidate the gains in treating malodorous black water bodies in cities at and above the prefectural level and take comprehensive steps to treat 1,500 sections of malodorous black water bodies in urban areas in 363 county-level cities; □ Strengthen pollution control and ecological restoration on key lakes and reservoirs, including the Tai, Chao, Dianchi, Erhai, Baiyangdian, Poyang, Dongting, Chagan, and Ulansuhai lakes and the Danjiangkou reservoir; □ Take integrated steps to harness the Yongding, Mulan, and other rivers; □ Move faster to comprehensively address the over-extraction of groundwater in northern China and other key areas and promote environmental governance in the Yellow River estuary.								
4:23	C5: Circular Economy Promotion Law of the PRC	Citizens shall enhance their awareness of resources conservation and protecting the environment, consume resources in a reasonable way and save resources				Target environmental quality on the consumption side				
7:28	C2: 14th 5YP	Extensive campaigns will be carried out to promote eco-friendly lifestyles.								
10:3	C6: 14th 5YP CE	Vigorously developing the circular economy, promoting the economical and intensive use of resources, building a resource recycling-based industrial system and waste material recycling system is of great significance to safeguard the security of national resources, promote the realization of carbon peak, carbon neutral, and promote the construction of ecological civilisation.								
12:2	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	It is an important step to accelerate the transformation of economic development methods, build a resource-saving and environment-friendly society, and achieve sustainable development.								
4:101	C5: Circular Economy Promotion Law of the PRC	The state adopts a government procurement policy that is good for the development of circular economy. Entities and individuals purchasing goods with funds from the public finance shall give preference to energy-saving, water-saving, material-saving and environment-friendly products and recycled products.	16:9	EU5: Ecodesign requirements for sustainable products	products' carbon and environmental footprints;					
9:16	C4: 12th 5YP V1	We encourage consumers to buy energy-saving and water-saving products, energy-saving and environment-friendly cars and energy-saving and land-saving houses, reduce the utilization of disposable products, restrict excessive packing, and control irrational consumption.								
12:184	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Facility construction must adopt energy-saving and environmentally friendly products, actively utilize renewable energy, and build supporting systems for sewage recycling, rainwater collection, and harmless garbage disposal. Support the use of energy-saving and environmentally friendly means of transportation in tourist attractions, develop green tourism products, scientifically set up garbage classification and recycling devices, and promote waste classification, recycling and resource utilization.								
12:197	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Give full play to the role of the retail and wholesale industry as a bridge connecting production and consumption, support the retail and wholesale industry in purchasing energy-saving and environmentally friendly products, encourage trade and circulation enterprises to open green product sales areas, counters, etc., promote green products to consumers, expand the consumption of green products, and promote green products. Product production. Actively cultivate the development of the rental industry and used goods industry, and promote product reuse.								

12:204	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of energy-saving, environmentally friendly and new energy vehicles.				Target environmental quality in products (footprints)				
12:257	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Consumers are encouraged to purchase and use energy-saving and environmentally friendly products, energy-saving and land-saving residences, and reduce the use of disposable items. It is encouraged to bring your own shopping bags, and the use of ultra-thin plastic shopping bags is prohibited. Strengthen the construction of regulations and standards, restrict companies from over-packaging goods, and guide consumers to boycott over-packaged goods.								
12:260	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Government agencies should take the lead in setting an example in energy saving, water saving, paper saving, food saving, etc., and effectively build a conservation-oriented government. Strengthen the government's green procurement system, strictly implement the mandatory or priority procurement system for energysaving and environmentally friendly products, and increase the proportion of recycled products and remanufactured products in government procurement. Government canteens should improve the meal charging system and improve the management system for official reception meals to avoid waste in government canteens and official reception meals.								
12:309	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Research and formulate policies to encourage circulation companies to purchase energy-saving and environmentally friendly products.								
12:313	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Increase government procurement support and give priority to purchasing energy-saving, water-saving, environmentally friendly and recycled products.								
5:5	C3: 13th 5YP	We will establish monitoring and early- warning mechanisms for environmental and resource carrying capacity and take restrictive measures in regions which have reached or are approaching the warning lines. We will survey, evaluate, and monitor land, minerals, and other resources. We will increase surveying, mapping, and geoinformation service capabilities, carry out regular geographical monitoring, and promote the development of global geoinformation resources.	1:21	EU1: EU action plan for the circular economy	help avoid the irreversible damages caused by using up resources at a rate that exceeds the Earth's capacity to renew them in terms of climate and biodiversity, air, soil and water pollution.	Target the environmental carrying capacity				
			13:1	EU2: A new Circular Economy Action Plan 2020	There is only one planet Earth, yet by 2050, the world will be consuming as if there were three1 . Global consumption of materials such as biomass, fossil fuels, metals and minerals is expected to double in the next forty years2 , while annual waste generation is projected to increase by 70% by 20503 .					
			13:3	EU2: A new Circular Economy Action Plan 2020	To fulfil this ambition, the EU needs to accelerate the transition towards a regenerative growth model that gives back to the planet more than it takes, advance towards keeping its resource consumption within planetary boundaries, and therefore strive to reduce its consumption footprint and double its circular material use rate in the coming decade.					
			13:141	EU2: A new Circular Economy Action Plan 2020	The EU can only succeed if its efforts drive also the global transition to a just, climateneutral, resource-efficient and circular economy. There is a growing need to advance discussions on defining a “Safe Operating Space' whereby the use of various natural resources does not exceed certain local, regional or global thresholds and environmental impacts remain within planetary boundaries.					

5:74	C3: 13th 5YP	In fostering new areas of economic growth, we will spur innovation and industrial application in emerging, cutting-edge fields such as advanced semi-conductivity, robotics, additive manufacturing, intelligent systems, next generation aviation equipment, comprehensive service systems for space technologies, smart transportation, precision medicine, systems for high-efficiency energy storage and distributed energy, smart materials, efficient energy conservation, environmental protection, virtual reality, and interactive movies and television				environmental quality is a field of innovation				
7:22	C2: 14th 5YP	We will expand the sectors relating to energy conservation and environmental protection, clean production, clean energy, ecosystems and the environment, green upgrading of infrastructure, and green services, and promote energy performance contracting, water-saving management contracting, and third-party governance of environmental pollution.								
9:24	C4: 12th 5YP V1	We will energetically develop such strategic emerging industries as environmental protection, new generation of information technology, biology, high-end equipment manufacturing, new energies, new materials, and new energy car sectors. Industries related to energy conservation and environmental protection need to emphasize on developing key technologies, equipment, products and services that are highly efficient, that save energy, that is advanced, that protect the environment, and that can recycle resources.								
7:12	C2: 14th 5YP	We will improve our ability to develop and protect mineral resources and work harder to make the mining sector and mining activities more environmentally friendly.				Improve environmental quality in mining				
7:35	C2: 14th 5YP	Reduction of air pollution emissions □ Put in place clean production facilities for 850 million metric tons of cement clinkers, 460 million metric tons of coking capacity, and about 4,000 non-ferrous metal furnaces; □ Realize ultra-low emissions for 530 million metric tons of steel capacity; □ Transform treatment practices for volatile organic compounds in petrochemicals, chemicals, painting, medicine, packaging and printing, and other key industries; □ Eliminate the use of bulk coal in key areas aff ected by heavy air pollution.				Improve air quality				
7:37	C2: 14th 5YP	03 Soil contamination prevention and control and safe use of land □ Carry out demonstrations on the safe use of agricultural lands in 100 counties with large areas of contaminated soil; □ Implement 100 projects to control soil contamination at the source with a focus on chemical and non-ferrous metal industries.	13:94	EU2: A new Circular Economy Action Plan 2020	reduce soil sealing, rehabilitate abandoned or contaminated brownfields and increase the safe, sustainable and circular use of excavated soils	Improve soil quality				
11:68	C7: The General Office of the State Council on accelerating the construction of	Integrate circular economy knowledge concepts into relevant education and training systems. At important time nodes such as National Ecology Day, National Energy Conservation Week, National Low Carbon Day, and Environment Day, we carry out various publicity and education activities to vigorously promote the importance of waste recycling and related policies and measures. Timely summarize and promote advanced experiences and typical practices.				Promote environmental quality in oublic				
12:156	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	In the agricultural field, we will accelerate the promotion of resource conservation, clean production processes, industrial link recycling, and resource recycling of waste treatment to form a cyclic agricultural production mode that is symbiotic with agriculture, forestry, animal husbandry, and fishery, accelerate agricultural mechanization, promote agricultural modernization, and improve rural ecology.				Improve environmental quality in agriculture				
12:185	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously advocate low-carbon travel modes, strengthen ecological science publicity and education in tourist attractions, spread green and low-carbon concepts, reduce the use of disposable items, guide tourists to classify waste, and consciously protect the environment of scenic spots.								

12:184	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Facility construction must adopt energy-saving and environmentally friendly products, actively utilize renewable energy, and build supporting systems for sewage recycling, rainwater collection, and harmless garbage disposal. Support the use of energy-saving and environmentally friendly means of transportation in tourist attractions, develop green tourism products, scientifically set up garbage classification and recycling devices, and promote waste classification, recycling and resource utilization.				Improve environmental quality in tourism				

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
4:7	C5: Circular Economy Promotion Law of the PRC	The term “reducing” as mentioned in these Measures refers to reducing the consumption of resources and the production of wastes in the process of production, circulation and consumption.	1:14	EU1: EU action plan for the circular economy	generation of waste minimised	Reduce waste (general)
4:22	C5: Circular Economy Promotion Law of the PRC	Enterprises and public institutions shall set up management systems and take measures to reduce the consumption of resources, reduce the production and discharge of wastes and improve the reutilization and recycling level of wastes	1:28	EU1: EU action plan for the circular economy	The aim is to ensure that the right regulatory framework is in place for the development of the circular economy in the single market, and to give clear signals to economic operators and society at large on the way forward with long term waste targets as well as a concrete, broad and ambitious set of actions, to be carried out before 2020	
4:24	C5: Circular Economy Promotion Law of the PRC	The state encourages and guides citizens to use products that save energy, water, and materials as well as environment-friendly products and recycled products so as to reduce the production and discharge of wastes	1:93	EU1: EU action plan for the circular economy	Aspects relating to guarantees, such as the legal guarantee period and the reversal of the burden of proof, are also an important part of the consumption puzzle, as they can protect consumers against defective products and contribute to products' durability and reparability, preventing them from being thrown away.	
			13:63	EU2: A new Circular Economy Action Plan 2020	applying product-as-service solutions to reduce virgin material consumption, use sustainable alternative transport fuels, optimise infrastructure and vehicle use, increase occupancy rates and load factors, and eliminate waste and pollution.	
			13:105	EU2: A new Circular Economy Action Plan 2020	All this shall serve the objective to significantly reduce total waste generation and halve the amount of residual (non-recycled) municipal waste by 2030.	
			13:115	EU2: A new Circular Economy Action Plan 2020	EU-wide end-of-waste criteria for certain waste streams based on monitoring Member States’ application of the revised rules on end-of-waste status and by-products, and support cross-border initiatives for cooperation to harmonise national end-of-waste and by-product criteria;	
			1:30	EU1: EU action plan for the circular economy	The legislative proposals on waste, adopted together with this action plan, include long-term targets to reduce landfilling and to increase preparation for reuse and recycling of key waste streams such as municipal waste and packaging waste.	Avoid landfilling
10:65	C6: 14th 5YP CE	(9) Special action on the whole chain management of plastic pollution Scientific and reasonable promotion of plastic source reduction, strictly prohibit the production of ultra-thin agricultural film, daily chemical products containing plastic microbeads and other products that endanger the environment and human health, and encourage the public to reduce the use of disposable plastic products. In-depth assessment of the resource and environmental impacts of various types of plastic substitutes throughout their life cycle. Promote degradable plastics according to local conditions, actively and steadily, improve the standard system, enhance inspection and testing capacity, and regulate the application and disposal of degradable plastics. Promote the application of standard films and improve the recycling level of used agricultural films. Strengthen the classification, recycling and reuse of plastic waste, accelerate the construction of domestic waste incineration and treatment facilities, and reduce the amount of plastic waste in landfills. Carry out plastic rubbish cleanup in rivers, lakes and coastlines, and implement special actions to clean up marine rubbish. Strengthen policy interpretation and publicity and guidance to create a good social atmosphere.	1:30	EU1: EU action plan for the circular economy	The legislative proposals on waste, adopted together with this action plan, include long-term targets to reduce landfilling and to increase preparation for reuse and recycling of key waste streams such as municipal waste and packaging waste.	Target waste reduction of plastics
			1:39	EU1: EU action plan for the circular economy	industrial and mining waste	Target waste reduction in mining

			1:40	EU1: EU action plan for the circular economy	food waste	Target waste reduction in food waste
			13:98	EU2: A new Circular Economy Action Plan 2020	While the food value chain is responsible for significant resource and environmental pressures, an estimated 20% of the total food produced is lost or wasted in the EU.	
			13:99	EU2: A new Circular Economy Action Plan 2020	Therefore, in line with the Sustainable Development Goals and as part of the review of Directive 2008/98/EC38 referred to in section 4.1, the Commission will propose a target on food waste reduction, as a key action under the forthcoming EU Farm-to-Fork Strategy, which will address comprehensively the food value chain.	
			1:86	EU1: EU action plan for the circular economy	this phase is also crucial for preventing and reducing the generation of household waste.	Target waste reduction in household waste
			1:30	EU1: EU action plan for the circular economy	The legislative proposals on waste, adopted together with this action plan, include long-term targets to reduce landfilling and to increase preparation for reuse and recycling of key waste streams such as municipal waste and packaging waste.	
			1:99	EU1: EU action plan for the circular economy	Other actions can be taken to reduce the amount of household waste. This is often more effective at national and local level, where it can be better targeted: awareness campaigns and economic incentives have proven particularly effective. The Commission promotes waste prevention and reuse through the exchange of information and best practices and by providing Cohesion Policy funding for projects at local and regional level, including interregional cooperation.	
			13:105	EU2: A new Circular Economy Action Plan 2020	All this shall serve the objective to significantly reduce total waste generation and halve the amount of residual (non-recycled) municipal waste by 2030.	
			13:64	EU2: A new Circular Economy Action Plan 2020	The amount of materials used for packaging is growing continuously and in 2017 packaging waste in Europe reached a record – 173 kg per inhabitant, the highest level ever.	Target waste reduction in packaging waste
			1:30	EU1: EU action plan for the circular economy	The legislative proposals on waste, adopted together with this action plan, include long-term targets to reduce landfilling and to increase preparation for reuse and recycling of key waste streams such as municipal waste and packaging waste.	
			13:71	EU2: A new Circular Economy Action Plan 2020	The Commission will also strictly monitor and support the implementation of the requirements of the Drinking Water Directive to make drinkable tap water accessible in public places, which will reduce dependence on bottled water and prevent packaging waste.	
			13:73	EU2: A new Circular Economy Action Plan 2020	To increase uptake of recycled plastics and contribute to the more sustainable use of plastics, the Commission will propose mandatory requirements for recycled content and waste reduction measures for key products such as packaging, construction materials and vehicles, also taking into account the activities of the Circular Plastics Alliance.	

			13:88	EU2: A new Circular Economy Action Plan 2020	The built environment has a significant impact on many sectors of the economy, on local jobs and quality of life. It requires vast amounts of resources and accounts for about 50% of all extracted material. The construction sector is responsible for over 35% of the EU's total waste generation32. Greenhouse gas emissions from material extraction, manufacturing of construction products, construction and renovation of buildings are estimated at 5-12% of total national GHG emissions33. Greater material efficiency could save 80% of those emissions34 .	Target waste reduction in construction/demolition waste
			13:73	EU2: A new Circular Economy Action Plan 2020	To increase uptake of recycled plastics and contribute to the more sustainable use of plastics, the Commission will propose mandatory requirements for recycled content and waste reduction measures for key products such as packaging, construction materials and vehicles, also taking into account the activities of the Circular Plastics Alliance.	
			15:10	EU4: Regulation proposal Critical Rawmaterials Act	The Waste Framework Directive targets waste in general and obliges Member States to take measures to prevent the generation of waste, targeting products containing CRMs in particular.	Target waste reduction in CRM
			15:20	EU4: Regulation proposal Critical Rawmaterials Act	In line with the waste hierarchy established in Directive 2008/98/EC of the European Parliament and of the Council, priority should be given to preventing the generation of waste containing critical raw materials, by extracting critical raw materials from the extracted volume prior to it becoming waste.	
			1:117	EU1: EU action plan for the circular economy	When waste cannot be prevented or recycled, recovering its energy content is in most cases preferable to landfilling it, in both environmental and economic terms. 'Waste to energy' can therefore play a role and create synergies with EU energy and climate policy, but guided by the principles of the EU waste hierarchy. The Commission will examine how this role can be optimised, without compromising the achievement of higher reuse and recycling rates, and how the corresponding energy potential can best be exploited. To that end, the Commission will adopt a 'waste to energy' initiative in the framework of the Energy Union.	Recovery is preferable to landfilling
11:10	C7: The General Office of the State Council on accelerating the construction of	By 2030, a comprehensive, efficient, standardized and orderly waste recycling system will be established. The value of various waste resources will be fully exploited. The proportion of recycled materials in the supply of raw materials will further increase. The scale and quality of the resource recycling industry will be improved. Significant improvement, the overall level of waste recycling ranks among the best in the world.	13:49	EU2: A new Circular Economy Action Plan 2020	Value is lost when fully or partially functional products are discarded because they are not reparable, the battery cannot be replaced, the software is no longer supported, or materials incorporated in devices are not recovered. About two in three Europeans would like to keep using their current digital devices for longer, provided performance is not significantly affected21 .	Avoid the loss of value in waste
13:10	EU2: A new Circular Economy Action Plan 2020	The plan presents a set of interrelated initiatives to establish a strong and coherent product policy framework that will make sustainable products, services and business models the norm and transform consumption patterns so that no waste is produced in the first place.	13:27	EU2: A new Circular Economy Action Plan 2020	restricting single-use and countering premature obsolescence;	
			13:67	EU2: A new Circular Economy Action Plan 2020	driving design for re-use and recyclability of packaging, including considering restrictions on the use of some packaging materials for certain applications, in particular where alternative reusable products or systems are possible or consumer goods can be handled safely without packaging;	
			13:68	EU2: A new Circular Economy Action Plan 2020	considering reducing the complexity of packaging materials, including the number of materials and polymers used.	

			13:71	EU2: A new Circular Economy Action Plan 2020	The Commission will also strictly monitor and support the implementation of the requirements of the Drinking Water Directive to make drinkable tap water accessible in public places, which will reduce dependence on bottled water and prevent packaging waste.	Prevent waste
			15:10	EU4: Regulation proposal Critical Rawmaterials Act	The Waste Framework Directive targets waste in general and obliges Member States to take measures to prevent the generation of waste, targeting products containing CRMs in particular.	
			16:13	EU5: Ecodesign requirements for sustainable products	prevent unsold consumer products from being destroyed.	
			15:20	EU4: Regulation proposal Critical Rawmaterials Act	In line with the waste hierarchy established in Directive 2008/98/EC of the European Parliament and of the Council, priority should be given to preventing the generation of waste containing critical raw materials, by extracting critical raw materials from the extracted volume prior to it becoming waste.	
			13:11	EU2: A new Circular Economy Action Plan 2020	Further measures will be put in place to reduce waste and ensure that the EU has a wellfunctioning internal market for high quality secondary raw materials. The capacity of the EU to take responsibility for its waste will be also strengthened.	Take responsibility for waste
			13:103	EU2: A new Circular Economy Action Plan 2020	Despite efforts at EU and national level, the amount of waste generated is not going down. Annual waste generation from all economic activities in the EU amounts to 2.5 billion tonnes, or 5 tonnes per capita a year, and each citizen produces on average nearly half a tonne of municipal waste. The decoupling of waste generation from economic growth will require considerable effort across the whole value chain and in every home.	Aim for decoupling of economic growth and waste generation

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
			1:9	EU1: EU action plan for the circular economy	EU's efforts to develop a sustainable, low carbon, resource efficient and competitive economy	Aim for a sustainable economy
			1:11	EU1: EU action plan for the circular economy	generate new and sustainable competitive advantages for Europe	
			1:15	EU1: EU action plan for the circular economy	sustainable, low carbon, resource efficient and competitive economy	
			1:34	EU1: EU action plan for the circular economy	By stimulating sustainable activity in key sectors and new business opportunities, the plan will help to unlock the growth and jobs potential of the circular economy	
			13:4	EU2: A new Circular Economy Action Plan 2020	For business, working together on creating the framework for sustainable products will provide new opportunities in the EU and beyond. This progressive, yet irreversible transition to a sustainable economic system is an indispensable part of the new EU industrial strategy.	
			13:9	EU2: A new Circular Economy Action Plan 2020	A whole new range of sustainable services, productas-service models and digital solutions will bring about a better quality of life, innovative jobs and upgraded knowledge and skills.	
			13:10	EU2: A new Circular Economy Action Plan 2020	The plan presents a set of interrelated initiatives to establish a strong and coherent product policy framework that will make sustainable products, services and business models the norm and transform consumption patterns so that no waste is produced in the first place.	
			17:3	EU6: Green Deal	The EU has the collective ability to transform its economy and society to put it on a more sustainable path.	
			17:6	EU6: Green Deal	The transition is an opportunity to expand sustainable and job-intensive economic activity. There is significant potential in global markets for low-emission technologies, sustainable products and services. Likewise, the circular economy offers great potential for new activities and jobs.	
			1:21	EU1: EU action plan for the circular economy	help avoid the irreversible damages caused by using up resources at a rate that exceeds the Earth's capacity to renew them in terms of climate and biodiversity, air, soil and water pollution.	Aim for more sustainable resource consumption
			1:75	EU1: EU action plan for the circular economy	sustainable sourcing of raw material globally, for example through policy dialogues, partnerships and its trade5 and development policy	
4:3	C5: Circular Economy Promotion Law of the PRC	realizing sustainable development	1:24	EU1: EU action plan for the circular economy	Action on the circular economy therefore ties in closely with key EU priorities, including jobs and growth, the investment agenda, climate and energy, the social agenda and industrial innovation, and with global efforts on sustainable development.	
8:2	C4: 12th 5YP V2	In transforming the economic development mode, the importance of building a resource-saving and environment-friendly society should be stressed to save energy, reduce greenhouse emissions and actively tackle global climate change. We should develop circular economy and low carbon technologies Through striking a balance between economic development and population growth, sustainable development will be enhanced.	13:12	EU2: A new Circular Economy Action Plan 2020	The EU will continue to lead the way to a circular economy at the global level and use its influence, expertise and financial resources to implement the 2030 Sustainable Development Goals.	

9:22	C4: 12th 5YP V1	We should conserve energy; reduce greenhouse effect; develop a circular economy; promote low-carbon technologies; actively deal with global climate change; promote the mutual coordination between economic and social development and population, resources, and the environment; and take the path of sustainable development.				Aim for sustainable development
9:25	C4: 12th 5YP V1	We will enhance the sustainable development capabilities and further raise the utilization efficiency of energy, land, and sea space resources. Efforts will be intensified to treat environmental pollution and to ease the restrains caused by resources and environmental bottlenecks.				
10:20	C6: 14th 5YP CE	focus on building a resource recycling-based industrial system, accelerate the construction of waste materials recycling system, deepen the development of circular economy in agriculture, comprehensively improve the efficiency of resource use, enhance the level of renewable resources, establish and improve the green, low-carbon and recycling development of the economic system, to provide resources for the sustainable development of the economy and society.				
12:2	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	It is an important step to accelerate the transformation of economic development methods, build a resource-saving and environment-friendly society, and achieve sustainable development.				
12:25	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Domestic resource supply cannot meet the needs of economic and social development. The shortage of energy, important minerals, water, land and other resources will further intensify. Important resources are exported to the outside world. Dependence will further increase, and sustainable development faces severe challenges restricted by energy resource bottlenecks.				
12:38	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	significant enhancement of sustainable development capabilities.				
12:268	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	establish our country as a responsible and sustainable development country.				
10:50	C6: 14th 5YP CE	Create a number of ecological farms and ecological recycling agricultural industrial complexes, and explore sustainable operation mechanisms.				Aim for sustainable agriculture
			13:17	EU2: A new Circular Economy Action Plan 2020	At the same time, the single market provides a critical mass enabling the EU to set global standards in product sustainability and to influence product design and value chain management worldwide.	

			13:9	EU2: A new Circular Economy Action Plan 2020	A whole new range of sustainable services, productas-service models and digital solutions will bring about a better quality of life, innovative jobs and upgraded knowledge and skills.	Aim for sustainable products
			13:10	EU2: A new Circular Economy Action Plan 2020	The plan presents a set of interrelated initiatives to establish a strong and coherent product policy framework that will make sustainable products, services and business models the norm and transform consumption patterns so that no waste is produced in the first place.	
			13:21	EU2: A new Circular Economy Action Plan 2020	In order to make products fit for a climate-neutral, resource-efficient and circular economy, reduce waste and ensure that the performance of front-runners in sustainability progressively becomes the norm, the Commission will propose a sustainable product policy legislative initiative.	
			13:60	EU2: A new Circular Economy Action Plan 2020	sustainability and transparency requirements for batteries taking account of, for instance, the carbon footprint of battery manufacturing, ethical sourcing of raw materials and security of supply, and facilitating reuse, repurposing and recycling.	
			13:63	EU2: A new Circular Economy Action Plan 2020	applying product-as-service solutions to reduce virgin material consumption, use sustainable alternative transport fuels, optimise infrastructure and vehicle use, increase occupancy rates and load factors, and eliminate waste and pollution.	
			13:73	EU2: A new Circular Economy Action Plan 2020	To increase uptake of recycled plastics and contribute to the more sustainable use of plastics, the Commission will propose mandatory requirements for recycled content and waste reduction measures for key products such as packaging, construction materials and vehicles, also taking into account the activities of the Circular Plastics Alliance.	
			13:83	EU2: A new Circular Economy Action Plan 2020	The strategy will aim at strengthening industrial competitiveness and innovation in the sector, boosting the EU market for sustainable and circular textiles, including the market for textile reuse, addressing fast fashion and driving new business models.	
			13:84	EU2: A new Circular Economy Action Plan 2020	ecodesign measures to ensure that textile products are fit for circularity, ensuring the uptake of secondary raw materials, tackling the presence of hazardous chemicals, and empowering business and private consumers to choose sustainable textiles and have easy access to re-use and repair services;	
			14:7	EU3: A Green Deal Industrial Plan for the Net-Zero Age	To further stimulate the demand for net-zero products at large scale, various forms of public action such as public procurement, concessions and incentives to business and end users to use net-zero technologies based on sustainability and circularity can play a big role.	
			14:9	EU3: A Green Deal Industrial Plan for the Net-Zero Age	Modelled on the European Battery Alliance Academy, the Commission will propose to establish Net-Zero Industry Academies to roll out up-skilling and re-skilling programmes in strategic industries for the green transition, such as raw materials, hydrogen and solar technologies, The Commission will initiate an Academy to offer onand offline trainings for sustainable construction with a focus on the use of biobased materials, circularity and digital technologies.	

			15:51	EU4: Regulation proposal Critical Rawmaterials Act	ensure the free movement of critical raw materials and products containing critical raw materials placed on the Union market while ensuring a high level of environmental protection, by improving their circularity and sustainability	
			16:1	EU5: Ecodesign requirements for sustainable products	This Regulation establishes a framework to improve the environmental sustainability of products and to ensure free movement in the internal market by setting ecodesign requirements that products shall fulfil to be placed on the market or put into service.	
			13:94	EU2: A new Circular Economy Action Plan 2020	reduce soil sealing, rehabilitate abandoned or contaminated brownfields and increase the safe, sustainable and circular use of excavated soils	Use land more sustainable
			17:4	EU6: Green Deal	This upfront investment is also an opportunity to put Europe firmly on a new path of sustainable and inclusive growth.	Aim for sustainable growth

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
4:10	C5: Circular Economy Promotion Law of the PRC	Developing a circular economy is an important strategy for the economic and social development of the state	1:19	EU1: EU action plan for the circular economy	opportunities for social integration and cohesion	CE serves social equity (general)
10:1	C6: 14th 5YP CE	The development of a circular economy is a major strategy for China's economic and social development.	1:24	EU1: EU action plan for the circular economy	Action on the circular economy therefore ties in closely with key EU priorities, including jobs and growth, the investment agenda, climate and energy, the social agenda and industrial innovation, and with global efforts on sustainable development.	
9:21	C4: 12th 5YP V1	We need to persist in building a society that conserves resources and that is friendly to environment as an important effort to accelerate the pace of the transformation of economic and social development model. There is a need to implement in depth the basic national policy of conserving resources and of protecting the environment.	13:13	EU2: A new Circular Economy Action Plan 2020	This plan aims also at ensuring that the circular economy works for people, regions and cities, fully contributes to climate neutrality and harnesses the potential of research, innovation and digitalisation.	
9:22	C4: 12th 5YP V1	We should conserve energy; reduce greenhouse effect; develop a circular economy; promote low-carbon technologies; actively deal with global climate change; promote the mutual coordination between economic and social development and population, resources, and the environment; and take the path of sustainable development.	13:122	EU2: A new Circular Economy Action Plan 2020	Circularity can be expected to have a positive net effect on job creation provided that workers acquire the skills required by the green transition. The potential of the social economy, which is a pioneer in job creation linked to the circular economy, will be further leveraged by the mutual benefits of supporting the green transition and strengthening social inclusion, notably under the Action Plan to implement the European Pillar of Social Rights .	
10:18	C6: 14th 5YP CE	Whether from the perspective of global green development trend and requirements for addressing climate change, or from the perspective of domestic resource demand and utilisation level, China must vigorously develop circular economy, focus on solving the outstanding contradictions and problems, realise efficient resource utilisation and recycling, and promote high-quality economic and social development.	13:141	EU2: A new Circular Economy Action Plan 2020	The EU can only succeed if its efforts drive also the global transition to a just, climateneutral, resource-efficient and circular economy. There is a growing need to advance discussions on defining a “Safe Operating Space’ whereby the use of various natural resources does not exceed certain local, regional or global thresholds and environmental impacts remain within planetary boundaries.	
			17:1	EU6: Green Deal	The European Green Deal is a response to these challenges. It is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use.	
			17:19	EU6: Green Deal	at the same time, this transition must be just and inclusive.	
			1:74	EU1: EU action plan for the circular economy	environmental and social impacts of their production, both in the EU and in non-EU countries.	Target social impacts of products
			13:8	EU2: A new Circular Economy Action Plan 2020	For citizens, the circular economy will provide high-quality, functional and safe products, which are efficient and affordable, last longer and are designed for reuse, repair, and high-quality recycling.	
			13:9	EU2: A new Circular Economy Action Plan 2020	A whole new range of sustainable services, productas-service models and digital solutions will bring about a better quality of life, innovative jobs and upgraded knowledge and skills.	
			15:1	EU4: Regulation proposal Critical Rawmaterials Act	These critical raw materials (CRMs) are often indispensable inputs for a wide set of strategic sectors including renewable energy, the digital industry, the space and defence sectors and the health sector. At the same time, extraction and processing of CRMs can have negative environmental impacts, depending on the methods and processes used, as well as social impacts.	

			15:42	EU4: Regulation proposal Critical Rawmaterials Act	The Commission should be empowered to adopt implementing acts recognising certification schemes that should be considered comprehensive and trustworthy, providing a common basis for authorities and market participants for assessing the sustainability of critical raw materials. Recognition should be given only to certification schemes that cover a broad range of sustainability aspects, including environmental protection, human rights including labour rights and business transparency, and which contain provisions for independent third party verification and monitoring of compliance.	
			16:27	EU5: Ecodesign requirements for sustainable products	(a) there shall be no significant negative impact on the functionality of the product, from the perspective of the user; (b) there shall be no adverse effect on the health and safety of persons; (c) there shall be no significant negative impact on consumers in terms of the affordability of relevant products, also taking into account access to secondhand products, durability and the life cycle cost of products;	
10:65	C6: 14th 5YP CE	(9) Special action on the whole chain management of plastic pollution Scientific and reasonable promotion of plastic source reduction, strictly prohibit the production of ultra-thin agricultural film, daily chemical products containing plastic microbeads and other products that endanger the environment and human health, and encourage the public to reduce the use of disposable plastic products. In-depth assessment of the resource and environmental impacts of various types of plastic substitutes throughout their life cycle. Promote degradable plastics according to local conditions, actively and steadily, improve the standard system, enhance inspection and testing capacity, and regulate the application and disposal of degradable plastics. Promote the application of standard films and improve the recycling level of used agricultural films. Strengthen the classification, recycling and reuse of plastic waste, accelerate the construction of domestic waste incineration and treatment facilities, and reduce the amount of plastic waste in landfills. Carry out plastic rubbish cleanup in rivers, lakes and coastlines, and implement special actions to clean up marine rubbish. Strengthen policy interpretation and publicity and guidance to create a good social atmosphere.	1:129	EU1: EU action plan for the circular economy	Another very important issue for the development of secondary raw materials markets is the link with legislation on chemicals. A growing number of chemical substances are identified as being of concern for health or the environment and become subject to restrictions or prohibitions. However, these substances may be present in products sold before the restrictions applied, some of which have a long lifetime, and therefore chemicals of concern can sometimes be found in recycling streams. Such substances can be costly to detect or remove, creating obstacles in particular for small recyclers.	Improve health of people
			1:131	EU1: EU action plan for the circular economy	The Commission will therefore develop its analysis and propose options for action to overcome unnecessary barriers while preserving the high level of protection of human health and the environment. This work will feed into the future EU strategy for a non-toxic environment.32	
			13:141	EU2: A new Circular Economy Action Plan 2020	The EU can only succeed if its efforts drive also the global transition to a just, climateneutral, resource-efficient and circular economy. There is a growing need to advance discussions on defining a “Safe Operating Space’ whereby the use of various natural resources does not exceed certain local, regional or global thresholds and environmental impacts remain within planetary boundaries.	
			16:27	EU5: Ecodesign requirements for sustainable products	(a) there shall be no significant negative impact on the functionality of the product, from the perspective of the user; (b) there shall be no adverse effect on the health and safety of persons; (c) there shall be no significant negative impact on consumers in terms of the affordability of relevant products, also taking into account access to secondhand products, durability and the life cycle cost of products;	

			17:2	EU6: Green Deal	It also aims to protect, conserve and enhance the EU's natural capital, and protect the health and well-being of citizens from environment-related risks and impacts	
			1:144	EU1: EU action plan for the circular economy	Food waste also has an important social angle: donation of food that is still edible but that for logistic or marketing reasons cannot be commercialised should be facilitated.	Food donations serve social equity
5:37	C3: 13th 5YP	Frugal Lifestyles Lifestyles Lifestyles Lifestyles We will advocate reasonable consumption while opposing waste and extravagance. We will work to see that economy is practiced throughout all stages— from production to distribution, storage, and consumption. We will exercise effective control over the abuse of public funds, take action against over-packaging, food waste, and overconsumption, and work to see that frugality becomes a social norm. We will promote green transport services such as bicycling and public transport. We will restrict the use of single-use disposable products.				Adress social norms
9:21	C4: 12th 5YP V1	We need to persist in building a society that conserves resources and that is friendly to environment as an important effort to accelerate the pace of the transformation of economic and social development model. There is a need to implement in depth the basic national policy of conserving resources and of protecting the environment.				
7:48	C2: 14th 5YP	The environment will steadily improve, and ecological security shields will be reinforced. The living environment in urban and rural areas will be significantly improved.	13:88	EU2: A new Circular Economy Action Plan 2020	The built environment has a significant impact on many sectors of the economy, on local jobs and quality of life. It requires vast amounts of resources and accounts for about 50% of all extracted material. The construction sector is responsible for over 35% of the EU's total waste generation. Greenhouse gas emissions from material extraction, manufacturing of construction products, construction and renovation of buildings are estimated at 5-12% of total national GHG emissions. Greater material efficiency could save 80% of those emissions .	Improve the living environment
			13:2	EU2: A new Circular Economy Action Plan 2020	As half of total greenhouse gas emissions and more than 90% of biodiversity loss and water stress come from resource extraction and processing, the European Green Deal launched a concerted strategy for a climate-neutral, resource-efficient and competitive economy. Scaling up the circular economy from front-runners to the mainstream economic players will make a decisive contribution to achieving climate neutrality by 2050 and decoupling economic growth from resource use, while ensuring the longterm competitiveness of the EU and leaving no one behind.	Leave no one behind / Put people first
			17:20	EU6: Green Deal	It must put people first, and pay attention to the regions, industries and workers who will face the greatest challenges.	
			13:14	EU2: A new Circular Economy Action Plan 2020	It foresees the further development of a sound monitoring framework contributing to measuring well-being beyond GDP.	monitoring

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
			1:21	EU1: EU action plan for the circular economy	help avoid the irreversible damages caused by using up resources at a rate that exceeds the Earth's capacity to renew them in terms of climate and biodiversity, air, soil and water pollution.	Improve biodiversity
			13:2	EU2: A new Circular Economy Action Plan 2020	As half of total greenhouse gas emissions and more than 90% of biodiversity loss and water stress come from resource extraction and processing, the European Green Deal launched a concerted strategy for a climate-neutral, resource-efficient and competitive economy. Scaling up the circular economy from front-runners to the mainstream economic players will make a decisive contribution to achieving climate neutrality by 2050 and decoupling economic growth from resource use, while ensuring the longterm competitiveness of the EU and leaving no one behind.	
			13:96	EU2: A new Circular Economy Action Plan 2020	The circular economy can significantly reduce the negative impacts of resource extraction and use on the environment and contribute to restoring biodiversity and natural capital in Europe.	

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
12:218	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	By 2015, the total utilization of major renewable resources will reach 266 million tons, the output value will reach 1.2 trillion yuan, and 18 million people will be employed.	1:18	EU1: EU action plan for the circular economy	create local jobs	Create new Jobs / Increase employment
			1:24	EU1: EU action plan for the circular economy	Action on the circular economy therefore ties in closely with key EU priorities, including jobs and growth, the investment agenda, climate and energy, the social agenda and industrial innovation, and with global efforts on sustainable development.	
			1:34	EU1: EU action plan for the circular economy	By stimulating sustainable activity in key sectors and new business opportunities, the plan will help to unlock the growth and jobs potential of the circular economy	
			1:94	EU1: EU action plan for the circular economy	Once a product has been purchased, its lifetime can be extended through reuse and repair, hence avoiding wastage. The reuse and repairs sectors are labour-intensive and therefore contribute to the EU's jobs and social agenda.	
			1:181	EU1: EU action plan for the circular economy	The transition to a circular economy will also require a qualified workforce with specific and sometimes new skills, and opportunities for employment and social dialogue. If the right skills at all levels are to be developed, they will have to be espoused by the education and training systems. The Commission is following up on its Green Employment Initiative with action to anticipate needs and encourage the development of skills and other measures to support job creation in the green economy. It is also acting through its forthcoming New Skills Agenda for Europe.	
			13:6	EU2: A new Circular Economy Action Plan 2020	A recent study estimates that applying circular economy principles across the EU economy has the potential to increase EU GDP by an additional 0.5% by 2030 creating around 700 000 new jobs5 . There is a clear business case for individual companies too: since manufacturing firms in the EU spend on average about 40% on materials, closed loop models can increase their profitability, while sheltering them from resource price fluctuations.	
			13:9	EU2: A new Circular Economy Action Plan 2020	A whole new range of sustainable services, productas-service models and digital solutions will bring about a better quality of life, innovative jobs and upgraded knowledge and skills.	
			13:122	EU2: A new Circular Economy Action Plan 2020	Circularity can be expected to have a positive net effect on job creation provided that workers acquire the skills required by the green transition. The potential of the social economy, which is a pioneer in job creation linked to the circular economy, will be further leveraged by the mutual benefits of supporting the green transition and strengthening social inclusion, notably under the Action Plan to implement the European Pillar of Social Rights42 .	

			17:6	EU6: Green Deal	The transition is an opportunity to expand sustainable and job-intensive economic activity. There is significant potential in global markets for low-emission technologies, sustainable products and services. Likewise, the circular economy offers great potential for new activities and jobs.	
			14:6	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The Plan will complement ongoing efforts to transform industry under the European Green Deal and the EU Industrial strategy, in particular the Circular Economy Action Plan. Modernising and decarbonising energy-intensive industries also remains a top priority, as does ensuring job transitions and quality job creation through training and education.	
			14:8	EU3: A Green Deal Industrial Plan for the Net-Zero Age	Second, the Commission will propose a Critical Raw Materials Act. The manufacturing of EU net-zero technologies is only possible if access to relevant critical raw materials is ensured, including by diversifying sourcing and by recycling raw materials to lower the EU's dependence on highly concentrated supplies from third countries and boost quality jobs and growth in the circular economy. This act will aim to provide the EU security of supply, including by strengthening international engagement, facilitating extraction (where relevant), processing and recycling, while ensuring high environmental standards and continuing research and innovation, e.g. to reduce material use and to develop bio-based substitutes. There have already been tangible successes: today, some EU companies are using lignin stemming from wood in batteries, instead of graphite.	
			15:18	EU4: Regulation proposal Critical Rawmaterials Act	The Union has, in many of its regions, a legacy of raw materials extraction and thus substantial amounts of extractive waste on closed facilities which, due to their only recent rise in economic importance, have generally not been analysed for critical raw materials potential. The recovery of critical raw materials from extractive waste facilities has the potential to create economic value and employment in historical mining regions, which are often affected by deindustrialisation and decline. The lack of attention to, and information on critical raw materials content, especially on closed waste facilities, constitutes a key barrier to greater use of the critical raw materials potential of extractive waste.	
			1:181	EU1: EU action plan for the circular economy	The transition to a circular economy will also require a qualified workforce with specific and sometimes new skills, and opportunities for employment and social dialogue. If the right skills at all levels are to be developed, they will have to be espoused by the education and training systems. The Commission is following up on its Green Employment Initiative with action to anticipate needs and encourage the development of skills and other measures to support job creation in the green economy. It is also acting through its forthcoming New Skills Agenda for Europe.	
			13:9	EU2: A new Circular Economy Action Plan 2020	A whole new range of sustainable services, productas-service models and digital solutions will bring about a better quality of life, innovative jobs and upgraded knowledge and skills.	education and training for new jobs

			13:123	EU2: A new Circular Economy Action Plan 2020	Skills Agenda, launching a Pact for Skills with large-scale multistakeholder partnerships, and the Action Plan for Social Economy. Further investment in education and training systems, lifelong learning, and social innovation will be promoted under the European Social Fund Plus.	
			14:6	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The Plan will complement ongoing efforts to transform industry under the European Green Deal and the EU Industrial strategy, in particular the Circular Economy Action Plan. Modernising and decarbonising energy-intensive industries also remains a top priority, as does ensuring job transitions and quality job creation through training and education.	
			15:42	EU4: Regulation proposal Critical Rawmaterials Act	The Commission should be empowered to adopt implementing acts recognising certification schemes that should be considered comprehensive and trustworthy, providing a common basis for authorities and market participants for assessing the sustainability of critical raw materials. Recognition should be given only to certification schemes that cover a broad range of sustainability aspects, including environmental protection, human rights including labour rights and business transparency, and which contain provisions for independent third party verification and monitoring of compliance.	Improve labour rights

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
7:26	C2: 14th 5YP	We will create a market-based system for green technology innovation, implement initiatives to make breakthroughs in this area, and perform benchmarking to improve the resource efficiency of key industries and products.	13:13	EU2: A new Circular Economy Action Plan 2020	This plan aims also at ensuring that the circular economy works for people, regions and cities, fully contributes to climate neutrality and harnesses the potential of research, innovation and digitalisation.	Aim for innovation (general)
10:23	C6: 14th 5YP CE	Adhere to innovation-driven. Vigorously promote innovative development, strengthen scientific and technological innovation, mechanism innovation and mode innovation, increase innovation investment, optimise the innovation environment, improve the innovation system, and strengthen the leading role of innovation in the circular economy.	1:36	EU1: EU action plan for the circular economy	fund innovative projects under the umbrella of the EU's Horizon 2020 research programme,	
11:5	C7: The General Office of the State Council on accelerating the construction of	nnovation-driven, improving quality and efficiency. Give play to the leading role of innovation, strengthen technological innovation, model innovation and mechanism innovation in waste recycling, constantly open up new fields, create new momentum, expand waste recycling methods, enrich waste recycling categories, and enhance the value of waste recycling.	1:42	EU1: EU action plan for the circular economy	horizontal enabling measures in areas such as innovation and investment	
12:22	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	It needs to be improved; the circular economy technology innovation system and the advanced applicable technology promotion mechanism are not perfect, and technological innovation capabilities need to be strengthened;	1:63	EU1: EU action plan for the circular economy	incentives for improved product design, while preserving the single market and competition, and enabling innovation.	
			1:166	EU1: EU action plan for the circular economy	The Commission will work on identifying and sharing best practices in this sector and promote innovation; the revised legislative proposals on waste also include a mandatory EU-level target on recycling wood packaging waste.	
			1:171	EU1: EU action plan for the circular economy	Innovation will play a key part in this systemic change. In order to rethink our ways of producing and consuming, and to transform waste into high value-added products, we will need new technologies, processes, services and business models which will shape the future of our economy and society. Hence, support of research and innovation will be a major factor in encouraging the transition; it will also contribute to the competitiveness and modernisation of EU industry. The Horizon 2020 work programme 2016-2017 includes a major initiative: "Industry 2020 in the circular economy", which will grant over €650 million for innovative demonstration projects that support the objectives of the circular economy and industrial competitiveness in the EU in a wide range of industrial and service activities, including process industries, manufacturing, and new business models. It also explores a pilot approach to help innovators facing regulatory obstacles (e.g. ambiguous legal provisions), by setting up agreements with stakeholders and public authorities ('innovation deals').	
11:47	C7: The General Office of the State Council on accelerating the construction of	Cultivate a group of industry backbone enterprises in different fields and regions with advanced technology and equipment, standardized management and operations, outstanding innovation capabilities, and strong leadership.	1:80	EU1: EU action plan for the circular economy	In addition, it is important to promote innovative industrial processes.	Aim for innovation in industry
			1:24	EU1: EU action plan for the circular economy	Action on the circular economy therefore ties in closely with key EU priorities, including jobs and growth, the investment agenda, climate and energy, the social agenda and industrial innovation, and with global efforts on sustainable development.	

			1:140	EU1: EU action plan for the circular economy	However, innovation in plastics can contribute to the circular economy by better preserving food, improving the recyclability of plastics or reducing the weight of materials used in vehicles.	Aim for innovation in plastics
			1:140	EU1: EU action plan for the circular economy	However, innovation in plastics can contribute to the circular economy by better preserving food, improving the recyclability of plastics or reducing the weight of materials used in vehicles.	Aim for innovation regarding food waste
			1:149	EU1: EU action plan for the circular economy	The Commission will also create a platform dedicated to food waste, bringing together Member States and all actors in the food chain. This platform will support the achievement of the food waste reduction target under the Sustainable Development Goals through appropriate steps, the involvement of stakeholders, the sharing of valuable and successful innovation and relevant benchmarking.	
			1:168	EU1: EU action plan for the circular economy	The bio-based sector has also shown its potential for innovation in new materials, chemicals and processes, which can be an integral part of the circular economy.	Aim for innovation in the biobased sector
4:92	C5: Circular Economy Promotion Law of the PRC	The State Council, the people's governments of the provinces, autonomous regions and municipalities directly under the Central Government and the relevant departments thereof shall bring the independent innovation research, application demonstration and industrialization of the key scientific and technological task force projects of circular economy into the state or provincial scientific and technological development plans or high-tech industry development plans, and allocate financial resources to support the implementation thereof.				Target R&D for innovation
			13:9	EU2: A new Circular Economy Action Plan 2020	A whole new range of sustainable services, productas-service models and digital solutions will bring about a better quality of life, innovative jobs and upgraded knowledge and skills.	Aim for innovation in jobs
			13:87	EU2: A new Circular Economy Action Plan 2020	boosting the sorting, re-use and recycling of textiles, including through innovation, encouraging industrial applications and regulatory measures such as extended producer responsibility.	Aim for innovation in textiles
			1:179	EU1: EU action plan for the circular economy	SMEs, including social enterprises, will make a key contribution to the circular economy: they are particularly active in fields such as recycling, repair, and innovation. However, they also face specific challenges, such as access to funding, and the difficulty of taking account of the circular economy if it is not their core business. As set out in the 2014 Green Action Plan for SMEs51, the Commission is acting to support these companies, analyse the barriers they encounter to a better use of resources and waste management, and to encourage innovation and cooperation across sectors and regions. The Commission also provides access to finance for social enterprises52 .	Aim for innovation in SMEs
10:80	C6: 14th 5YP CE	Encourage financial institutions to increase investment and financing for major projects in the field of circular economy. Strengthen the innovation of green financial products, and increase the support of green credit, green bonds, green funds and green insurance for enterprises and projects related to circular economy.	13:135	EU2: A new Circular Economy Action Plan 2020	The European Regional Development Fund, through smart specialisation, LIFE and Horizon Europe will complement private innovation funding and support the whole innovation cycle with the aim to bring solutions to the market.	

12:317	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Banking financial institutions are encouraged to provide diversified credit support, including credit loans, for key circular economy projects and the "Ten Hundreds and Thousands" demonstration project of circular economy, innovate credit products, broaden the scope of mortgage guarantees, and improve guarantee methods. Support circular economy demonstration pilot enterprises in issuing direct financing instruments such as corporate (corporate) bonds, project revenue bonds, convertible bonds, short-term financing bonds, and medium-term notes. Explore the issuance of collective bonds and collective bills by small and medium-sized enterprises in the circular economy demonstration pilot park. Support qualified resource recycling companies to apply for domestic and overseas listings and refinancing. Encourage the establishment of circular economy venture capital funds and study the establishment of circular economy industry investment funds. All localities should formulate supporting investment and financing policies and implementation plans to support the development of circular economy in accordance with relevant national policies.				Aim for innovation in finance
12:113	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the development of green building materials products. Focus on accelerating the development of new materials such as energy-saving glass, solar glass, composite multi-functional wall materials, and wood-plastic composite materials.				Aim for innovation in construction
12:215	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Innovate recycling methods, strengthen supervision and management, promote the recycling of waste electrical and electronic products, scrapped cars, waste tires, packaging materials, and waste textiles, and promote the recycling of waste lead-acid batteries, waste cadmium-nickel batteries, waste mercury-containing fluorescent lamps, waste thermometers, and waste pesticide packaging recycling of hazardous waste.				Aim for innovation in recycling

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ID	Document	Quotation content	ID	Document	Quotation content	
7:36	C2: 14th 5YP	02 Water pollution prevention and control and water ecosystem restoration Consolidate the gains in treating malodorous black water bodies in cities at and above the prefectural level and take comprehensive steps to treat 1,500 sections of malodorous black water bodies in urban areas in 363 county-level cities; Strengthen pollution control and ecological restoration on key lakes and reservoirs, including the Tai, Chao, Dianchi, Erhai, Baiyangdian, Poyang, Dongting, Chagan, and Ulansuhai lakes and the Danjiangkou reservoir; Take integrated steps to harness the Yongding, Mulan, and other rivers; Move faster to comprehensively address the over-extraction of groundwater in northern China and other key areas and promote environmental governance in the Yellow River estuary.	1:21	EU1: EU action plan for the circular economy	help avoid the irreversible damages caused by using up resources at a rate that exceeds the Earth's capacity to renew them in terms of climate and biodiversity, air, soil and water pollution.	Reduce pollution in water bodies
12:26	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Environmental pollution is serious. The overall deterioration of China's environmental conditions has not been fundamentally curbed. Water pollution in key river basins is serious. Air pollution problems are prominent in some areas. The phenomenon of "garbage siege" is common. Agricultural non-point source pollution, heavy metal and soil pollution are serious problems. Major environmental incidents occur from time to time. occur, causing harm to the health of the people.	1:137	EU1: EU action plan for the circular economy	Large quantities of plastics also end up in the oceans, and the 2030 Sustainable Development Goals include a target to prevent and significantly reduce marine pollution of all kinds, including marine litter.	
7:35	C2: 14th 5YP	Reduction of air pollution emissions Put in place clean production facilities for 850 million metric tons of cement clinkers, 460 million metric tons of coking capacity, and about 4,000 non-ferrous metal furnaces; Realize ultra-low emissions for 530 million metric tons of steel capacity; Transform treatment practices for volatile organic compounds in petrochemicals, chemicals, painting, medicine, packaging and printing, and other key industries; Eliminate the use of bulk coal in key areas aff ected by heavy air pollution.	1:21	EU1: EU action plan for the circular economy	help avoid the irreversible damages caused by using up resources at a rate that exceeds the Earth's capacity to renew them in terms of climate and biodiversity, air, soil and water pollution.	Reduce air pollution
12:26	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Environmental pollution is serious. The overall deterioration of China's environmental conditions has not been fundamentally curbed. Water pollution in key river basins is serious. Air pollution problems are prominent in some areas. The phenomenon of "garbage siege" is common. Agricultural non-point source pollution, heavy metal and soil pollution are serious problems. Major environmental incidents occur from time to time. occur, causing harm to the health of the people.				
7:37	C2: 14th 5YP	03 Soil contamination prevention and control and safe use of land Carry out demonstrations on the safe use of agricultural lands in 100 counties with large areas of contaminated soil; Implement 100 projects to control soil contamination at the source with a focus on chemical and non-ferrous metal industries.	1:21	EU1: EU action plan for the circular economy	help avoid the irreversible damages caused by using up resources at a rate that exceeds the Earth's capacity to renew them in terms of climate and biodiversity, air, soil and water pollution.	Reduce soil pollution
12:26	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Environmental pollution is serious. The overall deterioration of China's environmental conditions has not been fundamentally curbed. Water pollution in key river basins is serious. Air pollution problems are prominent in some areas. The phenomenon of "garbage siege" is common. Agricultural non-point source pollution, heavy metal and soil pollution are serious problems. Major environmental incidents occur from time to time. occur, causing harm to the health of the people.				
			13:72	EU2: A new Circular Economy Action Plan 2020	However, as consumption of plastics is expected to double in the coming 20 years, the Commission will take further targeted measures to address the sustainability challenges posed by this ubiquitous material and will continue to promote a concerted approach to tackle plastics pollution at global level as set out in section 7.	

			13:74	EU2: A new Circular Economy Action Plan 2020	address the presence of microplastics in the environment by:	Target plastic pollution
			13:80	EU2: A new Circular Economy Action Plan 2020	use of biodegradable or compostable plastics, based on an assessment of the applications where such use can be beneficial to the environment, and of the criteria for such applications. It will aim to ensure that labelling a product as 'biodegradable' or 'compostable' does not mislead consumers to dispose of it in a way that causes plastic littering or pollution due to unsuitable environmental conditions or insufficient time for degradation.	
4:49	C5: Circular Economy Promotion Law of the PRC	For any electric apparatus or electronic product that may cause environmental pollution in the process of dismantling and disposal, it is prohibited to use any poisonous or harmful substance. The directory of poisonous and harmful substances prohibited from use in electric apparatus and electronic products shall be worked out by the administrative department of circular economy development under the State Council together with the environmental protection department and other competent departments Translation by lawinfochina.com 5 under the State Council.				Target chemicals pollution
4:31	C5: Circular Economy Promotion Law of the PRC	A local people's government at or above the county level shall plan and adjust the industrial structure of this administrative region according to the indicators on the discharge of major pollutants, the land used for construction and the total volume of water consumption as assigned by the people's government at the next higher level so as to promote the development of circular economy.	13:63	EU2: A new Circular Economy Action Plan 2020	applying product-as-service solutions to reduce virgin material consumption, use sustainable alternative transport fuels, optimise infrastructure and vehicle use, increase occupancy rates and load factors, and eliminate waste and pollution.	Reduce pollution (general)
4:32	C5: Circular Economy Promotion Law of the PRC	Construction projects shall be built, rebuilt or enlarged in accordance with the requirements of the indicators on the discharge of major pollutants, the land used for construction and the total volume of water consumption of this administrative region.				
5:62	C3: 13th 5YP	Achieve an overall improvement in the quality of the environment and ecosystems Our modes of production and ways of life will become more eco- friendly and low-carbon. We will extract and use energy and resources with much greater efficiency. Aggregate energy and water consumption, the total amount of land used for construction, and aggregate carbon emissions will be effectively controlled, and aggregate emissions of major pollutants will be significantly reduced. We will basically complete functional zoning and the building of protective barriers for eco-security.				
9:4	C4: 12th 5YP V1	We will control the generation, discharge, emission of pollutants at the source and during the entire process, and reduce resources consumption				
9:25	C4: 12th 5YP V1	We will enhance the sustainable development capabilities and further raise the utilization efficiency of energy, land, and sea space resources. Efforts will be intensified to treat environmental pollution and to ease the restrains caused by resources and environmental bottlenecks.				
12:265	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	avoid the old path of pollution first and treatment later.				

7:47	C2: 14th 5YP	Total emissions of major pollutants will fall continuously, and forest coverage will expand to 24.1% of China's total land area.				indicator
8:10	C4: 12th 5YP V2	Total decrease in emissions of major pollutants (%) Chemical Oxygen Demand (COD) 8 Sulphur Dioxide (SO2) 8 binding Ammonia Nitrogen 10 Nitrous Oxides 10				
12:250	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	By 2015, the resource and energy utilization efficiency of infrastructure construction and operation services in the railway, highway, waterway, civil aviation, postal service, and urban rail transit industries will be comprehensively improved, and pollution emissions will be effectively controlled.				
7:14	C2: 14th 5YP	We will encourage industrial parks to make their operations more circular, strengthen weak links in industrial chains, and extend the length of industrial chains to promote the cascading use of energy and resources and advance waste recycling and the centralized disposal of pollutants.				Aim for centralised pollution discharge
9:8	C4: 12th 5YP V1	We will, in line with the demands of circular economy, plan, build and transform various types of industrial parks, realize intensive land utilization, exchange utilization of waste, energy gradient utilization, waste water circular utilization, and concentrated disposal of pollutants. It is necessary to promote circular economy industrial chain and establish a circular linkage industrial system.				
11:50	C7: The General Office of the State Council on accelerating the construction of	Strengthen information-based supervision on the prevention and control of environmental pollution by solid waste, and promote full-process monitoring and information-based traceability of solid waste. Strengthen the supervision and management of waste recycling enterprises to ensure stable and consistent discharge standards.				Target solid waste pollution
12:151	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement cleaner production and promote source reduction.				Aim for source point reduction
12:336	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strictly investigate and deal with enterprises that cause secondary pollution through comprehensive utilization of resources and dismantling and processing of renewable resources.				
12:289	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Select scientific research units or large enterprises with good foundation and strong technical strength to support the construction of a number of key circular economy engineering laboratories, technology centers, engineering research centers and quality inspection centers. Strengthen the research and development of key common technologies for the circular economy such as source reduction, recycling, remanufacturing, zero emissions, and industrial linkage. Build an industry-university-research docking platform and a mechanism for the industrialization of scientific research results, build a number of resource recycling technology industrialization demonstration bases and demonstration projects, and increase the promotion and application of advanced and applicable technologies.				

9:19	C4: 12th 5YP V1	We will develop application technologies for reduction at source, for circular utilization, for re-manufacturing, for zero emissions, and production chain, and promote the typical model of circular economy.				
12:223	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	avoid secondary pollution				Target secondary pollution
12:282	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build 50 national "urban mineral" demonstration bases with advanced technology, environmental protection standards, standardized management, large-scale utilization, and strong radiation effects, and promote the centralized dismantling, processing, and concentration of scrap steel, scrap nonferrous metals, waste plastics, waste rubber, and other renewable resources Control pollution, rationally extend the industrial chain, promote the high-value utilization and concentrated development of "urban mineral" resources, and effectively solve the problems of scattered operations, backward technology, low utilization levels and secondary pollution in the utilization of renewable resources.				
12:339	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement circular economy technology industrialization demonstration projects, focusing on supporting the comprehensive development and recycling of associated mines and tailings, waste resource utilization, recyclable materials, replacement of toxic and harmful raw materials, remanufacturing, high-value utilization of renewable resources, and extending the industrial chain Link with related industries and demonstrate the industrialization of key technologies and equipment such as “zero emission”.	13:41	EU2: A new Circular Economy Action Plan 2020	assessing options for further promoting circularity in industrial processes in the context of the review of the Industrial Emissions Directive, including the integration of circular economy practices in upcoming Best Available Techniques reference documents;	Aim for zero emissions
12:280	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	improve the park's main resource output rate, land output rate, and resource recycling rate, and basically achieve "zero emissions."				

China			EU			Statement/Theme		
ID	Document	Quotation content	ID	Document	Quotation content			
12:25	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Domestic resource supply cannot meet the needs of economic and social development. The shortage of energy, important minerals, water, land and other resources will further intensify. Important resources are exported to the outside world. Dependence will further increase, and sustainable development faces severe challenges restricted by energy resource bottlenecks.				existing export of important resources		
10:13	C6: 14th 5YP CE	Domestically, during the "14th Five-Year Plan" period, China will focus on building a new development pattern with the domestic macro-cycle as the main body and the domestic and international doublecycle promoting each other, releasing the potential of domestic demand, expanding the consumption of the population, upgrading the level of consumption, and constructing a super-large-scale domestic market, and the demand for resources and energy will still be rigidly growing, while some of China's major resources have a high degree of dependence on the outside world, and there is a contradiction between supply and demand. At the same time, some of China's major resources have a high degree of dependence on foreign countries, the contradiction between supply and demand is prominent, the efficiency of resource and energy utilisation is still not high in general, the mode of production and life of mass production, mass consumption and mass emission has not yet been fundamentally reversed, and the security of resources is under greater pressure. The need to develop a circular economy and to improve the efficiency of resource use and the level of renewable resources utilisation is very urgent, and there is enormous room for it.	1:185	EU1: EU action plan for the circular economy	A number of sectors face specific challenges in the context of the circular economy, because of the specificities of their products or value-chains, their environmental footprint or dependency on material from outside Europe.	existing dependency on imports		
			15:4	EU4: Regulation proposal Critical Rawmaterials Act	this concentration exposes the EU to significant supply risks. There are precedents of countries leveraging their strong position as suppliers of CRMs against buyer countries, for instance through export restrictions.			
			13:7	EU2: A new Circular Economy Action Plan 2020	Building on the single market and the potential of digital technologies, the circular economy can strengthen the EU's industrial base and foster business creation and entrepreneurship among SMEs. Innovative models based on a closer relationship with customers, mass customisation, the sharing and collaborative economy, and powered by digital technologies, such as the internet of things, big data, blockchain and artificial intelligence, will not only accelerate circularity but also the dematerialisation of our economy and make Europe less dependent on primary materials.	reduce dependency on imports		
			14:5	EU3: A Green Deal Industrial Plan for the Net-Zero Age	This is made more difficult by the global competition for raw materials and skilled personnel. The Plan aims to address this dichotomy by focusing on the areas where Europe can make the biggest difference. It also seeks to avert the risk of replacing our reliance on Russian fossil fuels with other strategic dependencies that could impede our access to key technologies and inputs for the green transition, through a mix of diversification and own development and production.			

			14:8	EU3: A Green Deal Industrial Plan for the Net-Zero Age	Second, the Commission will propose a Critical Raw Materials Act. The manufacturing of EU net-zero technologies is only possible if access to relevant critical raw materials is ensured, including by diversifying sourcing and by recycling raw materials to lower the EU's dependence on highly concentrated supplies from third countries and boost quality jobs and growth in the circular economy. This act will aim to provide the EU security of supply, including by strengthening international engagement, facilitating extraction (where relevant), processing and recycling, while ensuring high environmental standards and continuing research and innovation, e.g. to reduce material use and to develop bio-based substitutes. There have already been tangible successes: today, some EU companies are using lignin stemming from wood in batteries, instead of graphite.			
			13:60	EU2: A new Circular Economy Action Plan 2020	sustainability and transparency requirements for batteries taking account of, for instance, the carbon footprint of battery manufacturing, ethical sourcing of raw materials and security of supply, and facilitating reuse, repurposing and recycling.	ensure security of supply		
			14:8	EU3: A Green Deal Industrial Plan for the Net-Zero Age	Second, the Commission will propose a Critical Raw Materials Act. The manufacturing of EU net-zero technologies is only possible if access to relevant critical raw materials is ensured, including by diversifying sourcing and by recycling raw materials to lower the EU's dependence on highly concentrated supplies from third countries and boost quality jobs and growth in the circular economy. This act will aim to provide the EU security of supply, including by strengthening international engagement, facilitating extraction (where relevant), processing and recycling, while ensuring high environmental standards and continuing research and innovation, e.g. to reduce material use and to develop bio-based substitutes. There have already been tangible successes: today, some EU companies are using lignin stemming from wood in batteries, instead of graphite.			
			14:10	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The new EU regulatory framework for batteries is a crucial element in the EU's transition to a climate neutral economy, by securing competitive and resilient value chains for battery production, reuse and recycling in the EU. Going forward, the Ecodesign for Sustainable Products Regulation10 will apply to a broader range of products and further expand the range of sustainability requirements, in which EU industry excels. The Commission will give a high priority to work on net-zero technologies under the existing and future Ecodesign working plans.			
			15:47	EU4: Regulation proposal Critical Rawmaterials Act	The general objective of this Regulation is to improve the functioning of the internal market by establishing a framework to ensure the Union's access to a secure and sustainable supply of critical raw materials.			
			13:119	EU2: A new Circular Economy Action Plan 2020	overdependence of the EU on foreign waste treatment, but they have also mobilised the recycling industry to increase its capacity and add value to waste in the EU.	dependency on foreign waste treatment		
			15:1	EU4: Regulation proposal Critical Rawmaterials Act	These critical raw materials (CRMs) are often indispensable inputs for a wide set of strategic sectors including renewable energy, the digital industry, the space and defence sectors and the health sector. At the same time, extraction and processing of CRMs can have negative environmental impacts, depending on the methods and processes used, as well as social impacts.			

			15:50	EU4: Regulation proposal Critical Rawmaterials Act	diversify the Union's imports of strategic raw materials with a view to ensure that, by 2030, the Union's annual consumption of each strategic raw material at any relevant stage of processing can rely on imports from several third countries, none of which provide more than 65% of the Union's annual consumption; (c) improve the Union's ability to monitor and mitigate the supply risk related to critical raw materials;	strategic inputs		
			17:16	EU6: Green Deal	Access to resources is also a strategic security question for Europe's ambition to deliver the Green Deal. Ensuring the supply of sustainable raw materials, in particular of critical raw materials necessary for clean technologies, digital, space and defence applications, by diversifying supply from both primary and secondary sources, is therefore one of the pre-requisites to make this transition happen.			
			17:16	EU6: Green Deal	Access to resources is also a strategic security question for Europe's ambition to deliver the Green Deal. Ensuring the supply of sustainable raw materials, in particular of critical raw materials necessary for clean technologies, digital, space and defence applications, by diversifying supply from both primary and secondary sources, is therefore one of the pre-requisites to make this transition happen.	diversify imports		
			14:5	EU3: A Green Deal Industrial Plan for the Net-Zero Age	This is made more difficult by the global competition for raw materials and skilled personnel. The Plan aims to address this dichotomy by focusing on the areas where Europe can make the biggest difference. It also seeks to avert the risk of replacing our reliance on Russian fossil fuels with other strategic dependencies that could impede our access to key technologies and inputs for the green transition, through a mix of diversification and own development and production.			
			15:50	EU4: Regulation proposal Critical Rawmaterials Act	diversify the Union's imports of strategic raw materials with a view to ensure that, by 2030, the Union's annual consumption of each strategic raw material at any relevant stage of processing can rely on imports from several third countries, none of which provide more than 65% of the Union's annual consumption; (c) improve the Union's ability to monitor and mitigate the supply risk related to critical raw materials;			
			14:8	EU3: A Green Deal Industrial Plan for the Net-Zero Age	Second, the Commission will propose a Critical Raw Materials Act. The manufacturing of EU net-zero technologies is only possible if access to relevant critical raw materials is ensured, including by diversifying sourcing and by recycling raw materials to lower the EU's dependence on highly concentrated supplies from third countries and boost quality jobs and growth in the circular economy. This act will aim to provide the EU security of supply, including by strengthening international engagement, facilitating extraction (where relevant), processing and recycling, while ensuring high environmental standards and continuing research and innovation, e.g. to reduce material use and to develop bio-based substitutes. There have already been tangible successes: today, some EU companies are using lignin stemming from wood in batteries, instead of graphite.			

China			EU			Statement/Theme	
ID	Document	Quotation content	ID	Document	Quotation content		
			1:111	EU1: EU action plan for the circular economy	Often, higher recycling rates are limited by administrative capacity, a lack of investment in separate collection and recycling infrastructure and insufficient use of economic instruments (e.g. landfill charges or pay-asyou-throw schemes); the creation of overcapacities in infrastructure to treat residual (including mixed) waste also poses major challenges.	lacking administrative capacity	
			1:111	EU1: EU action plan for the circular economy	Often, higher recycling rates are limited by administrative capacity, a lack of investment in separate collection and recycling infrastructure and insufficient use of economic instruments (e.g. landfill charges or pay-asyou-throw schemes); the creation of overcapacities in infrastructure to treat residual (including mixed) waste also poses major challenges.	lack of investment	
			1:179	EU1: EU action plan for the circular economy	SMEs, including social enterprises, will make a key contribution to the circular economy: they are particularly active in fields such as recycling, repair, and innovation. However, they also face specific challenges, such as access to funding, and the difficulty of taking account of the circular economy if it is not their core business. As set out in the 2014 Green Action Plan for SMEs51, the Commission is acting to support these companies, analyse the barriers they encounter to a better use of resources and waste management, and to encourage innovation and cooperation across sectors and regions. The Commission also provides access to finance for social enterprises52 .		
12:23	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	At the same time, we must be clearly aware that the scale of China's circular economy development needs to be expanded and the level of development needs to be improved. This is mainly reflected in the following: the concept of circular economy has not yet been popularized in the whole society, and some places and enterprises still have insufficient understanding of the development of circular economy. are not in place; the supporting laws and regulations of the Circular Economy Promotion Law are not yet complete, and systems such as extended producer responsibility have not yet been fully established; the price formation mechanism of some resource products has not yet been straightened out, and industrial, investment, fiscal and taxation, financial and other policies that are conducive to the development of the circular economy It needs to be improved; the circular economy technology innovation system and the advanced applicable technology promotion mechanism are not perfect, and technological innovation capabilities need to be strengthened; basic statistical work is relatively weak, the evaluation system is imperfect, and circular economy capacity building, service systems, publicity and education need to be strengthened. These contradictions and problems have seriously restricted the development of circular economy and must be studied and resolved as soon as possible.	1:111	EU1: EU action plan for the circular economy	Often, higher recycling rates are limited by administrative capacity, a lack of investment in separate collection and recycling infrastructure and insufficient use of economic instruments (e.g. landfill charges or pay-asyou-throw schemes); the creation of overcapacities in infrastructure to treat residual (including mixed) waste also poses major challenges.	insufficient policy instruments	
12:21	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	the price formation mechanism of some resource products has not yet been straightened out, and industrial, investment, fiscal and taxation, financial and other policies that are conducive to the development of the circular economy					

			1:111	EU1: EU action plan for the circular economy	Often, higher recycling rates are limited by administrative capacity, a lack of investment in separate collection and recycling infrastructure and insufficient use of economic instruments (e.g. landfill charges or pay-asyou-throw schemes); the creation of overcapacities in infrastructure to treat residual (including mixed) waste also poses major challenges.	overcapacity in waste treatment facilities	
			1:115	EU1: EU action plan for the circular economy	Another barrier to higher recycling rates is the illegal transport of waste, both within the EU and to non-EU countries, which often results in economically sub-optimal and environmentally unsound treatment. A revised regulation on waste shipment was adopted in 201430 which will facilitate the detection of these illegal shipments; the Commission will take further measures to help ensure that it is properly implemented. High-value waste streams, such as end-of-life vehicles, will be targeted specifically, to prevent raw materials leakage.	illegal waste transport	
10:16	C6: 14th 5YP CE	Power batteries, photovoltaic modules and other new types of waste products generated a substantial increase in the amount of recycling and dismantling processing is more difficult.	1:159	EU1: EU action plan for the circular economy	For example, valuable materials are not always identified, collected separately, or adequately recovered. The Commission will develop targeted guidelines for use on demolition sites for that purpose, including on the treatment of hazardous waste, and is promoting sorting systems for construction and demolition waste in the revised proposals on waste.	inadequate waste treatment	
			1:111	EU1: EU action plan for the circular economy	Often, higher recycling rates are limited by administrative capacity, a lack of investment in separate collection and recycling infrastructure and insufficient use of economic instruments (e.g. landfill charges or pay-asyou-throw schemes); the creation of overcapacities in infrastructure to treat residual (including mixed) waste also poses major challenges.		
10:14	C6: 14th 5YP CE	At present, the development of China's circular economy is still faced with such outstanding problems as low resource output efficiency in key industries, low level of standardisation of recycling of renewable resources, lack of land security for recycling facilities, difficulty in recycling low-value recyclables, high intensity of generation of bulk solid wastes, insufficient utilisation, and low valueadded of comprehensively utilised products.				lacking land security for waste treatment facilities	
10:13	C6: 14th 5YP CE	Domestically, during the "14th Five-Year Plan" period, China will focus on building a new development pattern with the domestic macro-cycle as the main body and the domestic and international doublecycle promoting each other, releasing the potential of domestic demand, expanding the consumption of the population, upgrading the level of consumption, and constructing a super-large-scale domestic market, and the demand for resources and energy will still be rigidly growing, while some of China's major resources have a high degree of dependence on the outside world, and there is a contradiction between supply and demand. At the same time, some of China's major resources have a high degree of dependence on foreign countries, the contradiction between supply and demand is prominent, the efficiency of resource and energy utilisation is still not high in general, the mode of production and life of mass production, mass consumption and mass emission has not yet been fundamentally reversed, and the security of resources is under greater pressure. The need to develop a circular economy and to improve the efficiency of resource use and the level of renewable resources utilisation is very urgent, and there is enormous room for it.	1:62	EU1: EU action plan for the circular economy	current market signals appear insufficient to make this happen, in particular because the interests of producers, users and recyclers are not aligned	unaligned interests	

12:262	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	break regional blockades and departmental interests,					
			13:16	EU2: A new Circular Economy Action Plan 2020	Many products break down too quickly, cannot be easily reused, repaired or recycled, and many are made for single use only.	insufficient product design	
			13:15	EU2: A new Circular Economy Action Plan 2020	While up to 80% of products' environmental impacts are determined at the design phase , the linear pattern of "take-make-use-dispose" does not provide producers with sufficient incentives to make their products more circular.		
			15:7	EU4: Regulation proposal Critical Rawmaterials Act	Third, legislation on waste management does not create enough incentives to improve the circularity of critical raw materials ('their circularity') or for the development of a market in secondary raw materials.		
			1:66	EU1: EU action plan for the circular economy	ecodesign requirements have mainly targeted energy efficiency		
			1:150	EU1: EU action plan for the circular economy	EU action is also important in areas where food waste can result from the way EU legislation is interpreted or implemented. This is the case for rules concerning food donation to food banks, and the use of safe unsold food as a resource in animal feed – the Commission will take measures in these two areas.		
			13:20	EU2: A new Circular Economy Action Plan 2020	At the same time, instruments such as the EU Ecolabel or the EU green public procurement (GPP) criteria are broader in scope but have reduced impact due to the limitations of voluntary approaches. In fact, there is no comprehensive set of requirements to ensure that all products placed on the EU market become increasingly sustainable and stand the test of circularity.	voluntary policy apporaches	
10:14	C6: 14th 5YP CE	At present, the development of China's circular economy is still faced with such outstanding problems as low resource output efficiency in key industries, low level of standardisation of recycling of renewable resources, lack of land security for recycling facilities, difficulty in recycling low-value recyclables, high intensity of generation of bulk solid wastes, insufficient utilisation, and low valueadded of comprehensively utilised products.	1:120	EU1: EU action plan for the circular economy	One of the barriers faced by operators who want to use secondary raw materials is uncertainty as to their quality. In the absence of EU-wide standards, it can be difficult to ascertain impurity levels or suitability for high-grade recycling (e.g. for plastics)	absence of standards	
			1:124	EU1: EU action plan for the circular economy	However, the circulation of fertilisers based on recycled nutrients is currently hampered by the fact that rules as well as quality and environmental standards differ across Member States.		
			1:155	EU1: EU action plan for the circular economy	Other barriers include insufficient information exchange between manufacturers and recyclers of electronic products, the absence of recycling standards, and a lack of data for economic operators on the potential for recycled critical raw materials. Such materials could also be recovered in landfills (e.g. from discarded electronic devices) or in certain cases from mining waste. The Commission is developing R&I programmes, data and information exchange, and will promote best practices on all these issues. In order to ensure a coherent and effective approach, to provide key data sources and to identify options for further action, it will prepare a report on critical raw materials in the circular economy.		

			1:139	EU1: EU action plan for the circular economy	The presence of hazardous chemical additives can pose technical difficulties and the emergence of innovative types of plastics raises new questions, e.g. as regards plastics biodegradability.	presence of harmful substances	
10:13	C6: 14th 5YP CE	Domestically, during the "14th Five-Year Plan" period, China will focus on building a new development pattern with the domestic macro-cycle as the main body and the domestic and international doublecycle promoting each other, releasing the potential of domestic demand, expanding the consumption of the population, upgrading the level of consumption, and constructing a super-large-scale domestic market, and the demand for resources and energy will still be rigidly growing, while some of China's major resources have a high degree of dependence on the outside world, and there is a contradiction between supply and demand. At the same time, some of China's major resources have a high degree of dependence on foreign countries, the contradiction between supply and demand is prominent, the efficiency of resource and energy utilisation is still not high in general, the mode of production and life of mass production, mass consumption and mass emission has not yet been fundamentally reversed, and the security of resources is under greater pressure. The need to develop a circular economy and to improve the efficiency of resource use and the level of renewable resources utilisation is very urgent, and there is enormous room for it.	1:185	EU1: EU action plan for the circular economy	A number of sectors face specific challenges in the context of the circular economy, because of the specificities of their products or value-chains, their environmental footprint or dependency on material from outside Europe.	foreign dependency	
			15:18	EU4: Regulation proposal Critical Rawmaterials Act	The Union has, in many of its regions, a legacy of raw materials extraction and thus substantial amounts of extractive waste on closed facilities which, due to their only recent rise in economic importance, have generally not been analysed for critical raw materials potential. The recovery of critical raw materials from extractive waste facilities has the potential to create economic value and employment in historical mining regions, which are often affected by deindustrialisation and decline. The lack of attention to, and information on critical raw materials content, especially on closed waste facilities, constitutes a key barrier to greater use of the critical raw materials potential of extractive waste.	lack of information about CRM	
			1:155	EU1: EU action plan for the circular economy	Other barriers include insufficient information exchange between manufacturers and recyclers of electronic products, the absence of recycling standards, and a lack of data for economic operators on the potential for recycled critical raw materials. Such materials could also be recovered in landfills (e.g. from discarded electronic devices) or in certain cases from mining waste. The Commission is developing R&I programmes, data and information exchange, and will promote best practices on all these issues. In order to ensure a coherent and effective approach, to provide key data sources and to identify options for further action, it will prepare a report on critical raw materials in the circular economy.		
			1:87	EU1: EU action plan for the circular economy	Faced with a profusion of labels or environmental claims, EU consumers often find it difficult to differentiate between products and to trust the information available		
			1:88	EU1: EU action plan for the circular economy	Green claims may not always meet legal requirements for reliability, accuracy and clarity.15 The Commission is working with stakeholders to make green claims more trustworthy, and will ensure better enforcement of the rules in place, including through updated guidance on unfair commercial practices16.		

			1:151	EU1: EU action plan for the circular economy	Another area where action might be needed concerns date marking, in particular the "best before" date. This can be wrongly interpreted as an expiry date and lead to the discarding of safe, edible food. The Commission will examine ways of promoting a better use and understanding of date marking by the various actors of the food chain. The EU has also adopted measures to prevent edible fish being thrown back into the sea from fishing vessels.37	labelling	
			17:12	EU6: Green Deal	Reliable, comparable and verifiable information also plays an important part in enabling buyers to make more sustainable decisions and reduces the risk of 'green washing'. Companies making 'green claims' should substantiate these against a standard methodology to assess their impact on the environment. The Commission will step up its regulatory and non-regulatory efforts to tackle false green claims. Digitalisation can also help improve the availability of information on the characteristics of products sold in the EU. For instance, an electronic product passport could provide information on a product's origin, composition, repair and dismantling possibilities, and end of life handling.		
			1:147	EU1: EU action plan for the circular economy	this makes it particularly hard to quantify: today, there is no harmonised, reliable method to measure food waste in the EU, which makes it more difficult for public authorities to assess its scale, origins, and trends over time. Addressing the measurement issue is an important step towards a better understanding of the problem, a coherent monitoring and reporting as well as effective exchange of good practices across the EU. The Commission will elaborate a common EU methodology to measure food waste in close cooperation with Member States and stakeholders.	lack of information on food waste	
10:17	C6: 14th 5YP CE	The precision and depth of rare metal sorting are insufficient, and the recycling quality and cost are difficult to meet the requirements of key materials for strategic emerging industries, so there is an urgent need to improve high-quality recycling capacity.				economic problems in recycling	

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
			1:103	EU1: EU action plan for the circular economy	Waste management plays a central role in the circular economy: it determines how the EU waste hierarchy is put into practice.	
			1:104	EU1: EU action plan for the circular economy	The waste hierarchy establishes a priority order from prevention, preparation for reuse, recycling and energy recovery through to disposal, such as landfilling.	
			1:107	EU1: EU action plan for the circular economy	The Commission is putting forward new legislative proposals on waste to provide a long-term vision for increasing recycling and reducing the landfilling of municipal waste, while taking account of differences between Member States. These proposals also encourage greater use of economic instruments to ensure coherence with the EU waste hierarchy.	
			1:113	EU1: EU action plan for the circular economy	EU Cohesion Policy has a key role to play in closing the investment gap for improved waste management and supporting the application of the waste hierarchy	
			1:114	EU1: EU action plan for the circular economy	This means that funding for new landfill will be granted only in exceptional cases (e.g. mainly for non-recoverable hazardous waste) and that funding for new facilities for the treatment of residual waste, such as incineration or mechanical biological treatment, will be granted only in limited and well justified cases, where there is no risk of overcapacity and the objectives of the waste hierarchy are fully respected. In total, it is foreseen that €5.5 billion will be dedicated to waste management in the current financing programme.	
			1:117	EU1: EU action plan for the circular economy	When waste cannot be prevented or recycled, recovering its energy content is in most cases preferable to landfilling it, in both environmental and economic terms. ‘Waste to energy’ can therefore play a role and create synergies with EU energy and climate policy, but guided by the principles of the EU waste hierarchy. The Commission will examine how this role can be optimised, without compromising the achievement of higher reuse and recycling rates, and how the corresponding energy potential can best be exploited. To that end, the Commission will adopt a 'waste to energy' initiative in the framework of the Energy Union.	4R (general)

			1:164	EU1: EU action plan for the circular economy	In a circular economy, a cascading use of renewable resources, with several reuse and recycling cycles, should be encouraged where appropriate. Biobased materials, such as for example wood, can be used in multiple ways, and reuse and recycling can take place several times. This goes together with the application of the waste hierarchy (including for food - see section 5.2) and, more generally, options that result in the best overall environmental outcome.	
			15:20	EU4: Regulation proposal Critical Rawmaterials Act	In line with the waste hierarchy established in Directive 2008/98/EC of the European Parliament and of the Council46, priority should be given to preventing the generation of waste containing critical raw materials, by extracting critical raw materials from the extracted volume prior to it becoming waste.	
			16:41	EU5: Ecodesign requirements for sustainable products	An economic operator that discards unsold consumer products directly, or on behalf of another economic operator, shall disclose: (a) the number of unsold consumer products discarded per year, differentiated per type or category of products; EN 63 EN (b) the reasons for the discarding of products; (c) the delivery of discarded products to preparing for re-use, remanufacturing, recycling, energy recovery and disposal operations in accordance with the waste hierarchy as defined by Article 4 of Directive 2008/98/EC. The economic operator shall disclose that information on a freely accessible website or otherwise make it publicly available, until a delegated act adopted pursuant to paragraph 3 starts applying to the category of unsold consumer products discarded by the operator in question.	
			17:9	EU6: Green Deal	The circular economy action plan will include a ‘sustainable products’ policy to support the circular design of all products based on a common methodology and principles. It will prioritise reducing and reusing materials before recycling them. It will foster new business models and set minimum requirements to prevent environmentally harmful products from being placed on the EU market. Extended producer responsibility will also be strengthened.	

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
4:5	C5: Circular Economy Promotion Law of the PRC	reducing, reusing and recycling activities				3R (general)
10:19	C6: 14th 5YP CE	Guided by Xi Jinping's thought of socialism with Chinese characteristics in the new era, deeply implement the spirit of the 19th CPC National Congress and the 2nd, 3rd, 4th and 5th Plenary Sessions of the 19th CPC Central Committee and the State Council in accordance with the decision-making and deployment of the CPC Central Committee and the State Council, based on the new stage of development, implement the new development concept, build a new pattern of development, adhere to the basic national policy of resource conservation and environmental protection, and follow the principle of "reduce, reuse and resource", focusing on the development of circular economy and the efficient use of resources				
11:2	C7: The General Office of the State Council on accelerating the construction of	To accelerate the construction of a waste recycling system, we must be guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, thoroughly implement the spirit of the 20th National Congress of the Party, comprehensively implement Xi Jinping Thought on Ecological Civilization, fully, accurately and comprehensively implement the new development concept, and accelerate the construction of a new development pattern, strive to promote high-quality development, follow the circular economy concept of reduction, reuse, and resource utilization, aim to improve resource utilization efficiency, and take fine waste management, effective recycling, and efficient utilization as the path to cover all aspects of production and life.				
12:5	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	principles of reduction, reuse, resource utilization, and reduction first.				

12:29	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Guided by Deng Xiaoping Theory, the important thought of "Three Represents", and the Scientific Outlook on Development, we will implement the basic national policy of conserving resources and protecting the environment, and focus on improving resource output and follow the principles of "reduce, reuse, recycle,				

China			EU			Statement/Theme			
ID	Document	Quotation content	ID	Document	Quotation content				
5:66	C3: 13th 5YP	We will move forward with the development of intelligent storage facilities for grain crops and work to conserve grain crops and reduce waste	1:145	EU1: EU action plan for the circular economy	In September 2015, as part of the 2030 Sustainable Development Goals, the United Nations General Assembly adopted a target of halving per capita food waste at the retail and consumer level, and reducing food losses along production and supply chains. The EU and its Member States are committed to meeting this target.	Reduce food waste			
12:162	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the mechanization of the entire grain production process, accelerate the construction of grain drying and storage facilities, and reduce grain field losses and storage losses.	17:18	EU6: Green Deal	The Farm to Fork Strategy will also contribute to achieving a circular economy. It will aim to reduce the environmental impact of the food processing and retail sectors by taking action on transport, storage, packaging and food waste.				
7:20	C2: 14th 5YP	The reduction, standardization, and recycling of express delivery packaging will also be advanced.	13:66	EU2: A new Circular Economy Action Plan 2020	reducing (over)packaging and packaging waste, including by setting targets and other waste prevention measures;	Reduce packaging waste			
10:66	C6: 14th 5YP CE	Encourage packaging production, ecommerce, express delivery and other upstream and downstream enterprises to establish industrial alliances, support the establishment of qualified supplier system for express packaging products, and promote the production enterprises to consciously carry out packaging reduction.	13:68	EU2: A new Circular Economy Action Plan 2020	considering reducing the complexity of packaging materials, including the number of materials and polymers used.				
			13:100	EU2: A new Circular Economy Action Plan 2020	substitute single-use packaging, tableware and cutlery by reusable products in food services.				
			17:14	EU6: Green Deal	A sustainable product policy also has the potential to reduce waste significantly. Where waste cannot be avoided, its economic value must be recovered and its impact on the environment and on climate change avoided or minimised. This requires new legislation, including targets and measures for tackling over-packaging and waste generation.				
4:7	C5: Circular Economy Promotion Law of the PRC	The term "reducing" as mentioned in these Measures refers to reducing the consumption of resources and the production of wastes in the process of production, circulation and consumption.				Definition			
4:12	C5: Circular Economy Promotion Law of the PRC	giving priority to reduction under the precondition of being technically feasible, economically rational and good for saving resources.	17:9	EU6: Green Deal	The circular economy action plan will include a 'sustainable products' policy to support the circular design of all products based on a common methodology and principles. It will prioritise reducing and reusing materials before recycling them. It will foster new business models and set minimum requirements to prevent environmentally harmful products from being placed on the EU market. Extended producer responsibility will also be strengthened.	Ranking / Order of goals; "Reduce" has priority			
12:32	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strengthen the concept and prioritize reduction.							
4:22	C5: Circular Economy Promotion Law of the PRC	Enterprises and public institutions shall set up management systems and take measures to reduce the consumption of resources, reduce the production and discharge of wastes and improve the reutilization and recycling level of wastes				Reduce resource consumption (general)			
9:23	C4: 12th 5YP V1	We will raise the resources utilization efficiency and the level of the development of circular economy.							
9:25	C4: 12th 5YP V1	We will enhance the sustainable development capabilities and further raise the utilization efficiency of energy, land, and sea space resources. Efforts will be intensified to treat environmental pollution and to ease the restrains caused by resources and environmental bottlenecks.							
9:28	C4: 12th 5YP V1	We will implement the strategy of giving priority to conservation, comprehensively implement the policy of exercising control over the total volume of resources utilization, of making bi-directional readjustment of supply and demand, and of carrying out differentiated management. There will be big rise in energy and resources utilization efficiency and in the degree of protection over various types of resources.							

12:293	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Further raise the entry threshold for industries with high energy consumption, high water consumption, high land consumption, and high emission, and strictly enforce constraints on energy conservation, environmental protection, land, and safety.							
12:309	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Research and formulate policies to encourage circulation companies to purchase energy-saving and environmentally friendly products.							
9:9	C4: 12th 5YP V1	We will raise resources output rate by 15 percent.				indicator			
12:37	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	substantial increase in resource output rate,							
4:23	C5: Circular Economy Promotion Law of the PRC	Citizens shall enhance their awareness of resources conservation and protecting the environment, consume resources in a reasonable way and save resources				Aim for reduction by consumers			
4:24	C5: Circular Economy Promotion Law of the PRC	The state encourages and guides citizens to use products that save energy, water, and materials as well as environment-friendly products and recycled products so as to reduce the production and discharge of wastes							
9:16	C4: 12th 5YP V1	We encourage consumers to buy energy-saving and water-saving products, energy-saving and environment-friendly cars and energy-saving and land-saving houses, reduce the utilization of disposable products, restrict excessive packing, and control irrational consumption.							
12:45	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement system energy saving and consumption reduction.							
12:257	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Consumers are encouraged to purchase and use energy-saving and environmentally friendly products, energy-saving and land-saving residences, and reduce the use of disposable items. It is encouraged to bring your own shopping bags, and the use of ultra-thin plastic shopping bags is prohibited. Strengthen the construction of regulations and standards, restrict companies from over-packaging goods, and guide consumers to boycott over-packaged goods.							
12:258	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage moderate ordering and packing when dining out, and simple arrangements for weddings, funerals and other weddings and funerals.							
4:50	C5: Circular Economy Promotion Law of the PRC	Industrial enterprises shall use advanced or applicable water-saving technologies, techniques and equipment, work out and implement water-saving plans, strengthen water-saving management and exercise control over the use of water in the whole process of production.	13:101	EU2: A new Circular Economy Action Plan 2020	The new Water Reuse Regulation will encourage circular approaches to water reuse in agriculture. The Commission will facilitate water reuse and efficiency, including in industrial processes.				

5:15	C3: 13th 5YP	Toward a Water-Conserving Society We will put into effect the strictest possible water resources management system and get everyone to conserve water. We will plan industrial production and urban development based on water resources and impose stricter control over industrial development and water quotas in regions affected by water scarcity. We will move more quickly toward water conservancy in agriculture, industry, and cities, make steady progress in the comprehensive price reform of water for agricultural purposes, and carry out demonstrations of comprehensive improvements in water-saving equipment and technologies. We will tighten oversight over major water consumers, and encourage the reuse of water as well as the differentiated use of water according to its quality. We will establish a water efficiency labeling system and promote the adoption of water-saving technologies and products. We will accelerate the utilization of alternative water resources and implement projects to make better use of rainwater, floodwater, and reclaimed water. We will ensure that China's total water usage stays below 670 billion cubic meters.				Reduce water consumption			
5:77	C3: 13th 5YP	We will move faster to improve water conservancy infrastructure networks and work to ensure the carefully-planned development, rational allocation, economical use, and efficient utilization of water resources so as to strengthen the country's capacity to ensure water security.							
7:7	C2: 14th 5YP	We will improve the efficiency of water conservation in agriculture, reduce the discharge of wastewater from industrial sources, and promote the conservation and loss reduction of water in urban areas.							
9:41	C4: 12th 5YP V1	2. Enhance Water Resources Conservation We will enforce the strictest water resources management system, strengthen control over the total volume of water utilization and the fixed rate management, enforce measures on protecting water resources, accelerate the formulation of the plans on the distribution of the water volume at various rivers, enhance the establishment of the water right system, and build a water conservation type society. There will be enhancement of compensated utilization of water resources, and regularization of the fee collection, utilization, and management of water resources. We will promote water conservation in agriculture, increase efficiency, promote highly efficient water saving irrigation technology including pipeline water transportation popularization and drip irrigation, increase 50 million mu of highly efficient water saving irrigation area, and support the construction of drought-resistant demonstration bases. On the premise of protecting irrigation area, of irrigation guarantee rate, and of the farmers' interest, we will establish a sound water right transfer mechanism for industrial and agricultural water utilization. It is necessary to enhance water conservation in urban areas and raise the efficiency of industry's water utilization. There is a need to promote water conservation technology in key water-using sectors and citizens' conservation of water in their daily lives. It is necessary to enhance the capability building for supervision of water volume and water quality. We will implement the underground water monitoring project, and strictly control the development of underground water. We will greatly promote the utilization of recycled water, mineral water, desalinated water, and brackish water.							
12:47	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	reduce electricity consumption, water consumption							
5:63	C3: 13th 5YP	Water use reduction per 10,000 yuan of GDP (%)				water: indicator			
7:8	C2: 14th 5YP	We will encourage the use of reclaimed water in order to reduce water consumption per unit of GDP by about 16%.							
8:5	C4: 12th 5YP V2	Decrease in water consumption per unit of valueadded industrial output (%) 30 binding							
8:6	C4: 12th 5YP V2	Increase of water efficiency coefficient in agricultural irrigation 0.5 0.53 0.03 forecast							

5:67	C3: 13th 5YP	3. Water-efficient agriculture § Spread the application of water-efficient irrigation and promote waterefficient projects, crop breeds, agronomy, and management; § Accelerate the implementation of regional scaled high-efficiency watersaving irrigation projects, using water-conserving methods to increase crop production in the northeast, raise irrigation efficiency in the northwest, address groundwater overdraft in the north, and reduce waste water discharge in the south; § Increase the area of cropland making use of high-efficiency waterconserving irrigation by 6.7 million hectares, thereby raising the irrigation water utilization coefficient to 0.55 or above.				Reduce water consumption in agriculture			
12:159	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote and popularize high-efficiency water-saving irrigation technologies such as piped water transmission, drip irrigation under film, and water-fertilizer integration, support the construction of dry farming demonstration bases, and increase the promotion of dry farming water-saving agricultural technologies.							
4:54	C5: Circular Economy Promotion Law of the PRC	The state encourages enterprises to use highly efficient and oil-saving products.				Reduce oil consumption			
4:56	C5: Circular Economy Promotion Law of the PRC	Enterprises manufacturing combustion engines and motor vehicles shall, in accordance with the fuel economy standards of the state for combustion engines and motor vehicles, use oil-saving technologies to reduce the consumption of petroleum products.							
4:59	C5: Circular Economy Promotion Law of the PRC	Entities in architectural design and construction industry shall, according to the relevant state provisions and standards, use energy-saving, water-saving, land-saving and material-saving technologies and techniques as well as small, light and recyclable products for construction. Areas shall, where possible, make sufficient utilization of solar energy, geothermal energy, wind energy and other renewable energy resources.	13:88	EU2: A new Circular Economy Action Plan 2020	The built environment has a significant impact on many sectors of the economy, on local jobs and quality of life. It requires vast amounts of resources and accounts for about 50% of all extracted material. The construction sector is responsible for over 35% of the EU's total waste generation. Greenhouse gas emissions from material extraction, manufacturing of construction products, construction and renovation of buildings are estimated at 5-12% of total national GHG emissions. Greater material efficiency could save 80% of those emissions .	Reduce resource consumption in construction/demolition			
10:60	C6: 14th 5YP CE	Construction of 50 demonstration cities for resource utilisation of construction waste. Promote the reduction of construction waste at source, establish a management system for the classification of construction waste, and regulate the construction and operation and management of places for dumping, transferring and resource utilisation of construction waste. Improve the policy on recycling and utilisation of construction waste and the certification standard system for recycled products, promote the resourceful utilisation of engineering residue, engineering slurry, demolition waste, engineering rubbish and renovation rubbish, and enhance the scale of market use of recycled products. Cultivate backbone enterprises in the construction waste resource utilisation industry, and accelerate the development, application and integration of new technologies, new techniques and new equipment for the resource utilisation of construction waste.							
12:112	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Increase the application proportion of high-grade cement and high-performance concrete, and promote the reduction of cement and concrete consumption.							
12:113	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the development of green building materials products. Focus on accelerating the development of new materials such as energy-saving glass, solar glass, composite multi-functional wall materials, and wood-plastic composite materials.							
12:192	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote existing commercial buildings to carry out thermal insulation and thermal insulation renovations, carry out energy-saving renovations on heating, refrigeration, ventilation, lighting, refrigeration and other systems, and adopt energy-saving equipment and technologies such as automatic control escalators.							

12:234	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	In northern heating areas, the focus is on building envelope, heat metering, and pipe network heat balance. In areas with hot summers and cold winters, the focus is on building doors and windows, external shading, and natural ventilation to accelerate the implementation of energy-saving renovations. Vigorously promote energy-saving renovation of heating, air conditioning, ventilation, lighting and other large public buildings and office buildings.							
12:235	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strictly control the design process, strengthen the review of construction drawings, and ensure that 100% of the urban building design stages meet energy-saving standards. Strengthen construction supervision and inspection to ensure project quality and safety, and the implementation rate of energy-saving standards during the construction phase has reached more than 95%. Strictly implement special energy-saving acceptance inspections. Those that fail to meet energy-saving standards will not pass the completion acceptance and will be forced to make rectifications. Encourage qualified regions to improve building energy efficiency standards.							
12:240	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	New airports, stations, and wharves will strictly implement building energysaving standards,							
12:245	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Accelerate the energy- and water-saving renovation of existing airports, stations, and ports.							
4:64	C5: Circular Economy Promotion Law of the PRC	The people's governments at or above the county level and the agricultural departments and other competent departments thereunder shall promote the intensive use of land, encourage agricultural producers to take advanced water-saving, fertilizer-saving and pesticide-saving planting, cultivating and irrigating technologies, improve the energy efficiency of agricultural machinery and give priority to the development of ecological agriculture. Areas short of water shall adjust the planting structure, give priority to the development of watersaving agriculture, make more efforts in storing and using rainwater, build and maintain water saving irrigation facilities so as to improve the water use efficiency and reduce the evaporation and loss of water.				Reduce resource consumption in agriculture			
12:156	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	In the agricultural field, we will accelerate the promotion of resource conservation, clean production processes, industrial link recycling, and resource recycling of waste treatment to form a cyclic agricultural production mode that is symbiotic with agriculture, forestry, animal husbandry, and fishery, accelerate agricultural mechanization, promote agricultural modernization, and improve rural ecology.							
12:158	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Accelerate the elimination of old agricultural machinery, promote the use of energy-saving agricultural machinery, promote energy-saving renovation of water pumping stations, and popularize energy-saving solar vegetable greenhouses.							
5:68	C3: 13th 5YP	6. Agricultural product quality and safety § Make a serious push to reduce pesticide and chemical fertilizer use in the production of agricultural products;				Reduce chemicals consumption in agriculture			
12:160	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously promote the technology of soil testing and formulated fertilization, use chemical fertilizers scientifically, encourage farmers to apply more organic fertilizers, and reduce the unreasonable amount of chemical fertilizers.							

4:65	C5: Circular Economy Promotion Law of the PRC	State organs and other organizations using funds from the public finance shall be frugal, put an end to extravagance, take the lead in using energy-saving, water-saving, land-saving, materialsaving and environment-friendly products, equipment and facilities, and use office supplies in an economic way. The offices administrations under the State Council and the local people's governments at or above the county level shall, together with other relevant departments at the same level, work out energy use quotas and water use quotas for the state organs at the same level, and the public finance departments shall work out disbursement standards according to such quotas.				Target reduction in public institutions			
9:17	C4: 12th 5YP V1	We will urge government organs to carry out green procurement, and gradually raise the ratio of procuring energy-saving and water-saving products and recycled products.							
12:260	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Government agencies should take the lead in setting an example in energy saving, water saving, paper saving, food saving, etc., and effectively build a conservation-oriented government. Strengthen the government's green procurement system, strictly implement the mandatory or priority procurement system for energysaving and environmentally friendly products, and increase the proportion of recycled products and remanufactured products in government procurement. Government canteens should improve the meal charging system and improve the management system for official reception meals to avoid waste in government canteens and official reception meals.							
4:67	C5: Circular Economy Promotion Law of the PRC	Enterprises in the catering, entertainment, hotel and other service industries shall use energy-saving, water-saving, material-saving and environment-friendly products and reduce or stop using energy-waste or contaminating products. Enterprises in the catering, entertainment, hotel and other service industries which are established after this Law comes into effect shall use energy-saving, water-saving, material-saving and environmentfriendly technologies, equipment and facilities.				Target reduction in the service sector			
12:199	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the catering and accommodation industry to carry out energy-saving transformation of lighting, air conditioning and boiler systems, use energy-saving and water-saving products and phosphorus-free highefficiency detergents, classify the discharge of domestic waste, and classify and store food and kitchen waste.							
5:9	C3: 13th 5YP	We will promote society-wide energy conservation, make comprehensive efforts to promote energy conservation in industry, construction, transportation, public institutions, and other areas, and launch projects to upgrade boilers, furnaces, lighting products, and electric motors and recover waste heat for household heating.	13:18	EU2: A new Circular Economy Action Plan 2020	Notably, the Ecodesign Directive successfully regulates energy efficiency and some circularity features of energy-related products.	Reduce energy consumption			
7:4	C2: 14th 5YP	Prioritizing energy conservation, we will enhance conservation efforts in industry, construction, transportation, and public institutions, boost energy efficiency in emerging domains like 5G networks and big data centers, and strengthen energy conservation management for major energy consumers.	13:23	EU2: A new Circular Economy Action Plan 2020	improving product durability, reusability, upgradability and reparability, addressing the presence of hazardous chemicals in products, and increasing their energy and resource efficiency;				
12:45	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement system energy saving and consumption reduction.	14:12	EU3: A Green Deal Industrial Plan for the Net-Zero Age	As set out in the REPowerEU Plan, boosting industrial competitiveness will require both transforming industrial processes, massive speed-up and scale-up of renewable energy and stronger efforts for energy efficiency and reduction of energy demand as well as reskilling and upskilling of the workforce.				
12:47	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	reduce electricity consumption, water consumption	14:17	EU3: A Green Deal Industrial Plan for the Net-Zero Age	A Heat Pumps skills partnership will be established by the end of this year and efforts are under way to create a skills partnership on energy efficiency.				
			16:6	EU5: Ecodesign requirements for sustainable products	product energy and resource efficiency;				

12:55	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Increase the energy-saving renovation of boilers, fans, water pumps and other equipment, promote energy-saving technologies such as plasma oil-free ignition, and reduce the power consumption rate of the factory.				Reduce energy consumption of specific equipment			
12:56	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Accelerate the construction of smart grids and power grid energysaving technological transformation, improve grid transmission efficiency, and effectively reduce line losses.							
12:78	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Eliminate backward smelting, processing and other production capacities, vigorously promote advanced and applicable technologies and equipment, optimize production processes, and strengthen energy-saving management. Focus on promoting advanced energy-saving process technologies such as new cathode structure aluminum electrolysis cells and low-temperature and high-efficiency aluminum electrolysis. Promote the widespread application of oxygen bottom blowing smelting technology and flash technology. Accelerate the development, promotion and application of technologies such as short-process continuous lead smelting and liquid lead slag direct reduction lead smelting. Encourage hot delivery, hot loading and direct casting.							
12:87	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously promote the utilization of cold energy in natural gas distributed energy sources and large liquefied natural gas (LNG) receiving stations to improve natural gas utilization efficiency.							
12:88	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of advanced energy-saving and environmentally friendly technologies and equipment, and focus on promoting energy-saving technologies such as optimizing heat exchange processes, increasing condensate recovery rates, optimizing the proportion of midstage reflux heat extraction, reducing vaporization rates, and increasing top-of-tower circulation reflux heat exchange.							
12:106	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Focus on promoting energysaving renovation of thermal equipment such as kilns.							
12:107	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Continue to promote large-scale new dry process cement production lines and promote energy-saving transformation such as cement grinding and clinker production. Promote kiln waste heat cascade utilization technologies such as pure low-temperature waste heat power generation, and promote low-temperature waste heat power generation in glass production lines.							
12:186	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Reduce equipment energy consumption through carrier intelligent functions, intelligent adjustment and other means. Promote air conditioning heating startup technology based on natural cold and heat sources and battery temperature control, rationally adopt wind and solar complementary systems, distributed cooling systems and battery pack online maintenance and management, and implement energy-saving transformation of traditional base stations.							
12:188	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Accelerate the withdrawal of old equipment from the network, encourage the construction of cloud computing, warehousing and container-type data equipment rooms, promote the widespread application of advanced energysaving technologies, increase energy-saving renovation efforts, and improve the energy efficiency of data centers and computer rooms.							
12:246	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Increase the proportion of electrified railways, expand the application of new materials and new technologies, and reduce non-traction energy consumption.							

5:74	C3: 13th 5YP	In fostering new areas of economic growth, we will spur innovation and industrial application in emerging, cutting-edge fields such as advanced semi-conductivity, robotics, additive manufacturing, intelligent systems, next generation aviation equipment, comprehensive service systems for space technologies, smart transportation, precision medicine, systems for high-efficiency energy storage and distributed energy, smart materials, efficient energy conservation, environmental protection, virtual reality, and interactive movies and television				Aim for new technology that reduces energy consumption			
5:75	C3: 13th 5YP	4. Energy storage and distributed energy § Make breakthroughs in and promote the industrial application of key technologies such as next generation photovoltaics, high-efficiency, high-wattage wind power generation, biomass energy, hydrogen power and fuel cells, smart grids, and new types of energy storage devices; § Facilitate the comprehensive utilization of distributed new energy technologies; § Promote the large-scale development of related techniques and equipment.							
5:76	C3: 13th 5YP	We will make a strong push to advance the energy revolution, giving impetus to a transformation in the way energy is produced and used, improving the energy supply mix, and elevating the efficiency of energy utilization. We will build a modern energy system that is clean, low-carbon, safe, and efficient, and will safeguard the country's energy security.							
9:24	C4: 12th 5YP V1	We will energetically develop such strategic emerging industries as environmental protection, new generation of information technology, biology, high-end equipment manufacturing, new energies, new materials, and new energy car sectors. Industries related to energy conservation and environmental protection need to emphasize on developing key technologies, equipment, products and services that are highly efficient, that save energy, that is advanced, that protect the environment, and that can recycle resources.							
5:73	C3: 13th 5YP	We will transform and upgrade major manufacturing technologies and improve policies to support enterprises in emulating world-wide models in terms of techniques, processes, equipment, energy efficiency, and environmental protection, thereby helping key manufacturing sectors move into the medium-high end.				Reduce energy consumption in manufacturing			
5:69	C3: 13th 5YP	2. Clean and efficient coal utilization § Implement the upgrading action plan for energy conservation and emissions reductions in coal based power generation: § Carry out nationwide upgrades of coal-fired power units to achieve ultra-low emissions and energy efficiency; § Ensure average coal consumption per kilowatt-hour is kept below 310 grams in existing power plants and below 300 grams in new power plants. § Encourage the use of backpressure thermal power units for heating and develop combined multi-source heating, cooling, and power systems; § Increase the proportion of coal used for power generation.				Reduce coal consumption			
5:71	C3: 13th 5YP	reduce coal consumption and replace it with alternative energy sources,							
7:23	C2: 14th 5YP	We will pursue the clean and efficient use of coal and other fossil energy sources and the green transformation of industries such as steel, petrochemical, and building materials.							
12:167	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Accelerate the elimination of high-energy-consuming backward processes, technologies and equipment, and promote energy-saving transformation of wood and bamboo processing equipment.				Reduce energy consumption in agriculture			
12:197	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Give full play to the role of the retail and wholesale industry as a bridge connecting production and consumption, support the retail and wholesale industry in purchasing energy-saving and environmentally friendly products, encourage trade and circulation enterprises to open green product sales areas, counters, etc., promote green products to consumers, expand the consumption of green products, and promote green products. Product production. Actively cultivate the development of the rental industry and used goods industry, and promote product reuse.				Reduce energy consumption in retail			

12:198	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	By 2015, the energy consumption per 10,000 yuan of turnover in retail industries such as large supermarkets, department stores, and specialty stores with a business area of more than 10,000 square meters will decrease significantly.							
5:61	C3: 13th 5YP	12 . Ene r g y consumptio n reductio n per unit of GDP (%)				Reduce energy consumption: indicator			
8:7	C4: 12th 5YP V2	Increase of non-fossil fuel usage in primary energy consumption (%) 8.3 11.4 3.1 binding							
8:8	C4: 12th 5YP V2	Decrease in energy consumption per unit of GDP (%) 16 binding							
7:9	C2: 14th 5YP	Efforts will be intensified to put land to more economical and intensive use, to enhance the management of idle land and land that has been approved for acquisition or transfer but has not yet been supplied, and to make better use of urban land that is being used inefficiently.	13:94	EU2: A new Circular Economy Action Plan 2020	reduce soil sealing, rehabilitate abandoned or contaminated brownfields and increase the safe, sustainable and circular use of excavated soils	Reduce land-use			
9:50	C4: 12th 5YP V1	In line with the principle of conserving, intensifying, and of controlling the overall volume of land, we will rationally define the scale, structure, and time order of the newly increase in the land for construction use.							
9:51	C4: 12th 5YP V1	It is necessary to enhance overall planning for land utilization and annual planning control, regularize utilization control, perfect land conservation standards, and strengthen accountability and evaluation of land utilization and land conservation.							
9:52	C4: 12th 5YP V1	We will reduce land for construction per unit of GDP by 30 percent.				Reduce land-use: indicator			
10:31	C6: 14th 5YP CE	4. Strengthen the comprehensive utilisation of resources. Strengthen the comprehensive utilisation of low-grade ores, co-associated ores, difficult metallurgical ores and tailings, and promote the efficient extraction and utilisation of valuable components. Further broaden the comprehensive utilisation channels of fly ash, coal gangue, metallurgical slag, industrial by-product gypsum, construction waste and other bulk solid wastes, and expand the scale of utilisation in the fields of ecological restoration, green mining, green building materials and traffic engineering. Strengthen the research and development of technology for the large-scale utilisation of complex and difficult-to-use industrial solid wastes such as red mud, phosphogypsum, electrolytic manganese slag and steel slag. Promote the use of mine water for supplementary water sources in mining areas and for production and ecological water use in neighbouring areas. Strengthen the comprehensive utilisation of waterway dredging soil and dredging sand.				"comprehensive utilisation"			
9:53	C4: 12th 5YP V1	It is necessary to develop green mining, enhance the conservation of mining resources and the comprehensive utilization of mining resources, and raise the repetitive exploitation rate of mining resources, the recycling rate of mine selection and the overall utilization rate.							
10:7	C6: 14th 5YP CE	By 2020, the comprehensive utilisation rate of agricultural straw will reach more than 86%, and the comprehensive utilisation rate of bulk solid waste will reach 56%.							
10:65	C6: 14th 5YP CE	(9) Special action on the whole chain management of plastic pollution Scientific and reasonable promotion of plastic source reduction, strictly prohibit the production of ultra-thin agricultural film, daily chemical products containing plastic microbeads and other products that endanger the environment and human health, and encourage the public to reduce the use of disposable plastic products. In-depth assessment of the resource and environmental impacts of various types of plastic substitutes throughout their life cycle. Promote degradable plastics according to local conditions, actively and steadily, improve the standard system, enhance inspection and testing capacity, and regulate the application and disposal of degradable plastics. Promote the application of standard films and improve the recycling level of used agricultural films. Strengthen the classification, recycling and reuse of plastic waste, accelerate the construction of domestic waste incineration and treatment facilities, and reduce the amount of plastic waste in landfills. Carry out plastic rubbish cleanup in rivers, lakes and coastlines, and implement special actions to clean up marine rubbish. Strengthen policy interpretation and publicity and guidance to create a good social atmosphere.	13:100	EU2: A new Circular Economy Action Plan 2020	substitute single-use packaging, tableware and cutlery by reusable products in food services.	Reduce plastics consumption			

12:118	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Eliminate backward production capacities such as small pulping and papermaking. Promote advanced energy-saving process equipment such as low-solids continuous steaming, low-energy cooking, new high-speed paper machines, and board machines. The use of high yield chip refining systems is encouraged. Promote elemental-free chlorine bleaching, oxygen delignification and other processes. Encourage the production of cleaning products such as low whiteness paper and natural paper.				Reduce paper consumption			
12:184	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Facility construction must adopt energy-saving and environmentally friendly products, actively utilize renewable energy, and build supporting systems for sewage recycling, rainwater collection, and harmless garbage disposal. Support the use of energy-saving and environmentally friendly means of transportation in tourist attractions, develop green tourism products, scientifically set up garbage classification and recycling devices, and promote waste classification, recycling and resource utilization.				Reduce resource consumption in tourism			
12:185	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously advocate low-carbon travel modes, strengthen ecological science publicity and education in tourist attractions, spread green and low-carbon concepts, reduce the use of disposable items, guide tourists to classify waste, and consciously protect the environment of scenic spots.							
12:200	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	advocate to reduce the use of disposable wooden chopsticks, fast food boxes, and disposable toothbrushes, razors and other supplies in guest rooms.				Reduce waste in tourism			
12:202	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously develop multimodal transport, promote the rational division of labor among multiple modes of transport, and reduce the total travel volume.	13:63	EU2: A new Circular Economy Action Plan 2020	applying product-as-service solutions to reduce virgin material consumption, use sustainable alternative transport fuels, optimise infrastructure and vehicle use, increase occupancy rates and load factors, and eliminate waste and pollution.	Reduce resource consumption in transport			
12:204	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of energy-saving, environmentally friendly and new energy vehicles.							
12:208	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	By 2015, a low-carbon, circular, and efficient green logistics system will be initially established, the energy utilization efficiency of logistics facilities will be significantly improved, and the empty vehicle rate will be steadily reduced							
12:247	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously promote drop-and-pull transportation and non-stop toll collection (ETC) systems, promote the technological transformation of shore power when ships dock, optimize port loading and unloading processes, and reduce secondary handling. Optimize the route network structure and encourage airports to provide ground power supply instead of aircraft self-power generation.							
			14:8	EU3: A Green Deal Industrial Plan for the Net-Zero Age	Second, the Commission will propose a Critical Raw Materials Act. The manufacturing of EU net-zero technologies is only possible if access to relevant critical raw materials is ensured, including by diversifying sourcing and by recycling raw materials to lower the EU's dependence on highly concentrated supplies from third countries and boost quality jobs and growth in the circular economy. This act will aim to provide the EU security of supply, including by strengthening international engagement, facilitating extraction (where relevant), processing and recycling, while ensuring high environmental standards and continuing research and innovation, e.g. to reduce material use and to develop bio-based substitutes. There have already been tangible successes: today, some EU companies are using lignin stemming from wood in batteries, instead of graphite.	Reduce CRM consumption			

China			EU			Statement/Theme			
ID	Document	Quotation content	ID	Document	Quotation content				
10:54	C6: 14th 5YP CE	Coordinate the planning and construction of renewable resources processing and utilisation bases, promote the classified utilisation and centralised disposal of municipal waste such as scrap iron and steel, scrap non-ferrous metals, end-of-life motor vehicles, retired photovoltaic modules and blades of wind turbines, waste household appliances, waste batteries, waste tyres, waste wood products, waste textiles, waste plastics, waste paper, waste glass, food waste and other municipal waste, and guide the development of renewable resources processing and utilisation projects to cluster together.	1:30	EU1: EU action plan for the circular economy	The legislative proposals on waste, adopted together with this action plan, include long-term targets to reduce landfilling and to increase preparation for reuse and recycling of key waste streams such as municipal waste and packaging waste.	Prepare for reuse			
			1:96	EU1: EU action plan for the circular economy	In addition, the revised legislative proposals on waste includes new provisions to boost preparation for reuse activities.				
			1:68	EU1: EU action plan for the circular economy	Ecodesign directive, the Commission has developed and will propose shortly to Member States mandatory product design and marking requirements to make it easier and safer to dismantle, reuse and recycle electronic displays (e.g. flat computer or television screens)	Target product design for reuse			
			1:69	EU1: EU action plan for the circular economy	encourage better product design by differentiating the financial contribution paid by producers under extended producer responsibility schemes on the basis of the end-of-life costs of their products. This should create a direct economic incentive to design products that can be more easily recycled or reused.				
			13:8	EU2: A new Circular Economy Action Plan 2020	For citizens, the circular economy will provide high-quality, functional and safe products, which are efficient and affordable, last longer and are designed for reuse, repair, and high-quality recycling.				
			13:16	EU2: A new Circular Economy Action Plan 2020	Many products break down too quickly, cannot be easily reused, repaired or recycled, and many are made for single use only.				
			13:23	EU2: A new Circular Economy Action Plan 2020	improving product durability, reusability, upgradability and reparability, addressing the presence of hazardous chemicals in products, and increasing their energy and resource efficiency;				
			17:11	EU6: Green Deal	The circular economy action plan will also include measures to encourage businesses to offer, and to allow consumers to choose, reusable, durable and repairable products. It will analyse the need for a 'right to repair', and curb the built-in obsolescence of devices, in particular for electronics. Consumer policy will help to empower consumers to make informed choices and play an active role in the ecological transition. New business models based on renting and sharing goods and services will play a role as long as they are truly sustainable and affordable.				
			1:104	EU1: EU action plan for the circular economy	The waste hierarchy establishes a priority order from prevention, preparation for reuse, recycling and energy recovery through to disposal, such as landfilling.	Ranking / Order of goals; "Reuse" after waste prevention			
			1:164	EU1: EU action plan for the circular economy	In a circular economy, a cascading use of renewable resources, with several reuse and recycling cycles, should be encouraged where appropriate. Biobased materials, such as for example wood, can be used in multiple ways, and reuse and recycling can take place several times. This goes together with the application of the waste hierarchy (including for food - see section 5.2) and, more generally, options that result in the best overall environmental outcome.				
4:22	C5: Circular Economy Promotion Law of the PRC	Enterprises and public institutions shall set up management systems and take measures to reduce the consumption of resources, reduce the production and discharge of wastes and improve the reutilization and recycling level of wastes	1:164	EU1: EU action plan for the circular economy	In a circular economy, a cascading use of renewable resources, with several reuse and recycling cycles, should be encouraged where appropriate. Biobased materials, such as for example wood, can be used in multiple ways, and reuse and recycling can take place several times. This goes together with the application of the waste hierarchy (including for food - see section 5.2) and, more generally, options that result in the best overall environmental outcome.				
5:34	C3: 13th 5YP	We will facilitate the recovery and utilization of mineral resources from urban waste, ensure that resources from industrial solid waste and other types of mass refuse are recycled and reused, accelerate the establishment of systems for the recycling or safe disposal of urban kitchen waste, construction refuse, and textile waste, and develop remanufacturing in line with standards.	16:3	EU5: Ecodesign requirements for sustainable products	product reusability;				

9:1	C4: 12th 5YP V1	In line with the principle of reduction, of re-utilization, and of resources recovery, with reduction as priority and with the rise in resources output efficiency as objective, we will promote the development of circular economy at various links of production, distribution, and consumption, and accelerate the building of a resources circular utilization system that covers the entire society.				Reuse (general)			
7:14	C2: 14th 5YP	We will encourage industrial parks to make their operations more circular, strengthen weak links in industrial chains, and extend the length of industrial chains to promote the cascading use of energy and resources and advance waste recycling and the centralized disposal of pollutants.							
9:25	C4: 12th 5YP V1	We will enhance the sustainable development capabilities and further raise the utilization efficiency of energy, land, and sea space resources. Efforts will be intensified to treat environmental pollution and to ease the restrains caused by resources and environmental bottlenecks.							
10:19	C6: 14th 5YP CE	Guided by Xi Jinping's thought of socialism with Chinese characteristics in the new era, deeply implement the spirit of the 19th CPC National Congress and the 2nd, 3rd, 4th and 5th Plenary Sessions of the 19th CPC Central Committee and the State Council in accordance with the decision-making and deployment of the CPC Central Committee and the State Council, based on the new stage of development, implement the new development concept, build a new pattern of development, adhere to the basic national policy of resource conservation and environmental protection, and follow the principle of "reduce, reuse and resource", focusing on the development of circular economy and the efficient use of resources							
11:2	C7: The General Office of the State Council on accelerating the construction of	To accelerate the construction of a waste recycling system, we must be guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, thoroughly implement the spirit of the 20th National Congress of the Party, comprehensively implement Xi Jinping Thought on Ecological Civilization, fully, accurately and comprehensively implement the new development concept, and accelerate the construction of a new development pattern, strive to promote high-quality development, follow the circular economy concept of reduction, reuse, and resource utilization, aim to improve resource utilization efficiency, and take fine waste management, effective recycling, and efficient utilization as the path to cover all aspects of production and life.							
12:40	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	promote symbiotic coupling between enterprises, industries, and industries to form a circularly linked industrial system; encourage the development of industrial agglomerations, implement circular transformation of parks, and achieve Energy cascade utilization, water resource recycling, waste exchange and utilization, and land conservation and intensive utilization promote circular production of enterprises, circular development of parks, and circular combination of industries to build a circular industrial system.							
12:152	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote enterprise waste exchange and utilization, wastewater recycling, energy cascade utilization, and land conservation and intensive utilization in the park.							
10:59	C6: 14th 5YP CE	Focusing on fly ash, coal gangue, metallurgical slag, industrial by-product gypsum, tailings, coassociated minerals, crop residues, forestry residues and other key species, promoting advanced technology and equipment for the comprehensive utilisation of bulk solid wastes, implementing key projects with demonstrative effect, vigorously promoting the use of comprehensive utilisation of resources, and constructing 50 bases for the comprehensive utilisation of bulk solid wastes and 50 bases for the comprehensive utilisation of industrial resources.	1:82	EU1: EU action plan for the circular economy	The reuse of gaseous effluents				
10:69	C6: 14th 5YP CE	Increase the promotion and application of green recycling shared standardised crates.							

12:58	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the comprehensive utilization of fly ash and desulfurization gypsum. Encourage the use of fly ash to produce building materials, promote the application of fly ash in municipal construction, road construction and other projects, orderly promote the extraction of alumina from high-aluminum fly ash, and support the ultra-fine processing of fly ash for papermaking , rubber and other filling materials. Encourage the use of desulfurized gypsum to produce gypsum boards, high-end decorative building materials and improve saline-alkali soil.				Reuse: specific materials, products			
12:66	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage converter slag, iron-containing dust sludge, and iron oxide scale to be recycled and sintered, and use blast furnace slag and converter slag to produce cement and other building materials products.							
12:82	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Construction of mining and processing - tailings - valuable components - smelting - non-ferrous metals, smelting - waste slag - non-ferrous metals, smelting - slag - building materials, smelting - tail gas - phosphorus, sulfur - chemical products, smelting - waste heat - power generation, smelting - non-ferrous metals Metal-recycled metal-smelting and other industrial chains.							
12:98	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	The soda ash industry focuses on promoting the use of ammonia-alkali waste residue for boiler flue gas wet desulfurization and comprehensive utilization of ammonia evaporation waste liquid.							
12:99	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	The chlor-alkali chemical industry focuses on promoting the use of calcium carbide slag to produce cement or for desulfurization, strengthening the recycling and utilization of calcium carbide slag supernatant liquid, and the comprehensive utilization of carbon monoxide and hydrogen in the exhaust gas of calcium carbide furnaces.							
12:100	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	the phosphorus chemical industry focuses on promoting the production of building materials from phosphogypsum, the decomposition of acid to produce cement, the recovery of yellow phosphorus furnace exhaust gas to produce carbon-chemicals and the recovery and utilization of heat energy.							
12:101	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	The sulfur chemical industry focuses on promoting the use of sulfuric acid production waste residue for steelmaking and cement production, and strengthening waste heat recovery and utilization.							
12:102	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	The coal chemical industry focuses on promoting the use of waste residues in the production of cement and other building materials products, promoting the recycling of coal-to-olefin water, treatment of phenol-containing wastewater through pressurized gasification of crushed powder, reclaimed water reuse, treatment of highly concentrated brine, utilization of low-temperature waste heat, and utilization of high-temperature gas heat.							
12:119	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the recovery of alkali from pulping black liquor, use the organic matter in the black liquor to generate electricity, and promote the use of by-product white mud for the production of cement or calcium oxide.							
12:67	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the use of coking by-products such as tar, coke oven gas, and crude benzene to produce chemical products.				Reuse chemicals			

12:49	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of mining gangue to fill goafs, carry out three-dimensional ecological improvement of subsidence areas, use gangue, ash, etc. for land reclamation,				Reuse in mining			
12:63	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	extraction and utilization of metals associated with iron tailings, low-cost reprocessing of iron-rich old tailings, and high-value overall utilization of low-iron and silicon-rich tailings. Encourage the use of tailings sand to produce building materials, conduct underground filling, and carry out ecological environment management.							
5:18	C3: 13th 5YP	We will tighten oversight over major water consumers, and encourage the reuse of water as well as the differentiated use of water according to its quality.	1:127	EU1: EU action plan for the circular economy	In addition to water-efficiency measures, the reuse of treated wastewater in safe and cost-effective conditions is a valuable but under-used means of increasing water supply and alleviating pressure on over-exploited water resources in the EU.	Reuse water			
9:48	C4: 12th 5YP V1	We will greatly promote the utilization of recycled water, mineral water, desalinated water, and brackish water.	1:128	EU1: EU action plan for the circular economy	Water reuse in agriculture also contributes to nutrients recycling by substitution of solid fertilisers. The Commission will take a series of actions to promote the reuse of treated wastewater, including legislation on minimum requirements for reused water.				
12:44	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the use of mine water for supplementary water sources in mining areas and production, domestic and ecological water use in surrounding areas.	13:101	EU2: A new Circular Economy Action Plan 2020	The new Water Reuse Regulation will encourage circular approaches to water reuse in agriculture. The Commission will facilitate water reuse and efficiency, including in industrial processes.				
12:68	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the establishment of internal water circulation systems within enterprises to carry out quality-separated and cascade recycling of wastewater.							
12:70	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	use unconventional water such as recycled water, mine water, and seawater desalination water to supplement new water.							
12:93	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the advanced treatment and reuse of oil production wastewater such as heavy oil production sewage, and the classified treatment and utilization of petrochemical wastewater.							
12:120	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the utilization of water resources from papermaking wastewater,							
12:139	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage wastewater recycling and wastewater and waste gas heat energy recovery.							
10:58	C6: 14th 5YP CE	Construct centralised sewage collection, treatment and reuse facilities in the park, and strengthen sewage treatment and recycling. Strengthen industrial circular links in the park and promote the comprehensive utilisation of enterprise waste resources. Constructing public information service platforms in the parks and strengthening material flow management in the parks. Provincial-level parks with conditions will all implement recycling transformation by the end of 2025.				Reuse sewage			

12:153	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	reuse of domestic sewage in the park, build rainwater collection and utilization facilities, and encourage areas with favorable conditions to develop seawater desalination industry.							
7:8	C2: 14th 5YP	We will encourage the use of reclaimed water in order to reduce water consumption per unit of GDP by about 16%.				Reuse water: indicator			
7:15	C2: 14th 5YP	We will promote the comprehensive utilization of bulk solid waste and ensure the wellregulated development of the remanufacturing industry.				"comprehensive utilisation"			
7:50	C2: 14th 5YP	We will promote the comprehensive utilization of crop straws and the recovery of resources from livestock and poultry manure.							
12:180	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the comprehensive utilization of old fishing boats and gear materials.							
12:184	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Facility construction must adopt energy-saving and environmentally friendly products, actively utilize renewable energy, and build supporting systems for sewage recycling, rainwater collection, and harmless garbage disposal. Support the use of energy-saving and environmentally friendly means of transportation in tourist attractions, develop green tourism products, scientifically set up garbage classification and recycling devices, and promote waste classification, recycling and resource utilization.							
4:8	C5: Circular Economy Promotion Law of the PRC	The term “reusing” as mentioned in these Measures refers to using wastes as products directly, using wastes after repair, renewal or reproduction or using part or all wastes as components of other products.				Definition			
4:35	C5: Circular Economy Promotion Law of the PRC	Enterprises producing products or packages listed in the catalogue of articles subject to compulsory recycle must be responsible for recycling deserted products or packages. For those usable, the producers thereof shall be responsible for using them, while for those products which are inappropriate for reutilization due to the absence of technical or economic conditions, the producers shall make them harmless.	16:41	EU5: Ecodesign requirements for sustainable products	An economic operator that discards unsold consumer products directly, or on behalf of another economic operator, shall disclose: (a) the number of unsold consumer products discarded per year, differentiated per type or category of products; EN 63 EN (b) the reasons for the discarding of products; (c) the delivery of discarded products to preparing for re-use, remanufacturing, recycling, energy recovery and disposal operations in accordance with the waste hierarchy as defined by Article 4 of Directive 2008/98/EC. The economic operator shall disclose that information on a freely accessible website or otherwise make it publicly available, until a delegated act adopted pursuant to paragraph 3 starts applying to the category of unsold consumer products discarded by the operator in question.	responsibility for reuse			
4:36	C5: Circular Economy Promotion Law of the PRC	For the deserted products or packages as prescribed in the preceding paragraph, if the producers thereof entrust the distributors or other organizations to recycle or entrust waste using or disposing enterprises to use or dispose of them, the entrusted parties shall recycle, use or dispose of them in accordance with the relevant laws, administrative regulations or contractual stipulations.							
4:43	C5: Circular Economy Promotion Law of the PRC	The standardization department under the State Council shall, together with the administrative department of circular economy development, the environmental protection department and other competent departments under the State Council, work out the standards for saving energy, saving water, saving materials and reutilizing and recycling wastes and constantly perfect them.				Reuse on macro-level			
10:55	C6: 14th 5YP CE	Encourage Beijing-Tianjin-Hebei, Yangtze River Delta, Pearl River Delta, Chengdu-Chongqing and other key urban agglomerations to build regional renewable resources processing and utilisation bases.				Reuse on meso-level			
4:13	C5: Circular Economy Promotion Law of the PRC	In the process of reutilizing and recycling wastes, production safety shall be guaranteed so as to ensure that product quality satisfy the state standards and prevent the secondary pollution				Avoid side effects of reuse			

5:23	C3: 13th 5YP	We will redevelop urban land that is being used inefficiently, develop and utilize hilly slope land, promote the multipurpose development of land designated for construction and its aboveground and belowground vertical overall development, and facilitate the reutilization of idle resources such as vacant buildings and factories.				Reuse land			
7:10	C2: 14th 5YP	We will facilitate the reutilization of deserted industrial and mining land and improve policies for supporting the combined use and diverse development of land.							
5:23	C3: 13th 5YP	We will redevelop urban land that is being used inefficiently, develop and utilize hilly slope land, promote the multipurpose development of land designated for construction and its aboveground and belowground vertical overall development, and facilitate the reutilization of idle resources such as vacant buildings and factories.				Reuse in construction			
10:60	C6: 14th 5YP CE	Construction of 50 demonstration cities for resource utilisation of construction waste. Promote the reduction of construction waste at source, establish a management system for the classification of construction waste, and regulate the construction and operation and management of places for dumping, transferring and resource utilisation of construction waste. Improve the policy on recycling and utilisation of construction waste and the certification standard system for recycled products, promote the resourceful utilisation of engineering residue, engineering slurry, demolition waste, engineering rubbish and renovation rubbish, and enhance the scale of market use of recycled products. Cultivate backbone enterprises in the construction waste resource utilisation industry, and accelerate the development, application and integration of new technologies, new techniques and new equipment for the resource utilisation of construction waste.							
12:110	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the use of bulk solid waste such as slag, gangue, fly ash, tailings, industrial by-product gypsum, construction waste and waste road materials to produce building materials.							
12:114	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage cement kilns to use collaborative resources to process urban domestic waste, sewage plant sludge, hazardous waste, waste plastics and other wastes, replace some raw materials and fuels, and promote the circular link between the cement industry and related industries and social systems.							
12:242	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the recycling of road asphalt and the use of fly ash to build roads and bridges.							
7:40	C2: 14th 5YP	06 Economical use of resources ⍰ Implement major demonstration projects for industrial application of energyconserving and low-carbon technologies; ⍰ Carry out major demonstration projects for near-zero energy consumption buildings, near-zero carbon emissions, and carbon capture, utilization and storage (CCUS); ⍰ Develop systems for recycling waste and used materials in 60 large and medium cities.	13:127	EU2: A new Circular Economy Action Plan 2020	Carbon removals can be nature based, including through restoration of ecosystems, forest protection, afforestation, sustainable forest management and carbon farming sequestration, or based on increased circularity, for instance through long term storage in wood construction, re-use and storage of carbon in products such as mineralisation in building material.	Reuse carbon			
11:38	C7: The General Office of the State Council on accelerating the construction of	Support the exploration and application of carbon dioxide resource utilization and carbon sequestration technology models.							
10:38	C6: 14th 5YP CE	Standardise the development of the second-hand goods market.							

10:39	C6: 14th 5YP CE	Improve the regulations on the circulation of second-hand commodities, establish and improve the identification, evaluation and grading standards for second-hand commodities such as vehicles, home appliances and mobile phones, and regulate the order of second-hand commodity circulation and trading behaviour. Encourage the development of the "Internet + second-hand" model, strengthen the management responsibility of the Internet trading platform, strengthen the supervision of trading behaviour, provide standardised and regulated services for second-hand commodity trading, and encourage platform enterprises to introduce third-party second-hand commodity professional operators to improve the efficiency of second-hand commodity trading. Promote the standardised construction and operation of offline physical second-hand markets, and encourage the construction of centralised and standardised "flea markets". Encourage schools at all levels to set up used book sharing corners and days to promote the exchange of used books among teachers and students. Encourage communities to organise secondhand goods trading activities on a regular basis, and promote the trading and circulation of idle goods among residents' families under their jurisdiction.				Establish Second-hand markets			
11:28	C7: The General Office of the State Council on accelerating the construction of	Support qualified regions to build centralized and standardized second-hand commodity trading markets. Improve the second-hand goods trading management system, study and formulate management methods for online secondhand goods trading, and improve the talent training and management mechanism in the second-hand goods appraisal and appraisal industry.							
11:31	C7: The General Office of the State Council on accelerating the construction of	Support the export of second-hand cars that meet quality and other relevant requirements.							
11:52	C7: The General Office of the State Council on accelerating the construction of	Crack down on illegal activities in renewable resource recycling and second-hand commodity transactions in accordance with the law.							
12:197	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Give full play to the role of the retail and wholesale industry as a bridge connecting production and consumption, support the retail and wholesale industry in purchasing energy-saving and environmentally friendly products, encourage trade and circulation enterprises to open green product sales areas, counters, etc., promote green products to consumers, expand the consumption of green products, and promote green products. Product production. Actively cultivate the development of the rental industry and used goods industry, and promote product reuse.							
10:57	C6: 14th 5YP CE	Actively utilise waste heat and pressure resources, promote the application of cogeneration, distributed energy and integrated photovoltaic energy storage systems, and promote the gradual utilisation of energy.				Reuse energy			
12:65	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously promote the recovery and utilization of by-product gas from coke ovens, blast furnaces, and converters and power generation with waste heat and pressure from each process, and encourage gas-steam combined cycle power generation.				Reuse oil and gas use			
12:86	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strengthen the recovery and utilization of oil field associated gas and acid gas, promote the industrial development of oil sand and oil shale utilization, and strengthen the comprehensive utilization of sulfur in natural gas with high hydrogen sulfide content.							
12:87	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously promote the utilization of cold energy in natural gas distributed energy sources and large liquefied natural gas (LNG) receiving stations to improve natural gas utilization efficiency.							

12:91	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of automatic ignition systems, strengthen flare gas recovery, and explore the use of flare gas to generate electricity.							
12:141	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of waste gas from chemical fiber production to produce acid.							
12:69	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	In areas where conditions permit, steel companies are encouraged to use waste heat resources to provide urban heating,				Reuse waste heat			
12:90	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strengthen the recovery and utilization of waste heat and pressure in each stage of refining.							
10:57	C6: 14th 5YP CE	Actively utilise waste heat and pressure resources, promote the application of cogeneration, distributed energy and integrated photovoltaic energy storage systems, and promote the gradual utilisation of energy.							
10:63	C6: 14th 5YP CE	(7) Actions to improve the quality of the recycling of waste electrical and electronic products Using Internet information technology and encouraging diversified participation, we will build a recycling network for waste electrical and electronic products that integrates online and offline, and continue to carry out pilot projects on the extension of producer responsibility for electrical and electronic products. Support for electrical and electronic product manufacturers to establish a recycling system through independent recycling, joint recycling or entrusted recycling, guide and regulate the production enterprises and recycling enterprises, e-commerce platforms to share information. Guide the flow of waste electrical and electronic products into standardised dismantling enterprises. Guarantee the security of personal privacy information throughout the recycling process of mobile phones, computers and other electronic products. Strengthen scientific and technological innovation, encourage the promotion and application of new technologies, new techniques and new equipment, support the upgrading and transformation of processes and equipment of standardised dismantling enterprises, promote intelligent and refined dismantling, and promote high-value utilisation.	13:51	EU2: A new Circular Economy Action Plan 2020	regulatory measures for electronics and ICT including mobile phones, tablets and laptops under the Ecodesign Directive so that devices are designed for energy efficiency and durability, reparability, upgradability, maintenance, reuse and recycling.	Reuse electronics			
12:217	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the large-scale and industrial development of the utilization of waste mechanical and electrical products, wires and cables, communication equipment, automobiles, home appliances, mobile phones, lead-acid batteries, plastics, rubber, glass and other renewable resources.	13:55	EU2: A new Circular Economy Action Plan 2020	EU-wide take back scheme to return or sell back old mobile phones, tablets and chargers;				
12:221	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Improve the level of dismantling and utilization of discarded electrical and electronic products, scrapped motor vehicles, scrapped ships, etc.	15:11	EU4: Regulation proposal Critical Rawmaterials Act	o prevent the generation of waste, targeting products containing CRMs in particular. The Waste Electrical and Electronic Equipment Directive lays down rules to promote the preparation for re-use, recycling and other forms of recovery of waste from electrical and electronic equipment, to contribute to the efficient use of resources and to the retrieval of secondary raw materials, including critical ones.				
			13:60	EU2: A new Circular Economy Action Plan 2020	sustainability and transparency requirements for batteries taking account of, for instance, the carbon footprint of battery manufacturing, ethical sourcing of raw materials and security of supply, and facilitating reuse, repurposing and recycling.				

			14:10	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The new EU regulatory framework for batteries is a crucial element in the EU's transition to a climate neutral economy, by securing competitive and resilient value chains for battery production, reuse and recycling in the EU. Going forward, the Ecodesign for Sustainable Products Regulation will apply to a broader range of products and further expand the range of sustainability requirements, in which EU industry excels. The Commission will give a high priority to work on net-zero technologies under the existing and future Ecodesign working plans.	Reuse batteries			
10:64	C6: 14th 5YP CE	(8) Promoting actions to promote the management of the entire life cycle of automobile use It will study and formulate a programme for the management of the entire life cycle of automobile use, build an interactive system of information on the entire life cycle of automobile use covering automobile manufacturers, dealers, maintenance enterprises and recycling and dismantling enterprises, and strengthen the interconnection and interactive sharing of information on automobile production, import, sales, registration, maintenance, used-car trading, scrapping, and the direction of the flow of key parts and components. Establishing a labelling system and information query system for certified parts, remanufactured parts and reused exterior parts. Carrying out pilot projects on the extension of producer responsibility for automobile products. Selecting some regions to take the lead in carrying out pilot projects on the whole life-cycle management of automobile use, and promoting them nationwide when conditions are ripe.	15:12	EU4: Regulation proposal Critical Rawmaterials Act	A joint review is being carried out of the End-of-Life Vehicles Directive 2000/53/EC12, in conjunction with Directive EN 5 EN 2005/64/EC13 on the type-approval of motor vehicles regarding their reusability, recyclability and recoverability, aiming to reduce waste from end-of-life vehicles and their components and increase the circularity of both conventional and electric vehicles, which contain significant amounts of CRMs. The legislative initiative based on this review will complement the horizontal recyclability requirements included in this Regulation by introducing more specific requirements to improve the recyclability of permanent magnets in vehicles, which will make their waste treatment and recycling easier.	Reuse automobiles and their components			
11:31	C7: The General Office of the State Council on accelerating the construction of	Support the export of second-hand cars that meet quality and other relevant requirements.							
10:65	C6: 14th 5YP CE	(9) Special action on the whole chain management of plastic pollution Scientific and reasonable promotion of plastic source reduction, strictly prohibit the production of ultra-thin agricultural film, daily chemical products containing plastic microbeads and other products that endanger the environment and human health, and encourage the public to reduce the use of disposable plastic products. In-depth assessment of the resource and environmental impacts of various types of plastic substitutes throughout their life cycle. Promote degradable plastics according to local conditions, actively and steadily, improve the standard system, enhance inspection and testing capacity, and regulate the application and disposal of degradable plastics. Promote the application of standard films and improve the recycling level of used agricultural films. Strengthen the classification, recycling and reuse of plastic waste, accelerate the construction of domestic waste incineration and treatment facilities, and reduce the amount of plastic waste in landfills. Carry out plastic rubbish cleanup in rivers, lakes and coastlines, and implement special actions to clean up marine rubbish. Strengthen policy interpretation and publicity and guidance to create a good social atmosphere.	13:100	EU2: A new Circular Economy Action Plan 2020	substitute single-use packaging, tableware and cutlery by reusable products in food services.	Reuse plastics			
11:30	C7: The General Office of the State Council on accelerating the construction of	Research and resolve intellectual property issues involved in services such as resale and refurbishment of used goods or related products.				Target intellectual property for reuse			
12:130	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	the fermentation and brewing industries focus on promoting the harmless treatment of distiller's grains, waste liquid, etc., and using them as raw materials for the production of feed, organic fertilizers, biomass energy, etc. The sugar industry focuses on promoting the use of bagasse to generate electricity, papermaking, and production of building materials products, and the use of waste molasses to produce alcohol. The beverage industry focuses on harmless treatment of fruit pomace, tea residue, etc., and uses them as raw materials for the production of feed or fertilizer.				Reuse in agriculture			
12:163	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the use of crop straw as feed, fertilizer, base material, raw material, and fuel according to local conditions.							

12:164	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	promoting the return of straw to the field,							
12:165	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	We will process straw to make feed, promote the use of straw to cultivate edible fungi, develop new straw substitutes for wood and functional straw wood-plastic composite profiles, and promote centralized gas supply for straw biogas production and solidified molded fuel.							
12:172	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of livestock and poultry blood, organs, bone tissue, fur, eggshells, etc. to produce medicines, health care products, daily necessities, etc., to increase the added value of livestock and poultry processing.				Reuse in medicine / healthcare products			
12:129	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	The meat and aquatic product processing industry focuses on promoting the use of fur, viscera, blood and other by-products to produce medicines, biochemical products, etc.							
12:178	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of rice fields, saline-alkali lands, and mining subsidence areas to develop aquaculture.				Reuse land			
12:179	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the effective connection between the aquaculture industry and the planting industry to achieve coordinated development of fish, grain, fruits and vegetables. Encourage the use of fish, shrimps, crabs, shellfish and aquatic product processing by-products to produce amino acids, condiments, health care products and other products.				Reuse food			
12:132	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strengthen the risk-free resource utilization of expired food and recalled food.							
12:128	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	The grain processing industry focuses on promoting the use of rice husk, rice bran, wheat germ, bran and other by-products to produce rice husk carbon, rice bran oil, rice bran protein, corn oil, wheat germ oil, dietary fiber, etc.							
12:166	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the recycling of farmland film residues and irrigation equipment. Establish a recycling mechanism for farmland film residues and irrigation equipment promoted by the government, participated by farmers, and implemented by enterprises to form a recycling system that supports each other in use, recycling, and reuse. Support the construction of farmland residual film, irrigation equipment recycling, primary processing outlets and deep processing and utilization projects.				Reuse plastics			
12:168	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of forestry "three leftovers" such as logging, lumber making, and processing, as well as sub-small firewood to produce boards, cultivate edible fungi, etc., and encourage the reuse of edible fungus culture media. Promote the use of the "three leftovers" of the bamboo industry to produce bamboo charcoal, activated carbon, refined vinegar powder and other products as well as extended processing and utilization.				Reuse in forestry			

12:170	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of livestock and poultry manure to develop rural household and centralized gas supply biogas projects, and encourage the use of livestock and poultry manure, straw, organic domestic waste and other raw materials to develop very large biogas projects.				Reuse as biogas			
12:171	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote composting, factory-based production of organic fertilizer, and aerobic fermentation direct application technology on farmland, and promote resource utilization and harmless treatment of breeding manure.				Reuse as fertiliser			
12:163	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the use of crop straw as feed, fertilizer, base material, raw material, and fuel according to local conditions.							
12:205	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote reusable packaging that can be used multiple times, support the construction of pallet sharing systems, realize cascade utilization of packaging, and strengthen the recycling and regeneration of waste packaging.	13:65	EU2: A new Circular Economy Action Plan 2020	In order to ensure that all packaging on the EU market is reusable or recyclable in an economically viable way by 2030, the Commission will review Directive 94/62/EC27 to reinforce the mandatory essential requirements for packaging to be allowed on the EU market	Reuse packaging			
12:321	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Accelerate the formulation of product standards for degradable products, recycled products, kitchen waste resource products, waste-recycling building materials and agricultural machinery prohibition and scrapping standards, and improve energy-saving, water-saving, and comprehensive resource utilization product standards. Improve standards for excessively packaged goods.	13:67	EU2: A new Circular Economy Action Plan 2020	driving design for re-use and recyclability of packaging, including considering restrictions on the use of some packaging materials for certain applications, in particular where alternative reusable products or systems are possible or consumer goods can be handled safely without packaging;				
			13:100	EU2: A new Circular Economy Action Plan 2020	substitute single-use packaging, tableware and cutlery by reusable products in food services.				
			17:10	EU6: Green Deal	The Commission will follow up on the 2018 plastics strategy focusing, among other things, on measures to tackle intentionally added micro plastics and unintentional releases of plastics, for example from textiles and tyre abrasion. The Commission will develop requirements to ensure that all packaging in the EU market is reusable or recyclable in an economically viable manner by 2030, will develop a regulatory framework for biodegradable and bio-based plastics, and will implement measures on single use plastics.				
12:291	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Select 1,000 key enterprises or parks to establish circular economy models. The resource output rate, land output rate, energy consumption per unit output value, material consumption, water consumption, industrial waste comprehensive utilization rate, industrial water reuse rate and other indicators of the demonstration enterprise (park) have reached the domestic leading level and the international advanced level.				indicator			
10:54	C6: 14th 5YP CE	Coordinate the planning and construction of renewable resources processing and utilisation bases, promote the classified utilisation and centralised disposal of municipal waste such as scrap iron and steel, scrap non-ferrous metals, end-of-life motor vehicles, retired photovoltaic modules and blades of wind turbines, waste household appliances, waste batteries, waste tyres, waste wood products, waste textiles, waste plastics, waste paper, waste glass, food waste and other municipal waste, and guide the development of renewable resources processing and utilisation projects to cluster together.	13:83	EU2: A new Circular Economy Action Plan 2020	The strategy will aim at strengthening industrial competitiveness and innovation in the sector, boosting the EU market for sustainable and circular textiles, including the market for textile reuse, addressing fast fashion and driving new business models.	Reuse textiles			
			13:84	EU2: A new Circular Economy Action Plan 2020	ecodesign measures to ensure that textile products are fit for circularity, ensuring the uptake of secondary raw materials, tackling the presence of hazardous chemicals, and empowering business and private consumers to choose sustainable textiles and have easy access to re-use and repair services;				
			13:87	EU2: A new Circular Economy Action Plan 2020	boosting the sorting, re-use and recycling of textiles, including through innovation, encouraging industrial applications and regulatory measures such as extended producer responsibility.				
			15:26	EU4: Regulation proposal Critical Rawmaterials Act	increase the re-use of products and components with high critical raw materials recovery potential;				

			15:31	EU4: Regulation proposal Critical Rawmaterials Act	introduction of financial incentives, such as discounts, monetary rewards or depositrefund systems, to encourage the re-use of products with high critical raw materials recovery potential and the collection of waste from such products.	Reuse CRM			

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
			1:104	EU1: EU action plan for the circular economy	The waste hierarchy establishes a priority order from prevention, preparation for reuse, recycling and energy recovery through to disposal, such as landfilling.	Ranking / Order of goals
7:38	C2: 14th 5YP	04 Urban sewage and refuse treatment facilities Build or upgrade 80,000 kilometers of sewers and increase daily sewage treatment capacity by 20 million cubic meters; Accelerate the construction of waste incineration facilities, and ensure that no raw refuse goes to landfi lls in areas with a daily urban domestic waste collection and transportation capacity of more than 300 metric tons; Carry out trials for small household waste incineration facilities.	1:106	EU1: EU action plan for the circular economy	the way we collect and manage our waste can lead either to high rates of recycling and to valuable materials finding their way back into the economy, or to an inefficient system where most recyclable waste ends in landfills or is incinerated, with potentially harmful environmental impacts and significant economic losses.	Recover (general)
10:32	C6: 14th 5YP CE	5. Promote the coordinated disposal of municipal waste. Improve policies, mechanisms and standards, promote coordinated disposal facilities with reference to the management of urban environmental infrastructure, and guarantee the continuous and stable operation of facilities. Determine the standard of payment for co-disposal of municipal waste through market-oriented methods, and orderly promote the co-disposal of medical waste, hazardous waste and domestic rubbish in cement kilns and smelting kilns, as well as the coordinated promotion of the co-disposal of medical waste in domestic rubbish incinerators in an emergency. Promote the co-ordinated co-disposal of food waste, garden waste, sewage plant sludge and other low-value organic waste.	1:117	EU1: EU action plan for the circular economy	When waste cannot be prevented or recycled, recovering its energy content is in most cases preferable to landfilling it, in both environmental and economic terms. 'Waste to energy' can therefore play a role and create synergies with EU energy and climate policy, but guided by the principles of the EU waste hierarchy. The Commission will examine how this role can be optimised, without compromising the achievement of higher reuse and recycling rates, and how the corresponding energy potential can best be exploited. To that end, the Commission will adopt a 'waste to energy' initiative in the framework of the Energy Union.	
11:33	C7: The General Office of the State Council on accelerating the construction of	Promote the energy utilization of waste. Accelerate the construction of urban domestic waste treatment facilities and make up for the shortcomings in domestic waste incineration treatment capacity in county-level areas.				
			1:106	EU1: EU action plan for the circular economy	the way we collect and manage our waste can lead either to high rates of recycling and to valuable materials finding their way back into the economy, or to an inefficient system where most recyclable waste ends in landfills or is incinerated, with potentially harmful environmental impacts and significant economic losses.	Recover is not desirable
			1:114	EU1: EU action plan for the circular economy	This means that funding for new landfill will be granted only in exceptional cases (e.g. mainly for non-recoverable hazardous waste) and that funding for new facilities for the treatment of residual waste, such as incineration or mechanical biological treatment, will be granted only in limited and well justified cases, where there is no risk of overcapacity and the objectives of the waste hierarchy are fully respected. In total, it is foreseen that €5.5 billion will be dedicated to waste management in the current financing programme.	
			1:138	EU1: EU action plan for the circular economy	Smarter separate collection and certification schemes for collectors and sorters are critical to divert recyclable plastics away from landfills and incineration into recycling.	Prevention of recovery
			1:117	EU1: EU action plan for the circular economy	When waste cannot be prevented or recycled, recovering its energy content is in most cases preferable to landfilling it, in both environmental and economic terms. 'Waste to energy' can therefore play a role and create synergies with EU energy and climate policy, but guided by the principles of the EU waste hierarchy. The Commission will examine how this role can be optimised, without compromising the achievement of higher reuse and recycling rates, and how the corresponding energy potential can best be exploited. To that end, the Commission will adopt a 'waste to energy' initiative in the framework of the Energy Union.	
5:53	C3: 13th 5YP	increase the waste incineration rate				indicator

10:65	C6: 14th 5YP CE	(9) Special action on the whole chain management of plastic pollution Scientific and reasonable promotion of plastic source reduction, strictly prohibit the production of ultra-thin agricultural film, daily chemical products containing plastic microbeads and other products that endanger the environment and human health, and encourage the public to reduce the use of disposable plastic products. In-depth assessment of the resource and environmental impacts of various types of plastic substitutes throughout their life cycle. Promote degradable plastics according to local conditions, actively and steadily, improve the standard system, enhance inspection and testing capacity, and regulate the application and disposal of degradable plastics. Promote the application of standard films and improve the recycling level of used agricultural films. Strengthen the classification, recycling and reuse of plastic waste, accelerate the construction of domestic waste incineration and treatment facilities, and reduce the amount of plastic waste in landfills. Carry out plastic rubbish cleanup in rivers, lakes and coastlines, and implement special actions to clean up marine rubbish. Strengthen policy interpretation and publicity and guidance to create a good social atmosphere.				Recover from plastics
12:71	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously promote steel companies to consume chromium slag, waste plastics and other wastes.				
11:35	C7: The General Office of the State Council on accelerating the construction of	Promote the development and utilization of agricultural and forestry biomass energy according to local conditions, and steadily promote the diversified development and utilization of biomass energy.				Recover energy from biomass
12:130	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	the fermentation and brewing industries focus on promoting the harmless treatment of distiller's grains, waste liquid, etc., and using them as raw materials for the production of feed, organic fertilizers, biomass energy, etc. The sugar industry focuses on promoting the use of bagasse to generate electricity, papermaking, and production of building materials products, and the use of waste molasses to produce alcohol. The beverage industry focuses on harmless treatment of fruit pomace, tea residue, etc., and uses them as raw materials for the production of feed or fertilizer.				
12:170	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of livestock and poultry manure to develop rural household and centralized gas supply biogas projects, and encourage the use of livestock and poultry manure, straw, organic domestic waste and other raw materials to develop very large biogas projects.				
12:252	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Support the construction of kitchen waste resource utilization facilities, and encourage the use of kitchen waste to produce biogas, biodiesel, industrial oils, organic fertilizers, etc.				
12:123	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the use of bark, sawdust and other material preparation process residues, and papermaking wastewater treatment sludge as boiler fuel.				

12:139	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage wastewater recycling and wastewater and waste gas heat energy recovery.				Recover from waste gas

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
7:20	C2: 14th 5YP	The reduction, standardization, and recycling of express delivery packaging will also be advanced.	1:30	EU1: EU action plan for the circular economy	The legislative proposals on waste, adopted together with this action plan, include long-term targets to reduce landfilling and to increase preparation for reuse and recycling of key waste streams such as municipal waste and packaging waste.	Recycle packaging waste
10:68	C6: 14th 5YP CE	Carry out large-scale application of recyclable express packaging pilot, significantly increase the proportion of recycled transit bag (box) application.	1:108	EU1: EU action plan for the circular economy	The revised waste proposals also includes increased recycling targets for packaging materials, which will reinforce the targets on municipal waste and improve the management of packaging waste in the commercial and industrial sectors. More packaging waste (from households and industrial/commercial sources) has been recycled in the EU since the introduction of EU-wide targets for paper, glass, plastics, metal and wood packaging28, and there is potential for more recycling, with both economic and environmental benefits.	
10:69	C6: 14th 5YP CE	Increase the promotion and application of green recycling shared standardised crates.	1:166	EU1: EU action plan for the circular economy	The Commission will work on identifying and sharing best practices in this sector and promote innovation; the revised legislative proposals on waste also include a mandatory EU-level target on recycling wood packaging waste.	
10:70	C6: 14th 5YP CE	Encourage ecommerce and express delivery enterprises to cooperate with commercial institutions, convenience stores and property service enterprises to set up recyclable express delivery packaging agreement recycling points, and put in professional recycling facilities for recyclable express delivery packaging.	13:65	EU2: A new Circular Economy Action Plan 2020	In order to ensure that all packaging on the EU market is reusable or recyclable in an economically viable way by 2030, the Commission will review Directive 94/62/EC27 to reinforce the mandatory essential requirements for packaging to be allowed on the EU market	
10:71	C6: 14th 5YP CE	By 2025, basic e-commerce express no longer secondary packaging, recyclable express packaging application scale of 10 million.	13:67	EU2: A new Circular Economy Action Plan 2020	driving design for re-use and recyclability of packaging, including considering restrictions on the use of some packaging materials for certain applications, in particular where alternative reusable products or systems are possible or consumer goods can be handled safely without packaging;	
12:194	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Retail and wholesale enterprises are encouraged to classify and recycle waste packaging, waste food, garbage, etc.				
			1:64	EU1: EU action plan for the circular economy	Electrical and electronic products are particularly significant in this context. Their reparability can be important to consumers, and they can contain valuable materials that should be made easier to recycle (e.g. rare earth elements in electronic devices)	Recycle valuable materials
4:48	C5: Circular Economy Promotion Law of the PRC	Enterprises engaging in the design of products, equipment, products and packages shall, in accordance with the requirement of reducing the consumption of resources and the generation of wastes, give preference to the materials which are recyclable, dismountable, degradable, innocuous, harmless or slightly harmful or poisonous, and the compulsory requirements in the relevant state standards shall be satisfied.	1:68	EU1: EU action plan for the circular economy	Ecodesign directive, the Commission has developed and will propose shortly to Member States mandatory product design and marking requirements to make it easier and safer to dismantle, reuse and recycle electronic displays (e.g. flat computer or television screens)	

10:28	C6: 14th 5YP CE	Promote the green design of key products. Improve the policy mechanism for green design of products, and guide enterprises to use environmentally friendly raw materials such as non-toxic, lowtoxic, low-harm, and low (no) volatile organic compounds (VOCs) content in the production process. Promote product design solutions that are easy to disassemble, classify and recycle, and increase the proportion of alternative use of recycled raw materials. Promote the reduction of packaging and packaging printing. Accelerate the improvement of technical specifications for green design evaluation of key products, encourage industry associations to issue guidelines on green design of products, and promote cases of green design.	1:69	EU1: EU action plan for the circular economy	encourage better product design by differentiating the financial contribution paid by producers under extended producer responsibility schemes on the basis of the end-of-life costs of their products. This should create a direct economic incentive to design products that can be more easily recycled or reused.	Target product design for recycling
			13:8	EU2: A new Circular Economy Action Plan 2020	For citizens, the circular economy will provide high-quality, functional and safe products, which are efficient and affordable, last longer and are designed for reuse, repair, and high-quality recycling.	
			13:24	EU2: A new Circular Economy Action Plan 2020	increasing recycled content in products, while ensuring their performance and safety;	
			13:51	EU2: A new Circular Economy Action Plan 2020	regulatory measures for electronics and ICT including mobile phones, tablets and laptops under the Ecodesign Directive so that devices are designed for energy efficiency and durability, reparability, upgradability, maintenance, reuse and recycling.	
4:59	C5: Circular Economy Promotion Law of the PRC	Entities in architectural design and construction industry shall, according to the relevant state provisions and standards, use energy-saving, water-saving, land-saving and material-saving technologies and techniques as well as small, light and recyclable products for construction. Areas shall, where possible, make sufficient utilization of solar energy, geothermal energy, wind energy and other renewable energy resources.	13:90	EU2: A new Circular Economy Action Plan 2020	revision of the Construction Product Regulation, including the possible introduction of recycled content requirements for certain construction products, taking into account their safety and functionality;	Target design in construction for recycling
			1:161	EU1: EU action plan for the circular economy	Given the long lifetime of buildings, it is essential to encourage design improvements that will reduce their environmental impacts and increase the durability and recyclability of their components. The Commission will develop indicators to assess environmental performance throughout the lifecycle of a building, and promote their use for building projects through large demonstration projects and guidance on GPP.	
			1:104	EU1: EU action plan for the circular economy	The waste hierarchy establishes a priority order from prevention, preparation for reuse, recycling and energy recovery through to disposal, such as landfilling.	Ranking / Order of goals
			17:9	EU6: Green Deal	The circular economy action plan will include a ‘sustainable products’ policy to support the circular design of all products based on a common methodology and principles. It will prioritise reducing and reusing materials before recycling them. It will foster new business models and set minimum requirements to prevent environmentally harmful products from being placed on the EU market. Extended producer responsibility will also be strengthened.	

10:65	C6: 14th 5YP CE	(9) Special action on the whole chain management of plastic pollution Scientific and reasonable promotion of plastic source reduction, strictly prohibit the production of ultra-thin agricultural film, daily chemical products containing plastic microbeads and other products that endanger the environment and human health, and encourage the public to reduce the use of disposable plastic products. In-depth assessment of the resource and environmental impacts of various types of plastic substitutes throughout their life cycle. Promote degradable plastics according to local conditions, actively and steadily, improve the standard system, enhance inspection and testing capacity, and regulate the application and disposal of degradable plastics. Promote the application of standard films and improve the recycling level of used agricultural films. Strengthen the classification, recycling and reuse of plastic waste, accelerate the construction of domestic waste incineration and treatment facilities, and reduce the amount of plastic waste in landfills. Carry out plastic rubbish cleanup in rivers, lakes and coastlines, and implement special actions to clean up marine rubbish. Strengthen policy interpretation and publicity and guidance to create a good social atmosphere.	1:136	EU1: EU action plan for the circular economy	Increasing plastic recycling is essential for the transition to a circular economy. The use of plastics in the EU has grown steadily, but less than 25% of collected plastic waste is recycled and about 50% goes to landfill.	Recycle plastics
12:166	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the recycling of farmland film residues and irrigation equipment. Establish a recycling mechanism for farmland film residues and irrigation equipment promoted by the government, participated by farmers, and implemented by enterprises to form a recycling system that supports each other in use, recycling, and reuse. Support the construction of farmland residual film, irrigation equipment recycling, primary processing outlets and deep processing and utilization projects.	1:138	EU1: EU action plan for the circular economy	Smarter separate collection and certification schemes for collectors and sorters are critical to divert recyclable plastics away from landfills and incineration into recycling.	
12:214	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement relevant preferential policies, recycle traditional renewable resources such as scrap metal, waste plastic, waste glass, and waste paper to increase the recycling rate.	1:140	EU1: EU action plan for the circular economy	However, innovation in plastics can contribute to the circular economy by better preserving food, improving the recyclability of plastics or reducing the weight of materials used in vehicles.	
			13:73	EU2: A new Circular Economy Action Plan 2020	To increase uptake of recycled plastics and contribute to the more sustainable use of plastics, the Commission will propose mandatory requirements for recycled content and waste reduction measures for key products such as packaging, construction materials and vehicles, also taking into account the activities of the Circular Plastics Alliance.	
			13:81	EU2: A new Circular Economy Action Plan 2020	Single Use Plastic Products29 and fishing gear to address the problem of marine plastic pollution while safeguarding the single market, in particular with regard to: □ harmonised interpretation of the products covered by the Directive; □ labelling of products such as tobacco, beverage cups and wet wipes and ensuring the introduction of tethered caps for bottles to prevent littering; □ developing for the first time rules on measuring recycled content in products.	
			17:10	EU6: Green Deal	The Commission will follow up on the 2018 plastics strategy focusing, among other things, on measures to tackle intentionally added micro plastics and unintentional releases of plastics, for example from textiles and tyre abrasion. The Commission will develop requirements to ensure that all packaging in the EU market is reusable or recyclable in an economically viable manner by 2030, will develop a regulatory framework for biodegradable and bio-based plastics, and will implement measures on single use plastics.	

10:30	C6: 14th 5YP CE	3. Promote the development of recycling parks. Promote the cyclic production of enterprises and the cyclic combination of industries, promote the comprehensive utilisation of wastes, the gradual utilisation of energy and the recycling of water resources, promote the resourceful utilisation of industrial residual pressure and heat, wastewater, waste gas and waste liquids, realise the green, lowcarbon and recycling development, and actively promote the centralised supply of gas and heat. Encourage the parks to promote the construction of green factories to achieve the intensification of plants, harmlessness of raw materials, clean production, resourcefulness of waste, low-carbon energy and green building materials. It has formulated guidelines for the development of circularisation in parks, and promoted typical models of circular economy development in key industries such as iron and steel, non-ferrous metals, metallurgy, petrochemicals, equipment manufacturing and light industry. Encourage the creation of national eco-industrial demonstration parks.				Target industrial parks for recycling
10:56	C6: 14th 5YP CE	Develop a list of recycling development parks in each region, and formulate recycling transformation programmes one by one in accordance with the principle of "one policy for one park".				
4:5	C5: Circular Economy Promotion Law of the PRC	reducing, reusing and recycling activities	1:107	EU1: EU action plan for the circular economy	The Commission is putting forward new legislative proposals on waste to provide a long-term vision for increasing recycling and reducing the landfilling of municipal waste, while taking account of differences between Member States. These proposals also encourage greater use of economic instruments to ensure coherence with the EU waste hierarchy.	
4:22	C5: Circular Economy Promotion Law of the PRC	Enterprises and public institutions shall set up management systems and take measures to reduce the consumption of resources, reduce the production and discharge of wastes and improve the reutilization and recycling level of wastes	1:118	EU1: EU action plan for the circular economy	In a circular economy, materials that can be recycled are injected back into the economy as new raw materials thus increasing the security of supply. These "secondary raw materials" can be traded and shipped just like primary raw materials from traditional extractive resources.	
4:70	C5: Circular Economy Promotion Law of the PRC	Article 29 The people's governments at or above the county level shall make overall plans on the geographical distribution of the different sectors of the economy in their respective regions, reasonably readjust the industrial structure and compel enterprises to cooperate in such areas as the comprehensive utilization of resources so as to realize the efficient utilization and recycling of resources. An industrial park or zone shall organize the enterprises in the park or zone to make comprehensive utilization of resources so as to promote the development of circular economy. The state encourages enterprises in various industrial parks and zones to exchange wastes for purposes of utilization, cascade utilization of energy, intensive utilization of land, classified and recycled utilization of water, and joint use of infrastructure and other relevant facilities. An environmental impact assessment shall be conducted before any industrial park or zone is built or rebuilt, and measures for ecological protection and pollution control shall be taken to ensure that the environmental quality of that region reaches the prescribed standards. Article 30 Enterprises shall, in accordance with the relevant state provisions, make comprehensive utilization of the fly ash, coal slack, tailings, mullock, waste materials, waste gas and other industrial wastes generated in the production process. Article 31 Enterprises shall develop an interconnected water use system and a circulatory water use system so as to improve the repeated use of water. Enterprises shall use advanced technologies, techniques and equipment for the circulatory use of the waste water generated in the production process. Article 32 Enterprises shall use advanced or applicable recovery technologies, techniques and equipment to make comprehensive utilization of the waste heat and pressure generated in the production process. To build a grid-connected power generation project with waste heat, waste pressure, coalbed gas, coal slack, slime, refuse and other low-calorie fuels, the parties concerned shall get an administrative permit or file the project for archival purposes in accordance with laws and the provisions of the State Council. A grid enterprise shall, according to the relevant state provisions, conclude a grid connection agreement with an enterprise which generates power by comprehensive utilization of resources, provide grid access services and purchase the on-grid electricity of a grid-connected power generation project in full amount.	1:164	EU1: EU action plan for the circular economy	In a circular economy, a cascading use of renewable resources, with several reuse and recycling cycles, should be encouraged where appropriate. Biobased materials, such as for example wood, can be used in multiple ways, and reuse and recycling can take place several times. This goes together with the application of the waste hierarchy (including for food - see section 5.2) and, more generally, options that result in the best overall environmental outcome.	

5:32	C3: 13th 5YP	We will implement a plan for guiding circular development, encourage the circular use of resources between production and society, and accelerate efforts to recycle resources from refuse.	13:25	EU2: A new Circular Economy Action Plan 2020	enabling remanufacturing and high-quality recycling;	
5:34	C3: 13th 5YP	We will facilitate the recovery and utilization of mineral resources from urban waste, ensure that resources from industrial solid waste and other types of mass refuse are recycled and reused, accelerate the establishment of systems for the recycling or safe disposal of urban kitchen waste, construction refuse, and textile waste, and develop remanufacturing in line with standards.	1:30	EU1: EU action plan for the circular economy	The legislative proposals on waste, adopted together with this action plan, include long-term targets to reduce landfilling and to increase preparation for reuse and recycling of key waste streams such as municipal waste and packaging waste.	
5:36	C3: 13th 5YP	We will improve recycling networks for renewable resources and strengthen coordination between the recycling of sorted household waste and the recycling of renewable resources.				
7:14	C2: 14th 5YP	We will encourage industrial parks to make their operations more circular, strengthen weak links in industrial chains, and extend the length of industrial chains to promote the cascading use of energy and resources and advance waste recycling and the centralized disposal of pollutants.				
7:17	C2: 14th 5YP	We will step up the planning and construction of waste recycling facilities and improve urban waste recycling and sorting systems.				
7:18	C2: 14th 5YP	We will promote “reverse recycling” models for producers and establish a sound resource recycling system which integrates online and offline businesses so as to control resource flows.				
7:40	C2: 14th 5YP	06 Economical use of resources □ Implement major demonstration projects for industrial application of energyconserving and low-carbon technologies; □ Carry out major demonstration projects for near-zero energy consumption buildings, near-zero carbon emissions, and carbon capture, utilization and storage (CCUS); □ Develop systems for recycling waste and used materials in 60 large and medium cities.				
9:1	C4: 12th 5YP V1	In line with the principle of reduction, of re-utilization, and of resources recovery, with reduction as priority and with the rise in resources output efficiency as objective, we will promote the development of circular economy at various links of production, distribution, and consumption, and accelerate the building of a resources circular utilization system that covers the entire society.				
9:6	C4: 12th 5YP V1	We will promote the recovery and utilization of bulk industrial solid waste, construction waste, roadside waste, agricultural and forestry waste.				
9:10	C4: 12th 5YP V1	2. Perfect Resources Circular Utilization and Recovery System We will perfect the renewable resources recycling system, speed up the establishment of the "trinity" recycling networks of recycling stations at communities in urban areas and in rural areas, of sorting centers, of terminal markets, and promote the scale utilization of renewable resources. It is necessary to accelerate the perfection of the system to recover re-manufactured old stuff, and promote the development of the remanufacturing sector. We will establish a sound system of garbage sorting and recycling, and perfect the system of sorting and recycling, of sealed transportation, and of concentrated disposal. There is a need to promote the recycling and utilization of kitchen garbage and harmless garbage disposal.				

9:13	C4: 12th 5YP V1	recover re-manufactured old stuff, and promote the development of the remanufacturing sector. We will establish a sound system of garbage sorting and recycling, and perfect the system of sorting and recycling, of sealed transportation, and of concentrated disposal. There is a need to promote the recycling and utilization of kitchen garbage and harmless garbage disposal				Recycling (general)
10:3	C6: 14th 5YP CE	Vigorously developing the circular economy, promoting the economical and intensive use of resources, building a resource recycling-based industrial system and waste material recycling system is of great significance to safeguard the security of national resources, promote the realization of carbon peak, carbon neutral, and promote the construction of ecological civilisation.				
10:9	C6: 14th 5YP CE	Resource recycling has become an important way to guarantee China's resource security.				
10:18	C6: 14th 5YP CE	Whether from the perspective of global green development trend and requirements for addressing climate change, or from the perspective of domestic resource demand and utilisation level, China must vigorously develop circular economy, focus on solving the outstanding contradictions and problems, realise efficient resource utilisation and recycling, and promote high-quality economic and social development.				
10:19	C6: 14th 5YP CE	Guided by Xi Jinping's thought of socialism with Chinese characteristics in the new era, deeply implement the spirit of the 19th CPC National Congress and the 2nd, 3rd, 4th and 5th Plenary Sessions of the 19th CPC Central Committee and the State Council in accordance with the decision-making and deployment of the CPC Central Committee and the State Council, based on the new stage of development, implement the new development concept, build a new pattern of development, adhere to the basic national policy of resource conservation and environmental protection, and follow the principle of "reduce, reuse and resource", focusing on the development of circular economy and the efficient use of resources				
10:20	C6: 14th 5YP CE	focus on building a resource recycling-based industrial system, accelerate the construction of waste materials recycling system, deepen the development of circular economy in agriculture, comprehensively improve the efficiency of resource use, enhance the level of renewable resources, establish and improve the green, low-carbon and recycling development of the economic system, to provide resources for the sustainable development of the economy and society.				
10:21	C6: 14th 5YP CE	Insist on problem orientation. Focus on solving the outstanding problems restricting the development of circular economy, improve the laws and regulations, policy and standard system, strengthen the scientific and technological support capacity, make up for the short boards of resource recycling facilities, etc., and effectively improve the level of development of circular economy.				
10:25	C6: 14th 5YP CE	The recycling network of waste materials will be improved, the recycling capacity of renewable resources will be further enhanced, and a resource recycling system covering the whole society will be basically established.				

10:53	C6: 14th 5YP CE	Focusing on municipalities directly under the central government, provincial capitals, planned cities and more populous cities, about 60 cities have been selected to carry out the construction of recycling systems for waste materials. The construction of urban waste materials recycling delivery points, transfer stations and sorting centres will be coordinated. Recycling drop-off points are set up in communities, supermarkets, schools and offices, and intelligent recycling terminals are promoted.				
11:2	C7: The General Office of the State Council on accelerating the construction of	To accelerate the construction of a waste recycling system, we must be guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, thoroughly implement the spirit of the 20th National Congress of the Party, comprehensively implement Xi Jinping Thought on Ecological Civilization, fully, accurately and comprehensively implement the new development concept, and accelerate the construction of a new development pattern, strive to promote high-quality development, follow the circular economy concept of reduction, reuse, and resource utilization, aim to improve resource utilization efficiency, and take fine waste management, effective recycling, and efficient utilization as the path to cover all aspects of production and life.				
11:3	C7: The General Office of the State Council on accelerating the construction of	In the field of resource recycling, develop the resource recycling industry, improve the incentive and restraint mechanism, accelerate the construction of a comprehensive, efficient, standardized and orderly waste recycling system, lay a solid green and low-carbon foundation for highquality development, and help comprehensively build a beautiful China.				
11:5	C7: The General Office of the State Council on accelerating the construction of	innovation-driven, improving quality and efficiency. Give play to the leading role of innovation, strengthen technological innovation, model innovation and mechanism innovation in waste recycling, constantly open up new fields, create new momentum, expand waste recycling methods, enrich waste recycling categories, and enhance the value of waste recycling.				
11:11	C7: The General Office of the State Council on accelerating the construction of	Consolidate the main responsibilities of waste generating units and improve the general industrial solid waste management ledger system. Promote the classified collection and storage of industrial solid waste, prevent mixed piles and discharge, and reserve conditions for resource recycling. Comprehensively conduct a thorough investigation of historical solid waste storage sites, implement graded and classified rectification, and urge enterprises with large storage volumes to strengthen resource recycling.				
11:36	C7: The General Office of the State Council on accelerating the construction of	Promote the resource recycling production model. Promote the cascade utilization of energy, recycling of water resources, and comprehensive utilization of solid waste within enterprises, parks, and between industries, and strengthen the resource utilization of industrial waste pressure and heat and waste gas and liquid waste.				

11:67	C7: The General Office of the State Council on accelerating the construction of	We must persist in strengthening the Party's overall leadership and the Party Central Committee 's centralized and unified leadership, implement the Party's leadership throughout the entire process of accelerating the green transformation of development methods in all fields, and effectively accelerate the construction of a waste recycling system. Relevant departments in all regions must improve working mechanisms, refine goals and tasks, and ensure that various policies, initiatives, and key tasks are implemented and effective. The National Development and Reform Commission should strengthen overall planning and coordination, promptly evaluate the implementation of these opinions, and work with relevant departments to explore the development of urban resources in key cities for the construction of waste material recycling systems, cities that have carried out domestic waste classification work, and "waste free cities". Recycle effectiveness evaluation to strengthen support and guidance. Report major matters in a timely manner.				
12:36	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	establishment of a resource recycling system covering the whole society,				
10:77	C6: 14th 5YP CE	It will study and improve the statistical system of circular economy, gradually establish a statistical system including the consumption and recycling of important resources, optimise the statistical accounting methods, and enhance the supporting capacity of statistical data for the work on circular economy. Improve the evaluation index system for the development of circular economy, improve the evaluation system of circular economy, and encourage third-party evaluation.	1:110	EU1: EU action plan for the circular economy	The revised waste proposals will also address key issues relating to the calculation of recycling rates. This is essential to ensure comparable, high-quality statistics across the EU, and to simplify the current system and encourage higher rates of effective recycling for separately collected waste.	indicator
12:280	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	improve the park's main resource output rate, land output rate, and resource recycling rate, and basically achieve "zero emissions."				
10:24	C6: 14th 5YP CE	By 2025, the circular production mode will be fully implemented, green design and clean production will be generally promoted, the comprehensive utilisation of resources will be significantly enhanced, and a resource-cycling industrial system will be basically established.				time
10:27	C6: 14th 5YP CE	By 2025, the output rate of major resources will be about 20% higher than that of 2020, energy consumption and water consumption per unit of GDP will be about 13.5% and 16% lower than that of 2020, the comprehensive utilisation rate of agricultural straw will be maintained at more than 86%, the comprehensive utilisation rate of bulk solid waste will reach 60%, the comprehensive utilisation rate of construction waste will be 60%, the utilisation of waste paper will reach 60 million tonnes, and the utilisation of waste steel will reach 320 million tonnes. The utilization of waste paper has reached 60 million tons, the utilization of waste steel has reached 320 million tons, the output of renewable nonferrous metals has reached 20 million tons, of which the output of renewable copper, renewable aluminium and renewable lead has reached 4 million tons, 11.5 million tons and 2.9 million tons, respectively, and the output value of the resource recycling industry has reached 5 trillion yuan.				

12:147	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	By 2015, more than 50% of national parks and more than 30% of provincial parks will have implemented recycling transformation.				
4:9	C5: Circular Economy Promotion Law of the PRC	The term “recycling” as mentioned in these Measures refers to using wastes as raw materials directly or after regeneration.				definition
12:216	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	By 2015, an advanced and complete renewable resource recycling system will be established, significant progress will be made in waste classification, and the recycling rate of major types of renewable resources will reach 70%.				
11:48	C7: The General Office of the State Council on accelerating the construction of	Encourage key urban agglomerations and metropolitan areas to establish and improve regional waste collaborative utilization mechanisms, and support the layout and construction of a number of key regional waste recycling projects.				Target recycling on micro-level
12:210	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Accelerate the construction of a threein-one recycling network of recycling sites, sorting centers, and distribution markets in urban communities and rural areas.				
11:49	C7: The General Office of the State Council on accelerating the construction of	Support domestic resource recycling enterprises to "go global" and make positive contributions to the construction of a green Silk Road. Guide state-owned enterprises to play a backbone and exemplary role in waste recycling.				Target recycling on macro-level
12:324	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Improve relevant laws and regulations, establish an extended producer responsibility system, and promote producers to implement responsibilities such as recycling and processing of discarded products.	1:109	EU1: EU action plan for the circular economy	To raise levels of high-quality recycling, improvements are needed in waste collection and sorting. Collection and sorting systems are often financed in part by extended producer responsibility schemes, in which manufacturers contribute to product collection and treatment costs. In order to make these schemes more effective, the Commission is proposing minimum conditions on transparency and cost-efficiency. Member States and regions can also use these schemes for additional waste streams such as textiles or furniture.	Target extended producer responsibility for recycling
12:326	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Study and establish a producer responsibility system for mandatory recycling of products and packaging, cars, tires, mobile phones, and chargers.				
4:35	C5: Circular Economy Promotion Law of the PRC	Enterprises producing products or packages listed in the catalogue of articles subject to compulsory recycle must be responsible for recycling deserted products or packages. For those usable, the producers thereof shall be responsible for using them, while for those products which are inappropriate for reutilization due to the absence of technical or economic conditions, the producers shall make them harmless.				

4:36	C5: Circular Economy Promotion Law of the PRC	For the deserted products or packages as prescribed in the preceding paragraph, if the producers thereof entrust the distributors or other organizations to recycle or entrust waste using or disposing enterprises to use or dispose of them, the entrusted parties shall recycle, use or dispose of them in accordance with the relevant laws, administrative regulations or contractual stipulations.				Target responsibility for recycling
4:38	C5: Circular Economy Promotion Law of the PRC	The catalogue of products and packages subject to compulsory recycle and the administrative measures therefor shall be determined by the administrative department of circular economy development under the State Council.				
4:43	C5: Circular Economy Promotion Law of the PRC	The standardization department under the State Council shall, together with the administrative department of circular economy development, the environmental protection department and other competent departments under the State Council, work out the standards for saving energy, saving water, saving materials and reutilizing and recycling wastes and constantly perfect them.				
10:14	C6: 14th 5YP CE	At present, the development of China's circular economy is still faced with such outstanding problems as low resource output efficiency in key industries, low level of standardisation of recycling of renewable resources, lack of land security for recycling facilities, difficulty in recycling low-value recyclables, high intensity of generation of bulk solid wastes, insufficient utilisation, and low valueadded of comprehensively utilised products.	13:16	EU2: A new Circular Economy Action Plan 2020	Many products break down too quickly, cannot be easily reused, repaired or recycled, and many are made for single use only.	Barriers and problems in recycling
10:15	C6: 14th 5YP CE	China's energy consumption per unit of GDP, water consumption is still significantly higher than the world average level, copper, aluminium, lead and other bulk metal recycling is still dominated by low-end resources.	13:48	EU2: A new Circular Economy Action Plan 2020	Electrical and electronic equipment continues to be one of the fastest growing waste streams in the EU, with current annual growth rates of 2%. It is estimated that less than 40% of electronic waste is recycled in the EU20.	
10:17	C6: 14th 5YP CE	The precision and depth of rare metal sorting are insufficient, and the recycling quality and cost are difficult to meet the requirements of key materials for strategic emerging industries, so there is an urgent need to improve high-quality recycling capacity.	13:49	EU2: A new Circular Economy Action Plan 2020	Value is lost when fully or partially functional products are discarded because they are not reparable, the battery cannot be replaced, the software is no longer supported, or materials incorporated in devices are not recovered. About two in three Europeans would like to keep using their current digital devices for longer, provided performance is not significantly affected.	
			13:118	EU2: A new Circular Economy Action Plan 2020	In the past decade, millions of tonnes of European waste has been exported to non-EU countries, often without sufficient consideration of proper waste treatment. In many cases, waste exports result both in negative environmental and health impacts in the countries of destination, and in loss of resources and economic opportunities for the recycling industry in the EU.	
			13:119	EU2: A new Circular Economy Action Plan 2020	overdependence of the EU on foreign waste treatment, but they have also mobilised the recycling industry to increase its capacity and add value to waste in the EU.	
			15:8	EU4: Regulation proposal Critical Rawmaterials Act	Second, the EU's potential to increase its extraction, processing or recycling capacities remains underexploited.	
			13:120	EU2: A new Circular Economy Action Plan 2020	ensure that the EU does not export its waste challenges to third countries. Actions on product design, quality and safety of secondary materials and enhancing their markets will contribute to making “recycled in the EU” a benchmark for qualititative secondary materials.	Target domestic recycling capacity

			1:123	EU1: EU action plan for the circular economy	Recycled nutrients are a distinct and important category of secondary raw materials, for which the development of quality standards is necessary. They are present in organic waste material, for example, and can be returned to soils as fertilisers. Their sustainable use in agriculture reduces the need for mineral-based fertilisers, the production of which has negative environmental impacts, and depends on imports of phosphate rock, a limited resource.	Recycle fertilisers
			1:124	EU1: EU action plan for the circular economy	However, the circulation of fertilisers based on recycled nutrients is currently hampered by the fact that rules as well as quality and environmental standards differ across Member States.	
4:48	C5: Circular Economy Promotion Law of the PRC	Enterprises engaging in the design of products, equipment, products and packages shall, in accordance with the requirement of reducing the consumption of resources and the generation of wastes, give preference to the materials which are recyclable, dismountable, degradable, innocuous, harmless or slightly harmful or poisonous, and the compulsory requirements in the relevant state standards shall be satisfied.	1:129	EU1: EU action plan for the circular economy	Another very important issue for the development of secondary raw materials markets is the link with legislation on chemicals. A growing number of chemical substances are identified as being of concern for health or the environment and become subject to restrictions or prohibitions. However, these substances may be present in products sold before the restrictions applied, some of which have a long lifetime, and therefore chemicals of concern can sometimes be found in recycling streams. Such substances can be costly to detect or remove, creating obstacles in particular for small recyclers.	Target chemicals/hazard for recycling
10:28	C6: 14th 5YP CE	Promote the green design of key products. Improve the policy mechanism for green design of products, and guide enterprises to use environmentally friendly raw materials such as non-toxic, lowtoxic, low-harm, and low (no) volatile organic compounds (VOCs) content in the production process. Promote product design solutions that are easy to disassemble, classify and recycle, and increase the proportion of alternative use of recycled raw materials. Promote the reduction of packaging and packaging printing. Accelerate the improvement of technical specifications for green design evaluation of key products, encourage industry associations to issue guidelines on green design of products, and promote cases of green design.	1:130	EU1: EU action plan for the circular economy	The promotion of non-toxic material cycles and better tracking of chemicals of concern in products will facilitate recycling and improve the uptake of secondary raw materials.	
			13:110	EU2: A new Circular Economy Action Plan 2020	develop methodologies to minimise the presence of substances that pose problems to heatlh or the environment in recycled materials and articles made thereof;	
			13:113	EU2: A new Circular Economy Action Plan 2020	improve the classification and management of hazardous waste so as to maintain clean recycling streams, including through further alignment with the classification of chemical substances and mixtures where necessary.	
			13:136	EU2: A new Circular Economy Action Plan 2020	Horizon Europe will support the development of indicators and data, novel materials and products, substitution and elimination of hazardous substances based on “safe by design” approach, circular business models, and new production and recycling technologies, including exploring the potential of chemical recycling, keeping in mind the role of digital tools to achieve circular objectives.	

10:63	C6: 14th 5YP CE	(7) Actions to improve the quality of the recycling of waste electrical and electronic products Using Internet information technology and encouraging diversified participation, we will build a recycling network for waste electrical and electronic products that integrates online and offline, and continue to carry out pilot projects on the extension of producer responsibility for electrical and electronic products. Support for electrical and electronic product manufacturers to establish a recycling system through independent recycling, joint recycling or entrusted recycling, guide and regulate the production enterprises and recycling enterprises, e-commerce platforms to share information. Guide the flow of waste electrical and electronic products into standardised dismantling enterprises. Guarantee the security of personal privacy information throughout the recycling process of mobile phones, computers and other electronic products. Strengthen scientific and technological innovation, encourage the promotion and application of new technologies, new techniques and new equipment, support the upgrading and transformation of processes and equipment of standardised dismantling enterprises, promote intelligent and refined dismantling, and promote high-value utilisation.	15:11	EU4: Regulation proposal Critical Rawmaterials Act	o prevent the generation of waste, targeting products containing CRMs in particular. The Waste Electrical and Electronic Equipment Directive11 lays down rules to promote the preparation for re-use, recycling and other forms of recovery of waste from electrical and electronic equipment, to contribute to the efficient use of resources and to the retrieval of secondary raw materials, including critical ones.	Recycle electronics
11:17	C7: The General Office of the State Council on accelerating the construction of	Improve the recycling network of various waste materials such as used household appliances and electronic products. Further improve the pre-processing capabilities of waste material recycling.				
11:20	C7: The General Office of the State Council on accelerating the construction of	Deeply implement the producer recycling target responsibility system in the fields of home appliances, electronic products and other fields.				
11:44	C7: The General Office of the State Council on accelerating the construction of	Promote the recycling of waste in new infrastructure fields such as data centers and communication base stations. Study and revise the "Catalogue for Disposal of Waste Electrical and Electronic Products", strengthen the management of new electrical and electronic waste, and improve supporting environmental management policies such as qualification licenses for the disposal of waste electrical and electronic products.				
11:66	C7: The General Office of the State Council on accelerating the construction of	In conjunction with the implementation of the extended producer responsibility system, we will launch an action to upgrade the application of recycled materials, and guide manufacturers of automobiles, electrical appliances and electronic products to increase the proportion of recycled materials. Encourage enterprises to include the application of recycled materials into the scope of corporate social responsibility.				
12:189	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote communication operators to recycle used lead-acid batteries in base stations. Relying on the service outlets of communication operators, explore the use of deposit systems and other methods to establish a recycling system for used mobile phones, batteries, chargers and other communication products to increase the recycling rate. Promote the standardization of mobile phone chargers and batteries.				
12:227	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Actively utilize the existing renewable resource recycling network to recycle computer servers, toner cartridges, ink cartridges and other easily recyclable products.				

			1:153	EU1: EU action plan for the circular economy	Critical raw materials are both of high economic importance for the EU and vulnerable to supply disruption; in certain cases, their extraction also causes significant environmental impacts. They are often present in electronic devices. The current very low rate of recycling of these materials means that significant economic opportunities are lost. For all these reasons, increasing the recovery of critical raw materials is one of the challenges that must be addressed in the move to a more circular economy.	Recycle CRM
			1:154	EU1: EU action plan for the circular economy	Existing EU legislation encourages the recycling of electronic waste, including through mandatory targets; but only high-quality recycling can ensure the recovery of critical raw materials. One of the challenges is collecting, dismantling and recycling products that contain such materials. It will be essential to improve the recyclability of electronic devices through product design (see section 1.1), thus improving the economic viability of the recycling process. The Commission is encouraging Member States to promote recycling of critical raw materials in its revised proposals on waste.	
			14:8	EU3: A Green Deal Industrial Plan for the Net-Zero Age	Second, the Commission will propose a Critical Raw Materials Act. The manufacturing of EU net-zero technologies is only possible if access to relevant critical raw materials is ensured, including by diversifying sourcing and by recycling raw materials to lower the EU's dependence on highly concentrated supplies from third countries and boost quality jobs and growth in the circular economy. This act will aim to provide the EU security of supply, including by strengthening international engagement, facilitating extraction (where relevant), processing and recycling, while ensuring high environmental standards and continuing research and innovation, e.g. to reduce material use and to develop bio-based substitutes. There have already been tangible successes: today, some EU companies are using lignin stemming from wood in batteries, instead of graphite.	
			15:13	EU4: Regulation proposal Critical Rawmaterials Act	Most critical raw materials are metals, which can be in principle endlessly recycled, albeit with sometimes deteriorating qualities. This offers the potential to move to a truly circular economy in the context of the green transition. After an initial phase of rapid growth of demand for critical raw material for new technologies, where primary extraction and processing will still constitute the predominant source, recycling should become increasingly important and reduce the need for primary extraction and its associated impacts. Today, however, recycling rates of most critical raw materials are low, and recycling systems and technologies are often not adapted to the specificities of these raw materials. Action addressing the different factors holding back the circularity potential is thus required.	
			15:14	EU4: Regulation proposal Critical Rawmaterials Act	Member States retain important competences in the field of circularity, for example in the area of waste collection and treatment systems. These should be used to increase collection and recycling rates for waste streams with a high potential for recovery of critical raw materials, making use for example of financial incentives such as discounts, monetary rewards or deposit-refund systems.	
			15:17	EU4: Regulation proposal Critical Rawmaterials Act	Finally, Member States should promote the recovery of critical raw materials from extractive waste by improving the availability of information and by addressing legal, economic and technical barriers. One possible solution that Member States should look into are risk-sharing mechanisms between operators and the Member State to promote recovery from closed waste facilities.	

			15:25	EU4: Regulation proposal Critical Rawmaterials Act	increase the collection of waste with high critical raw materials recovery potential and ensure their introduction into the appropriate recycling system, EN 39 EN with a view to maximising the availability and quality of recyclable material as an input to critical raw material recycling facilities;	
			15:26	EU4: Regulation proposal Critical Rawmaterials Act	increase the re-use of products and components with high critical raw materials recovery potential;	
			15:27	EU4: Regulation proposal Critical Rawmaterials Act	increase the use of secondary critical raw materials in manufacturing, including, where appropriate, by taking recycled content into account in award criteria related to public procurement;	
			15:32	EU4: Regulation proposal Critical Rawmaterials Act	Each Member State shall by [OP please insert: 4 years after the date of entry into force of this Regulation] adopt and implement measures to promote the recovery of critical raw materials from extractive waste, in particular from closed waste facilities identified in the database created in accordance with Article 26 as containing potentially economically recoverable critical raw materials.	
5:57	C3: 13th 5YP	Strengthen efforts to recover and dispose of used batteries from newenergy vehicles.	13:58	EU2: A new Circular Economy Action Plan 2020	rules on recycled content and measures to improve the collection and recycling rates of all batteries, ensure the recovery of valuable materials and provide guidance to consumers;	Recycle batteries
10:72	C6: 14th 5YP CE	Strengthen the construction of the traceability management platform for power batteries of new energy vehicles, and improve the traceability management system for the recycling of power batteries of new energy vehicles. Promote new energy vehicle manufacturers and used power battery laddering enterprises to build standardised recycling service outlets through self-built, co-built, authorised and other means. Promote the standardised laddering use of power batteries, and improve the technical level of residual energy detection, residual value assessment, restructuring and utilisation, and safety management. Strengthen the recycling of waste power batteries and the promotion and application of complete sets of advanced technology and equipment for secondary use. Improve the standard system of power battery recycling. Cultivate backbone enterprises for comprehensive utilisation of waste power batteries, and promote the development of waste power battery recycling industry.	13:60	EU2: A new Circular Economy Action Plan 2020	sustainability and transparency requirements for batteries taking account of, for instance, the carbon footprint of battery manufacturing, ethical sourcing of raw materials and security of supply, and facilitating reuse, repurposing and recycling.	
10:81	C6: 14th 5YP CE	Strengthen the standardised management of enterprises recycling end-of-life motor vehicles, waste electrical and electronic products and waste batteries, crack down on illegal modification and assembling, dismantling and processing, and increase investigation and punishment. Strengthen market supervision, crack down on the illegal production and sale of plastic products banned by the state, and strictly investigate and deal with the behaviour of degradable plastics such as false labelling and pseudo-labelling. Strengthen the environmental supervision of recycling, utilisation and disposal of waste materials.	14:10	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The new EU regulatory framework for batteries is a crucial element in the EU's transition to a climate neutral economy, by securing competitive and resilient value chains for battery production, reuse and recycling in the EU. Going forward, the Ecodesign for Sustainable Products Regulation10 will apply to a broader range of products and further expand the range of sustainability requirements, in which EU industry excels. The Commission will give a high priority to work on net-zero technologies under the existing and future Ecodesign working plans.	

11:41	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling of used power batteries. Strengthen the traceability management of new energy vehicle power batteries. Organize and carry out producer recycling target responsibility system actions. Establish and improve standard systems for power battery ecological design and carbon footprint accounting, actively participate in the formulation of international standards for power battery recycling, and promote international cooperation and mutual recognition of standards and specifications. Vigorously promote the quality certification of power battery cascade utilization products, and study and formulate technical specifications for waste power battery recycling and dismantling enterprises. Carry out a joint special inspection operation of "workshopstyle recycling" of used power batteries.				
12:190	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	By 2015, the energy consumption of communication base stations will be reduced by 25% compared with 2010, and the recycling rate of used lead-acid batteries in communication base stations will reach over 90%.	15:48	EU4: Regulation proposal Critical Rawmaterials Act	Union recycling capacity, including for all intermediate recycling steps, is able to produce at least 15% of the Union's annual consumption of strategic raw materials.	indicator
			15:23	EU4: Regulation proposal Critical Rawmaterials Act	Permanent magnets are incorporated in a wide variety of products, with wind turbines and electric vehicles being the most important and fastest-growing applications but also other products, including magnet resonance imaging devices, industrial robots, light means of transport, cooling generators, heat pumps, electric motors, industrial electric pumps, automatic washing machines, tumble driers, microwaves, vacuum cleaners and dishwashers containing significant amounts worth recovering. Most permanent magnets, especially the most performant types, contain critical raw materials, such as neodymium, praseodymium, dysprosium and terbium, boron, samarium, nickel or cobalt. Their recycling is possible but today only performed in the Union at a small scale or in the context of research projects. Permanent magnets should therefore be a priority product for increasing circularity.	Recycle magnets
			15:54	EU4: Regulation proposal Critical Rawmaterials Act	(b) 12 months for Strategic Projects only involving processing or recycling.	time
			15:55	EU4: Regulation proposal Critical Rawmaterials Act	(b) 9 months for Strategic Projects only involving processing or recycling.	
5:34	C3: 13th 5YP	We will facilitate the recovery and utilization of mineral resources from urban waste, ensure that resources from industrial solid waste and other types of mass refuse are recycled and reused, accelerate the establishment of systems for the recycling or safe disposal of urban kitchen waste, construction refuse, and textile waste, and develop remanufacturing in line with standards.	1:158	EU1: EU action plan for the circular economy	The recycling of construction and demolition waste is encouraged by an EU-wide mandatory target, but challenges on the ground still have to be addressed if waste management in this sector is to improve.	Recycle in construction
12:66	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage converter slag, iron-containing dust sludge, and iron oxide scale to be recycled and sintered, and use blast furnace slag and converter slag to produce cement and other building materials products.	1:159	EU1: EU action plan for the circular economy	For example, valuable materials are not always identified, collected separately, or adequately recovered. The Commission will develop targeted guidelines for use on demolition sites for that purpose, including on the treatment of hazardous waste, and is promoting sorting systems for construction and demolition waste in the revised proposals on waste.	
12:111	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	In areas with large volumes of solid waste generation and storage, priority will be given to the development of high-grade, high-volume waste-recycling new building materials products. Promote the recycling of waste glass, waste fiberglass, waste ceramics, waste composite materials, waste gravel and stone powder and produce building materials products. Cultivate leading enterprises in the waste-recycling building materials industry.	1:160	EU1: EU action plan for the circular economy	It will help to spread best practices by developing voluntary recycling protocols based on the highest common standards for each waste stream. The Commission is also currently conducting a study to identify the obstacles to, and drivers for, the recycling of construction and demolition waste, and best practices in this area.	

12:238	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the centralized treatment and graded utilization of construction waste to produce high-performance recycled concrete, concrete blocks and other building materials products. Build construction waste resource utilization and processing bases according to local conditions.	13:93	EU2: A new Circular Economy Action Plan 2020	considering a revision of material recovery targets set in EU legislation for construction and demolition waste and its material-specific fractions;	
12:242	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the recycling of road asphalt and the use of fly ash to build roads and bridges.				
5:34	C3: 13th 5YP	We will facilitate the recovery and utilization of mineral resources from urban waste, ensure that resources from industrial solid waste and other types of mass refuse are recycled and reused, accelerate the establishment of systems for the recycling or safe disposal of urban kitchen waste, construction refuse, and textile waste, and develop remanufacturing in line with standards.	13:87	EU2: A new Circular Economy Action Plan 2020	boosting the sorting, re-use and recycling of textiles, including through innovation, encouraging industrial applications and regulatory measures such as extended producer responsibility.	Recycle textiles
12:143	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Taking the recycling of waste professional clothing as a breakthrough, we will improve the social waste textile recycling system. Choose an economical and reasonable technical route for recycling waste textiles, promote the classification and safe and environmentally friendly processing of waste textiles, and encourage the use of waste textiles to produce products such as building insulation materials.				
10:64	C6: 14th 5YP CE	(8) Promoting actions to promote the management of the entire life cycle of automobile use It will study and formulate a programme for the management of the entire life cycle of automobile use, build an interactive system of information on the entire life cycle of automobile use covering automobile manufacturers, dealers, maintenance enterprises and recycling and dismantling enterprises, and strengthen the interconnection and interactive sharing of information on automobile production, import, sales, registration, maintenance, used-car trading, scrapping, and the direction of the flow of key parts and components. Establishing a labelling system and information query system for certified parts, remanufactured parts and reused exterior parts. Carrying out pilot projects on the extension of producer responsibility for automobile products. Selecting some regions to take the lead in carrying out pilot projects on the whole life-cycle management of automobile use, and promoting them nationwide when conditions are ripe.	13:61	EU2: A new Circular Economy Action Plan 2020	The Commission will also propose to revise the rules on end-of-life vehicles with a view to promoting more circular business models by linking design issues to end-of-life treatment, considering rules on mandatory recycled content for certain materials of components, and improving recycling efficiency.	Recycle automobiles
10:81	C6: 14th 5YP CE	Strengthen the standardised management of enterprises recycling end-of-life motor vehicles, waste electrical and electronic products and waste batteries, crack down on illegal modification and assembling, dismantling and processing, and increase investigation and punishment. Strengthen market supervision, crack down on the illegal production and sale of plastic products banned by the state, and strictly investigate and deal with the behaviour of degradable plastics such as false labelling and pseudo-labelling. Strengthen the environmental supervision of recycling, utilisation and disposal of waste materials.				
11:66	C7: The General Office of the State Council on accelerating the construction of	In conjunction with the implementation of the extended producer responsibility system, we will launch an action to upgrade the application of recycled materials, and guide manufacturers of automobiles, electrical appliances and electronic products to increase the proportion of recycled materials. Encourage enterprises to include the application of recycled materials into the scope of corporate social responsibility.				

12:226	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Support the establishment of an auto parts recycling system with auto 4S stores and special maintenance sites as the main channels, supplemented by recycling and dismantling enterprises. Standardize the establishment of specialized remanufacturing and used parts recycling enterprises and regional remanufacturing and used parts recycling logistics distribution centers.				
12:138	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Accelerate the development of biomass textile fiber materials that can replace petroleum, encourage the use of waste polyester bottles, waste polypropylene, etc. to produce high value-added recycled fibers to reduce the consumption of primary resources.	1:164	EU1: EU action plan for the circular economy	In a circular economy, a cascading use of renewable resources, with several reuse and recycling cycles, should be encouraged where appropriate. Biobased materials, such as for example wood, can be used in multiple ways, and reuse and recycling can take place several times. This goes together with the application of the waste hierarchy (including for food - see section 5.2) and, more generally, options that result in the best overall environmental outcome.	Target biobased materials for recycling
			1:166	EU1: EU action plan for the circular economy	The Commission will work on identifying and sharing best practices in this sector and promote innovation; the revised legislative proposals on waste also include a mandatory EU-level target on recycling wood packaging waste.	
4:24	C5: Circular Economy Promotion Law of the PRC	The state encourages and guides citizens to use products that save energy, water, and materials as well as environment-friendly products and recycled products so as to reduce the production and discharge of wastes				Target consumers for recycling
4:37	C5: Circular Economy Promotion Law of the PRC	For products or packages listed in the catalogue of articles subject to compulsory recycle, consumers shall deliver the deserted ones to the producers or the distributors or other organizations entrusted by the producers for recycle.				
10:34	C6: 14th 5YP CE	Actively implement the "Internet + recycling" model, online and offline synergies, improve the integration of standardised recycling enterprises to individual operators, and further improve the level of convenience for residents to surrender waste materials.				
			1:133	EU1: EU action plan for the circular economy	A key factor in creating a dynamic market for secondary raw materials is sufficient demand, driven by the use of recycled materials in products and infrastructure.	Target demand for recycling
4:13	C5: Circular Economy Promotion Law of the PRC	In the process of reutilizing and recycling wastes, production safety shall be guaranteed so as to ensure that product quality satisfy the state standards and prevent the secondary pollution				Avoid secondary effects of recycling
4:68	C5: Circular Economy Promotion Law of the PRC	The state encourages and supports the use of recycled water. Areas with the conditions for using recycled water shall restrict or forbid the use of tap water for urban road cleaning, planting and landscape purposes.				
9:48	C4: 12th 5YP V1	We will greatly promote the utilization of recycled water, mineral water, desalinated water, and brackish water.				
12:46	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	recycling of coal washing wastewater,				
12:70	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	use unconventional water such as recycled water, mine water, and seawater desalination water to supplement new water.				

12:102	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	The coal chemical industry focuses on promoting the use of waste residues in the production of cement and other building materials products, promoting the recycling of coal-to-olefin water, treatment of phenol-containing wastewater through pressurized gasification of crushed powder, reclaimed water reuse, treatment of highly concentrated brine, utilization of low-temperature waste heat, and utilization of high-temperature gas heat.				Recycle water
12:122	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	and strengthen wastewater recycling.				
12:131	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strengthen wastewater recycling.				
12:139	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage wastewater recycling and wastewater and waste gas heat energy recovery.				
12:152	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote enterprise waste exchange and utilization, wastewater recycling, energy cascade utilization, and land conservation and intensive utilization in the park.				
12:173	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Support the recycling of slaughtering wastewater.				
12:275	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build 20 seawater desalination demonstration projects, 20 rainwater collection and utilization and recycled water utilization demonstration projects.				
12:333	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Study and formulate management measures to restrict the use of urban tap water as water for urban road cleaning, urban greening and landscape in areas where conditions permit the use of recycled water.				
5:52	C3: 13th 5YP	Implement the household refuse treatment project, make comprehensive improvements to the environment in 130,000 administrative villages, implement showcase projects for agricultural waste recycling, develop sewage and refuse collection and treatment facilities, progressively promote the treatment of household wastewater, and ensure that the household refuse of 90% of administrative villages is treated;				

7:50	C2: 14th 5YP	We will promote the comprehensive utilization of crop straws and the recovery of resources from livestock and poultry manure.				Target recycling in agriculture
9:49	C4: 12th 5YP V1	Recycling of such biomass energy as crop stubs and of waste materials from the forestry sector, and wind power and solar power will also be energetically promoted.				
10:48	C6: 14th 5YP CE	Strengthen the recycling of waste agricultural materials. Guiding planting households, farmers' cooperatives, family farms, agricultural materials enterprises, waste materials recycling enterprises and other relevant responsible subjects to take the initiative to participate in recycling.				
10:50	C6: 14th 5YP CE	Create a number of ecological farms and ecological recycling agricultural industrial complexes, and explore sustainable operation mechanisms.				
11:15	C7: The General Office of the State Council on accelerating the construction of	Guide local governments to strengthen the recycling of agricultural film, pesticide and fertilizer packaging, agricultural machinery, fishing nets and other waste agricultural materials.				
11:21	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling and utilization of urban landscaping waste.				
12:156	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	In the agricultural field, we will accelerate the promotion of resource conservation, clean production processes, industrial link recycling, and resource recycling of waste treatment to form a cyclic agricultural production mode that is symbiotic with agriculture, forestry, animal husbandry, and fishery, accelerate agricultural mechanization, promote agricultural modernization, and improve rural ecology.				
12:194	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Retail and wholesale enterprises are encouraged to classify and recycle waste packaging, waste food, garbage, etc.				Recycle food waste
5:54	C3: 13th 5YP	promote the recycling and safe disposal of sludge				Recycle sewage sludge
5:55	C3: 13th 5YP	sludge recycling,				
10:58	C6: 14th 5YP CE	Construct centralised sewage collection, treatment and reuse facilities in the park, and strengthen sewage treatment and recycling. Strengthen industrial circular links in the park and promote the comprehensive utilisation of enterprise waste resources. Constructing public information service platforms in the parks and strengthening material flow management in the parks. Provincial-level parks with conditions will all implement recycling transformation by the end of 2025.				
11:27	C7: The General Office of the State Council on accelerating the construction of	Accelerate the utilization of sewage resources, combine existing sewage treatment facilities with upgrading and capacity expansion, systematically plan and build sewage recycling facilities, and implement regional reclaimed water recycling projects according to local conditions.				

12:184	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Facility construction must adopt energy-saving and environmentally friendly products, actively utilize renewable energy, and build supporting systems for sewage recycling, rainwater collection, and harmless garbage disposal. Support the use of energy-saving and environmentally friendly means of transportation in tourist attractions, develop green tourism products, scientifically set up garbage classification and recycling devices, and promote waste classification, recycling and resource utilization.				
9:17	C4: 12th 5YP V1	We will urge government organs to carry out green procurement, and gradually raise the ratio of procuring energy-saving and water-saving products and recycled products.				Use GPP for recycling
11:65	C7: The General Office of the State Council on accelerating the construction of	Establish government green procurement demand standards and include more qualified recycled materials and products into the scope of government green procurement.				
12:260	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Government agencies should take the lead in setting an example in energy saving, water saving, paper saving, food saving, etc., and effectively build a conservation-oriented government. Strengthen the government's green procurement system, strictly implement the mandatory or priority procurement system for energysaving and environmentally friendly products, and increase the proportion of recycled products and remanufactured products in government procurement. Government canteens should improve the meal charging system and improve the management system for official reception meals to avoid waste in government canteens and official reception meals.				
9:24	C4: 12th 5YP V1	We will energetically develop such strategic emerging industries as environmental protection, new generation of information technology, biology, high-end equipment manufacturing, new energies, new materials, and new energy car sectors. Industries related to energy conservation and environmental protection need to emphasize on developing key technologies, equipment, products and services that are highly efficient, that save energy, that is advanced, that protect the environment, and that can recycle resources.				Target recycling technology
11:59	C7: The General Office of the State Council on accelerating the construction of	Carry out advanced technology demonstration projects for resource recycling and dynamically update the national catalog of advanced and applicable technology and equipment for comprehensive utilization of industrial resources.				
11:60	C7: The General Office of the State Council on accelerating the construction of	Encourage localities to organize waste recycling technology promotion docking, exchange and training, and promote the industrial application of technological achievements.				
10:61	C6: 14th 5YP CE	(5) Circular economy key technology and equipment innovation project In-depth implementation of key technologies and equipment for the circular economy key special projects. Focusing on the ecological design of typical products, clean production in key industries, comprehensive utilisation of bulk solid waste, high-quality recycling of renewable resources, and remanufacturing of high-end equipment, a number of breakthroughs in green recycling key common technologies and major equipment; in the Beijing-Tianjin-Hebei, Yangtze River Delta, Pearl River Delta, and other regions, to carry out integrated demonstration of the green technology system for the recycling economy, and to promote the formation of the integration of government, industry, academia, research and application of the mode of transformation of scientific and technological achievements.				

12:125	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Improve the recycling rate of waste paper and actively promote the use of recycled paper for newsprint.				Recycle paper
9:53	C4: 12th 5YP V1	It is necessary to develop green mining, enhance the conservation of mining resources and the comprehensive utilization of mining resources, and raise the repetitive exploitation rate of mining resources, the recycling rate of mine selection and the overall utilization rate.				Target mining in recycling
11:42	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling of low-value recyclables. Guide local governments to improve the catalog of low-value recyclables, and continuously improve the classification accuracy of low-value recyclables such as waste glass and low-value waste plastics in domestic waste classification. Support local governments to include the recycling of low-value recyclables into the scope of government procurement services. Encourage all localities to explore ways such as franchising to promote the recycling of low-value recyclables. Encourage qualified places to implement subsidy policies for the recycling of low-value recyclables.				Target low value materials recycling
11:43	C7: The General Office of the State Council on accelerating the construction of	Promote the recycling of decommissioned wind power and photovoltaic equipment, and establish and improve the responsibility mechanism for the disposal of decommissioned equipment of wind power and photovoltaic power generation enterprises.				Recycle RE-related materials
11:61	C7: The General Office of the State Council on accelerating the construction of	Incorporate the research and development of key process technologies and equipment for waste recycling into the scope of key special support related to the national key research and development plan. Support enterprises to carry out industry-universityresearch cooperation with universities and scientific research institutes.				Target R&D for recylcing
11:64	C7: The General Office of the State Council on accelerating the construction of	Conduct research on carbon footprint accounting standards and methods for key recycled materials.				Target accounting for recycling
12:72	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Establish a scrap steel recycling system and support steel companies in building scrap steel processing and distribution bases.				
12:79	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the extraction of valuable components from smelting waste residue, extract and recover iron, precious metals, alkali, etc. from red mud, extract rare precious metals from copper smelting slag and anode mud, and extract cadmium, germanium, iron, etc. from lead and zinc smelting waste residue. Extract copper, silver, lead, etc. from gold slag and cyanide tailings. Promote the comprehensive utilization of smelting waste liquid, recover gallium, scandium, etc. from alumina mother liquor, and recover nickel, etc. from electrolyte. Promote the recovery of lead, zinc, copper, antimony, bismuth, sulfur, phosphorus, etc. from smelting waste gas.				

12:81	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote high-value utilization of recycled metals such as recycled copper and recycled aluminum, and increase the proportion of non-ferrous metal production. It supports the extraction of waste acid and lead from waste leadacid batteries, the extraction of zinc from waste galvanized steel sheets, the extraction of silver from waste photosensitive materials, the extraction of platinum group elements and rare earth materials from waste catalysts, and the extraction of precious metals from waste electronic products. Support the use of overseas scrap nonferrous metal resources that can be used as raw materials.				Recycle metals
12:89	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the extraction of rare precious metals such as cobalt, rhodium, and palladium from waste petroleum refining catalysts.				
12:214	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement relevant preferential policies, recycle traditional renewable resources such as scrap metal, waste plastic, waste glass, and waste paper to increase the recycling rate.				
12:92	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Improve sulfur recovery rate.				miscellaneous
12:99	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	The chlor-alkali chemical industry focuses on promoting the use of calcium carbide slag to produce cement or for desulfurization, strengthening the recycling and utilization of calcium carbide slag supernatant liquid, and the comprehensive utilization of carbon monoxide and hydrogen in the exhaust gas of calcium carbide furnaces.				
12:108	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strengthen dust recycling.				
12:119	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the recovery of alkali from pulping black liquor, use the organic matter in the black liquor to generate electricity, and promote the use of by-product white mud for the production of cement or calcium oxide.				
12:140	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the recovery of dyeing chemicals and auxiliaries from printing and dyeing wastewater, and recover alkali from waste printing and dyeing alkali liquor.				

12:211	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	All types of investment entities are encouraged to actively participate in the construction and renovation of recycling sites, build professional sorting centers that meet environmental protection requirements, and gradually build a number of waste commodity recycling and sorting clusters with advanced sorting technology, complete environmental protection treatment facilities, and sound labor protection measures.	14:11	EU3: A Green Deal Industrial Plan for the Net-Zero Age	The InvestEU Programme is well placed to boost net-zero investments in the EU. InvestEU is the Union's instrument for catalysing private investments in EU priority areas. Through the EIB, the EIF, the EBRD and 14 other implementing partners, the EU supports public and private investments in net-zero tech and industrial innovation. Examples of projects that can be supported are RDI of battery technologies, critical raw materials recycling, demonstration plants for manufacturing materials in the supply chain of electric vehicle batteries, hydrogen propulsion technologies, innovative advanced biofuels plants, advanced manufacturing technology equipment in steel processing. InvestEU can mobilise over EUR 372 billion of financing – public, but mainly private - through the backing of the EU budget guarantee of EUR 26.2 billion.	Target finance for recycling
12:299	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strengthen the management of resource recycling in fixed asset investment projects, and project application reports and feasibility study reports should include content related to circular economy.				
12:317	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Banking financial institutions are encouraged to provide diversified credit support, including credit loans, for key circular economy projects and the "Ten Hundreds and Thousands" demonstration project of circular economy, innovate credit products, broaden the scope of mortgage guarantees, and improve guarantee methods. Support circular economy demonstration pilot enterprises in issuing direct financing instruments such as corporate (corporate) bonds, project revenue bonds, convertible bonds, short-term financing bonds, and medium-term notes. Explore the issuance of collective bonds and collective bills by small and medium-sized enterprises in the circular economy demonstration pilot park. Support qualified resource recycling companies to apply for domestic and overseas listings and refinancing. Encourage the establishment of circular economy venture capital funds and study the establishment of circular economy industry investment funds. All localities should formulate supporting investment and financing policies and implementation plans to support the development of circular economy in accordance with relevant national policies.				

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
12:256	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the whole society to establish and practice the concept of civilized, frugal, green, low-carbon, and circular consumption, guide frugal and moderate consumption, and oppose extravagance and waste. Carry forward the fine tradition of diligence and thrift, abandon the bad habits of ostentation, ostentation, luxury and waste, and raise the whole society's awareness of energy saving, water saving, material saving and food saving.				Refuse (general)

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
			1:58	EU1: EU action plan for the circular economy	Better design can make products more durable or easier to repair, upgrade or remanufacture	Target product design for remanufacturing
			1:59	EU1: EU action plan for the circular economy	It can help recyclers to disassemble products in order to recover valuable materials and components.	
5:34	C3: 13th 5YP	We will facilitate the recovery and utilization of mineral resources from urban waste, ensure that resources from industrial solid waste and other types of mass refuse are recycled and reused, accelerate the establishment of systems for the recycling or safe disposal of urban kitchen waste, construction refuse, and textile waste, and develop remanufacturing in line with standards.	1:83	EU1: EU action plan for the circular economy	Remanufacturing is another high-potential area: it is already common practice in certain industries, such as vehicles or industrial machinery, but could be applied to new sectors	Remanufacture (general)
7:15	C2: 14th 5YP	We will promote the comprehensive utilization of bulk solid waste and ensure the wellregulated development of the remanufacturing industry.	13:25	EU2: A new Circular Economy Action Plan 2020	enabling remanufacturing and high-quality recycling;	
9:12	C4: 12th 5YP V1	It is necessary to accelerate the perfection of the system to recover re-manufactured old stuff, and promote the development of the remanufacturing sector.	16:4	EU5: Ecodesign requirements for sustainable products	product upgradability, reparability, maintenance and refurbishment;	
9:19	C4: 12th 5YP V1	We will develop application technologies for reduction at source, for circular utilization, for re-manufacturing, for zero emissions, and production chain, and promote the typical model of circular economy.	16:8	EU5: Ecodesign requirements for sustainable products	product remanufacturing and recycling;	
10:40	C6: 14th 5YP CE	Promote the high-quality development of the remanufacturing industry.				
10:42	C6: 14th 5YP CE	cultivate professional remanufacturing old parts recycling enterprises.				
12:307	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Research special policies to encourage the promotion and application of remanufactured products and compulsory recycling of products and packaging.				
10:46	C6: 14th 5YP CE	Strengthen the evaluation and promotion of remanufactured products.				
10:62	C6: 14th 5YP CE	Combined with industrial intelligent transformation and digital transformation, vigorously promote the remanufacturing of industrial equipment, and expand the scope of remanufacturing applications of machine tools, industrial motors and industrial robots. Support tunnel boring, coal mining, oil extraction and other areas of enterprises to use a wide range of remanufactured products and services. Promote remanufactured auto parts and remanufactured office equipment in after-sales maintenance, insurance, commerce, logistics, leasing and other fields, and further increase the proportion of remanufactured products used in the after-sales market. The scale of the remanufacturing industry will be enlarged, 10 or so remanufacturing industry clusters will be formed, a number of leading remanufacturing enterprises will be cultivated, and the output value of the remanufacturing industry will reach RMB 200 billion.				
12:233	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	By 2015, we will achieve annual remanufacturing of 800,000 engines, 8 million pieces of gearboxes, starters, generators, etc., and 200,000 sets of engineering machinery, mining machinery, agricultural machinery, etc., and the annual output value of the remanufacturing industry will reach about 50 billion yuan. .				indicator
4:8	C5: Circular Economy Promotion Law of the PRC	The term “reusing” as mentioned in these Measures refers to using wastes as products directly, using wastes after repair, renewal or reproduction or using part or all wastes as components of other products.	16:15	EU5: Ecodesign requirements for sustainable products	‘remanufacturing’ means an industrial process in which a product is produced from objects that are waste, products or components and in which at least one change is made to the product that affects the safety, performance, purpose or type of the product typically placed on the market with a commercial guarantee;	definition
			16:17	EU5: Ecodesign requirements for sustainable products	‘refurbishment’ means preparing or modifying an object that is waste or a product to restore its performance or functionality within the intended use, range of performance and maintenance originally conceived at the design stage, or to meet applicable technical standards or regulatory requirements, with the result of making a fully functional product;	
4:87	C5: Circular Economy Promotion Law of the PRC	The state upholds enterprises to reproduce the parts and components of motor vehicles, engineering equipment, machine tools, etc. and to renew tyres.				

10:41	C6: 14th 5YP CE	Enhance the level of remanufacturing of automotive parts, construction machinery, machine tools, office equipment, etc., promote the development of remanufacturing industries in emerging fields such as shield machines, aviation engines, industrial robots, etc., and promote the application of common key remanufacturing technologies such as non-destructive testing, additive manufacturing, and flexible processing.				Remanfucature of various products				
10:61	C6: 14th 5YP CE	(5) Circular economy key technology and equipment innovation project In-depth implementation of key technologies and equipment for the circular economy key special projects. Focusing on the ecological design of typical products, clean production in key industries, comprehensive utilisation of bulk solid waste, high-quality recycling of renewable resources, and remanufacturing of high-end equipment, a number of breakthroughs in green recycling key common technologies and major equipment; in the Beijing-Tianjin-Hebei, Yangtze River Delta, Pearl River Delta, and other regions, to carry out integrated demonstration of the green technology system for the recycling economy, and to promote the formation of the integration of government, industry, academia, research and application of the mode of transformation of scientific and technological achievements.								
10:45	C6: 14th 5YP CE	Under the premise of information sharing among regulatory authorities and risk control, support the exploration of bonded maintenance and remanufacturing re-export business for aviation, CNC machine tools, communication equipment, etc. in the Pilot Free Trade Zone.								
11:32	C7: The General Office of the State Council on accelerating the construction of	Promote the development of the remanufacturing industry in traditional fields such as auto parts, engineering machinery, machine tools, and cultural and office equipment, and explore the orderly development of high-end equipment remanufacturing in new fields such as shield machines, aerospace engines, and industrial robots.								
12:229	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Focus on promoting the remanufacturing of motor vehicle parts, machine tools, engineering machinery, mining machinery, agricultural machinery, metallurgical rollers, photocopiers, computer servers, ink cartridges, toner cartridges, etc., explore the remanufacturing of aircraft engines and steam turbines, and continue to promote the retreading of waste tires.								
12:226	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Support the establishment of an auto parts recycling system with auto 4S stores and special maintenance sites as the main channels, supplemented by recycling and dismantling enterprises. Standardize the establishment of specialized remanufacturing and used parts recycling enterprises and regional remanufacturing and used parts recycling logistics distribution centers.				Remanufcature automobiles				
12:318	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	study and formulate regulations to restrict excessive packaging of goods, special fund management measures for circular economy development, auto parts remanufacturing management measures, remanufactured used parts and remanufactured products import and export management catalogs and management measures,								
10:62	C6: 14th 5YP CE	Combined with industrial intelligent transformation and digital transformation, vigorously promote the remanufacturing of industrial equipment, and expand the scope of remanufacturing applications of machine tools, industrial motors and industrial robots. Support tunnel boring, coal mining, oil extraction and other areas of enterprises to use a wide range of remanufactured products and services. Promote remanufactured auto parts and remanufactured office equipment in after-sales maintenance, insurance, commerce, logistics, leasing and other fields, and further increase the proportion of remanufactured products used in the after-sales market. The scale of the remanufacturing industry will be enlarged, 10 or so remanufacturing industry clusters will be formed, a number of leading remanufacturing enterprises will be cultivated, and the output value of the remanufacturing industry will reach RMB 200 billion.								
5:23	C3: 13th 5YP	We will redevelop urban land that is being used inefficiently, develop and utilize hilly slope land, promote the multipurpose development of land designated for construction and its aboveground and belowground vertical overall development, and facilitate the reutilization of idle resources such as vacant buildings and factories.				Remanufacture in construction				
10:43	C6: 14th 5YP CE	Support the construction of a trading platform for remanufactured products.				Establish a market for remanufacturing				
10:44	C6: 14th 5YP CE	Encourage enterprises to apply remanufactured products in the after-sales service system and fulfil the notification obligation. Promote the combination of remanufacturing technology and digital transformation of equipment, and provide customised remanufacturing services for large-scale electromechanical equipment.				Establish service for remanufacturing				

11:30	C7: The General Office of the State Council on accelerating the construction of	Research and resolve intellectual property issues involved in services such as resale and refurbishment of used goods or related products.				Target property rights for remanufacturing				
12:260	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Government agencies should take the lead in setting an example in energy saving, water saving, paper saving, food saving, etc., and effectively build a conservation-oriented government. Strengthen the government's green procurement system, strictly implement the mandatory or priority procurement system for energysaving and environmentally friendly products, and increase the proportion of recycled products and remanufactured products in government procurement. Government canteens should improve the meal charging system and improve the management system for official reception meals to avoid waste in government canteens and official reception meals.				Use GPP for remanufacturing				
12:283	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build 5-10 national-level remanufacturing industry demonstration bases to promote the clustered development of the remanufacturing industry. About 30 auto parts remanufacturing companies with a certain foundation will be selected to carry out demonstrations, focusing on supporting the establishment of recycling, remanufacturing, testing and quality control systems for old parts such as engines and gearboxes. Select a group of enterprises to carry out pilot remanufacturing of machine tools, engineering machinery, agricultural machinery, mining machinery, office supplies, etc. Cultivate about 20 professional remanufacturing service organizations.				Demonstrate remanufacturing				
12:289	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Select scientific research units or large enterprises with good foundation and strong technical strength to support the construction of a number of key circular economy engineering laboratories, technology centers, engineering research centers and quality inspection centers. Strengthen the research and development of key common technologies for the circular economy such as source reduction, recycling, remanufacturing, zero emissions, and industrial linkage. Build an industry-university-research docking platform and a mechanism for the industrialization of scientific research results, build a number of resource recycling technology industrialization demonstration bases and demonstration projects, and increase the promotion and application of advanced and applicable technologies.				Target R&D for remanfucturing				
12:294	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Publish a list of technologies, processes, equipment, materials and products that are encouraged, restricted and eliminated by the state, a list of remanufactured products and a list of disposable products with restricted production and sales, as well as management measures.				Share best practice of remanufacturing				
12:318	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	study and formulate regulations to restrict excessive packaging of goods, special fund management measures for circular economy development, auto parts remanufacturing management measures, remanufactured used parts and remanufactured products import and export management catalogs and management measures,				Target import/export for remanufacturing				
12:318	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	study and formulate regulations to restrict excessive packaging of goods, special fund management measures for circular economy development, auto parts remanufacturing management measures, remanufactured used parts and remanufactured products import and export management catalogs and management measures,								

China			EU			Statement/Theme				
ID	Document	Quotation content	ID	Document	Quotation content					
			1:58	EU1: EU action plan for the circular economy	Better design can make products more durable or easier to repair, upgrade or remanufacture	Target product design for repair and maintenance				
			13:8	EU2: A new Circular Economy Action Plan 2020	For citizens, the circular economy will provide high-quality, functional and safe products, which are efficient and affordable, last longer and are designed for reuse, repair, and high-quality recycling.					
			13:51	EU2: A new Circular Economy Action Plan 2020	regulatory measures for electronics and ICT including mobile phones, tablets and laptops under the Ecodesign Directive so that devices are designed for energy efficiency and durability, reparability, upgradability, maintenance, reuse and recycling.					
			17:11	EU6: Green Deal	The circular economy action plan will also include measures to encourage businesses to offer, and to allow consumers to choose, reusable, durable and repairable products. It will analyse the need for a 'right to repair', and curb the built-in obsolescence of devices, in particular for electronics. Consumer policy will help to empower consumers to make informed choices and play an active role in the ecological transition. New business models based on renting and sharing goods and services will play a role as long as they are truly sustainable and affordable.					
			1:7	EU1: EU action plan for the circular economy	maintained in the economy for as long as possible,	Repair and Maintain (general)				
			1:67	EU1: EU action plan for the circular economy	reparability, durability, upgradability, recyclability, or the identification of certain materials or substances will be systematically examined					
			1:94	EU1: EU action plan for the circular economy	Once a product has been purchased, its lifetime can be extended through reuse and repair, hence avoiding wastage. The reuse and repairs sectors are labour-intensive and therefore contribute to the EU's jobs and social agenda.					
			16:4	EU5: Ecodesign requirements for sustainable products	product upgradability, reparability, maintenance and refurbishment;					
			13:23	EU2: A new Circular Economy Action Plan 2020	improving product durability, reusability, upgradability and reparability, addressing the presence of hazardous chemicals in products, and increasing their energy and resource efficiency;					
4:8	C5: Circular Economy Promotion Law of the PRC	The term "reusing" as mentioned in these Measures refers to using wastes as products directly, using wastes after repair, renewal or reproduction or using part or all wastes as components of other products.	16:18	EU5: Ecodesign requirements for sustainable products	'maintenance' means an action carried out to keep a product in a condition where it is able to function as required; (20) 'repair' means returning a defective product or waste to a condition where it fulfils its intended use;	definition				
			1:64	EU1: EU action plan for the circular economy	Electrical and electronic products are particularly significant in this context. Their reparability can be important to consumers, and they can contain valuable materials that should be made easier to recycle (e.g. rare earth elements in electronic devices)	Repair and maintain electronics				
			13:37	EU2: A new Circular Economy Action Plan 2020	In addition, the Commission will work towards establishing a new 'right to repair' and consider new horizontal material rights for consumers for instance as regards availability of spare parts or access to repair and, in the case of ICT and electronics, to upgrading services. Regarding the role that guarantees can play in providing more circular products, the Commission will explore possible changes also in the context of the review of Directive 2019/77115 .					
			13:51	EU2: A new Circular Economy Action Plan 2020	regulatory measures for electronics and ICT including mobile phones, tablets and laptops under the Ecodesign Directive so that devices are designed for energy efficiency and durability, reparability, upgradability, maintenance, reuse and recycling.					
			13:53	EU2: A new Circular Economy Action Plan 2020	focus on electronics and ICT as a priority sector for implementing the 'right to repair', including a right to update obsolete software;					
			17:11	EU6: Green Deal	The circular economy action plan will also include measures to encourage businesses to offer, and to allow consumers to choose, reusable, durable and repairable products. It will analyse the need for a 'right to repair', and curb the built-in obsolescence of devices, in particular for electronics. Consumer policy will help to empower consumers to make informed choices and play an active role in the ecological transition. New business models based on renting and sharing goods and services will play a role as long as they are truly sustainable and affordable.					

			1:176	EU1: EU action plan for the circular economy	for example, Cohesion Policy funds are directed towards a growing number of programmes supporting the circular economy, including support for reuse and repair, improved production processes, product design and SMEs	Target finance for repair and maintenance				
			1:179	EU1: EU action plan for the circular economy	SMEs, including social enterprises, will make a key contribution to the circular economy: they are particularly active in fields such as recycling, repair, and innovation. However, they also face specific challenges, such as access to funding, and the difficulty of taking account of the circular economy if it is not their core business. As set out in the 2014 Green Action Plan for SMEs, the Commission is acting to support these companies, analyse the barriers they encounter to a better use of resources and waste management, and to encourage innovation and cooperation across sectors and regions. The Commission also provides access to finance for social enterprises.	Target SME for repair and maintenance				
4:63	C5: Circular Economy Promotion Law of the PRC	Areas short of water shall adjust the planting structure, give priority to the development of watersaving agriculture, make more efforts in storing and using rainwater, build and maintain water saving irrigation facilities so as to improve the water use efficiency and reduce the evaporation and loss of water.				Repair and Maintain in agriculture				
10:45	C6: 14th 5YP CE	Under the premise of information sharing among regulatory authorities and risk control, support the exploration of bonded maintenance and remanufacturing re-export business for aviation, CNC machine tools, communication equipment, etc. in the Pilot Free Trade Zone.				Target export for repair and maintenance				
10:64	C6: 14th 5YP CE	(8) Promoting actions to promote the management of the entire life cycle of automobile use It will study and formulate a programme for the management of the entire life cycle of automobile use, build an interactive system of information on the entire life cycle of automobile use covering automobile manufacturers, dealers, maintenance enterprises and recycling and dismantling enterprises, and strengthen the interconnection and interactive sharing of information on automobile production, import, sales, registration, maintenance, used-car trading, scrapping, and the direction of the flow of key parts and components. Establishing a labelling system and information query system for certified parts, remanufactured parts and reused exterior parts. Carrying out pilot projects on the extension of producer responsibility for automobile products. Selecting some regions to take the lead in carrying out pilot projects on the whole life-cycle management of automobile use, and promoting them nationwide when conditions are ripe.				Repair and Maintain automobiles				
12:226	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Support the establishment of an auto parts recycling system with auto 4S stores and special maintenance sites as the main channels, supplemented by recycling and dismantling enterprises. Standardize the establishment of specialized remanufacturing and used parts recycling enterprises and regional remanufacturing and used parts recycling logistics distribution centers.								
			13:16	EU2: A new Circular Economy Action Plan 2020	Many products break down too quickly, cannot be easily reused, repaired or recycled, and many are made for single use only.	Barriers for repair and maintenance				
			13:49	EU2: A new Circular Economy Action Plan 2020	Value is lost when fully or partially functional products are discarded because they are not reparable, the battery cannot be replaced, the software is no longer supported, or materials incorporated in devices are not recovered. About two in three Europeans would like to keep using their current digital devices for longer, provided performance is not significantly affected.					
			13:84	EU2: A new Circular Economy Action Plan 2020	ecodesign measures to ensure that textile products are fit for circularity, ensuring the uptake of secondary raw materials, tackling the presence of hazardous chemicals, and empowering business and private consumers to choose sustainable textiles and have easy access to re-use and repair services;	Repair and maintain textiles				

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
			13:60	EU2: A new Circular Economy Action Plan 2020	sustainability and transparency requirements for batteries taking account of, for instance, the carbon footprint of battery manufacturing, ethical sourcing of raw materials and security of supply, and facilitating reuse, repurposing and recycling.	Repurpose batteries

China			EU			Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content	
12:256	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the whole society to establish and practice the concept of civilized, frugal, green, low-carbon, and circular consumption, guide frugal and moderate consumption, and oppose extravagance and waste. Carry forward the fine tradition of diligence and thrift, abandon the bad habits of ostentation, ostentation, luxury and waste, and raise the whole society's awareness of energy saving, water saving, material saving and food saving.				Rethink (general)

China			EU			Statement/Theme					
ID	Document	Quotation content	ID	Document	Quotation content						
4:11	C5: Circular Economy Promotion Law of the PRC	The development of a circular economy shall be propelled by the government, led by the market, effected by enterprises and participated in by the public.	1:32	EU1: EU action plan for the circular economy	promote economic incentives	general					
5:44	C3: 13th 5YP	To this end, we will strengthen responsibility for meeting targets, ensure that the market plays a better role, and improve standards, performance assessments, and oversight.	1:99	EU1: EU action plan for the circular economy	Other actions can be taken to reduce the amount of household waste. This is often more effective at national and local level, where it can be better targeted: awareness campaigns and economic incentives have proven particularly effective. The Commission promotes waste prevention and reuse through the exchange of information and best practices and by providing Cohesion Policy funding for projects at local and regional level, including interregional cooperation.						
7:26	C2: 14th 5YP	We will create a market-based system for green technology innovation, implement initiatives to make breakthroughs in this area, and perform benchmarking to improve the resource efficiency of key industries and products.	1:107	EU1: EU action plan for the circular economy	The Commission is putting forward new legislative proposals on waste to provide a long-term vision for increasing recycling and reducing the landfilling of municipal waste, while taking account of differences between Member States. These proposals also encourage greater use of economic instruments to ensure coherence with the EU waste hierarchy.						
9:36	C4: 12th 5YP V1	It is necessary to perfect energy conservation marketization mechanism.	13:7	EU2: A new Circular Economy Action Plan 2020	Building on the single market and the potential of digital technologies, the circular economy can strengthen the EU's industrial base and foster business creation and entrepreneurship among SMEs. Innovative models based on a closer relationship with customers, mass customisation, the sharing and collaborative economy, and powered by digital technologies, such as the internet of things, big data, blockchain and artificial intelligence, will not only accelerate circularity but also the dematerialisation of our economy and make Europe less dependent on primary materials.						
10:22	C6: 14th 5YP CE	Adhere to market-led. Establish a long-term mechanism combining incentives and constraints, give full play to the decisive role of the market in the allocation of resources, fully stimulate the enthusiasm of market players to participate in the circular economy, and enhance the endogenous impetus for the development of the circular economy.	13:31	EU2: A new Circular Economy Action Plan 2020	rewarding products based on their different sustainability performance, including by linking high performance levels to incentives.						
10:32	C6: 14th 5YP CE	5. Promote the coordinated disposal of municipal waste. Improve policies, mechanisms and standards, promote coordinated disposal facilities with reference to the management of urban environmental infrastructure, and guarantee the continuous and stable operation of facilities. Determine the standard of payment for co-disposal of municipal waste through market-oriented methods, and orderly promote the co-disposal of medical waste, hazardous waste and domestic rubbish in cement kilns and smelting kilns, as well as the coordinated promotion of the co-disposal of medical waste in domestic rubbish incinerators in an emergency. Promote the co-ordinated co-disposal of food waste, garden waste, sewage plant sludge and other low-value organic waste.									
10:74	C6: 14th 5YP CE	Study the revision of the regulations on the management of waste electrical and electronic products recycling and treatment, improve supporting policies, and give better play to the role of the market.									
11:6	C7: The General Office of the State Council on accelerating the construction of	Give full play to the decisive role of the market in resource allocation, better play the role of the government, establish a policy system and incentive and restraint mechanisms conducive to waste recycling, stimulate the vitality of various business entities, guide the participation of the whole people, and enhance the internal content of waste recycling. vitality.									
4:101	C5: Circular Economy Promotion Law of the PRC	The state adopts a government procurement policy that is good for the development of circular economy. Entities and individuals purchasing goods with funds from the public finance shall give preference to energy-saving, water-saving, material-saving and environment-friendly products and recycled products.	1:134	EU1: EU action plan for the circular economy	This should be encouraged, given that market-driven initiatives can be a fast way to deliver tangible results. Public authorities can also contribute to the demand for recycled materials through their procurement policies.	Target recycled materials …	… in public procurement ….	…. to stir demand pull			
11:42	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling of low-value recyclables. Guide local governments to improve the catalog of low-value recyclables, and continuously improve the classification accuracy of low-value recyclables such as waste glass and low-value waste plastics in domestic waste classification. Support local governments to include the recycling of low-value recyclables into the scope of government procurement services. Encourage all localities to explore ways such as franchising to promote the recycling of low-value recyclables. Encourage qualified places to implement subsidy policies for the recycling of low-value recyclables.				Target low-value recycled materials ….					
4:101	C5: Circular Economy Promotion Law of the PRC	The state adopts a government procurement policy that is good for the development of circular economy. Entities and individuals purchasing goods with funds from the public finance shall give preference to energy-saving, water-saving, material-saving and environment-friendly products and recycled products.	13:39	EU2: A new Circular Economy Action Plan 2020	Public authorities' purchasing power represents 14% of EU GDP and can serve as a powerful driver of the demand for sustainable products. To tap into this potential, the Commission will propose minimum mandatory green public procurement (GPP) criteria and targets in sectoral legislation and phase in compulsory reporting to monitor the uptake of Green Public Procurement (GPP) without creating unjustified administrative burden for public buyers.						

			14:7	EU3: A Green Deal Industrial Plan for the Net-Zero Age	To further stimulate the demand for net-zero products at large scale, various forms of public action such as public procurement, concessions and incentives to business and end users to use net-zero technologies based on sustainability and circularity can play a big role.	Target products with CE-contribution …					
			17:13	EU6: Green Deal	Public authorities, including the EU institutions, should lead by example and ensure that their procurement is green. The Commission will propose further legislation and guidance on green public purchasing.						
10:78	C6: 14th 5YP CE	Increase the government's green procurement efforts, and actively purchase renewable resources products.				Target renewable resource products ….					
12:12	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Investment and financing policies to support the development of circular economy have been introduced.	13:7	EU2: A new Circular Economy Action Plan 2020	Building on the single market and the potential of digital technologies, the circular economy can strengthen the EU's industrial base and foster business creation and entrepreneurship among SMEs. Innovative models based on a closer relationship with customers, mass customisation, the sharing and collaborative economy, and powered by digital technologies, such as the internet of things, big data, blockchain and artificial intelligence, will not only accelerate circularity but also the dematerialisation of our economy and make Europe less dependent on primary materials.	(general)	… in investment …	… to create a technology push			
12:342	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the establishment of national, regional, and industrial waste reverse logistics trading platforms, trading centers, or trading markets. Encourage the establishment of display, exhibition, and trading platforms for circular economy products, technologies, equipment, etc.	13:135	EU2: A new Circular Economy Action Plan 2020	The European Regional Development Fund, through smart specialisation, LIFE and Horizon Europe will complement private innovation funding and support the whole innovation cycle with the aim to bring solutions to the market.						
			1:114	EU1: EU action plan for the circular economy	This means that funding for new landfill will be granted only in exceptional cases (e.g. mainly for non-recoverable hazardous waste) and that funding for new facilities for the treatment of residual waste, such as incineration or mechanical biological treatment, will be granted only in limited and well justified cases, where there is no risk of overcapacity and the objectives of the waste hierarchy are fully respected. In total, it is foreseen that €5.5 billion will be dedicated to waste management in the current financing programme.	Target landfilling and incineration …					
			14:15	EU3: A Green Deal Industrial Plan for the Net-Zero Age	allowing aid by reference to standard percentages of investment costs, based on case experience – for hydrogen use, energy efficiency and electrification.	Target hydrogen, energy efficiency, electrification …					
			1:169	EU1: EU action plan for the circular economy	investment in integrated bio-refineries, capable of processing biomass and bio-waste for different end-uses. The EU is supporting such investments and other innovative bio economy-based projects through research funding.	Target bio-refinieries …					
			1:169	EU1: EU action plan for the circular economy	investment in integrated bio-refineries, capable of processing biomass and bio-waste for different end-uses. The EU is supporting such investments and other innovative bio economy-based projects through research funding.	Target reasearch …					
			13:135	EU2: A new Circular Economy Action Plan 2020	The European Regional Development Fund, through smart specialisation, LIFE and Horizon Europe will complement private innovation funding and support the whole innovation cycle with the aim to bring solutions to the market.						
4:95	C5: Circular Economy Promotion Law of the PRC	The administrative departments of circular economy development of the people's governments at or above the county level shall, when making and implementing investment plans, list the energy-saving, water-saving, land-saving and material-saving projects as well as projects of comprehensive utilization of resources as the key areas of investment. For energy-saving, water-saving, land-saving and material-saving projects as well as projects of comprehensive utilization of resources that meet the requirements of the state industrial policies, financial institutions shall give credit support such as priority in obtaining loans, and actively provide supporting financial services.	16:40	EU5: Ecodesign requirements for sustainable products	Member States shall take appropriate measures to help SMEs apply ecodesign requirements set out in delegated acts adopted pursuant to Article 4.. Those measures shall at least include ensuring the availability of one-stop shops or similar mechanisms to raise awareness and create networking opportunities for SMEs to adapt to requirements. In addition, without prejudice to applicable State aid rules, such measures may include: (a) financial support, including by giving fiscal advantages and providing physical and digital infrastructure investments; (b) access to finance; (c) specialised management and staff training; (d) organisational and technical assistance.	Adjust credit conditions …					
4:96	C5: Circular Economy Promotion Law of the PRC	No financial institution may provide any form of credit support to enterprises that produce, import, distribute or use any of the technologies, techniques, equipment, materials or products listed in the eliminated category.									
12:311	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Priority support will be given to circular economy projects that fall within the scope of financial support from sewage charges.				Target sewage ….					
7:29	C2: 14th 5YP	We will implement tax policies conducive to energy conservation, environmental protection, and comprehensive utilization of resources, and initiate a major push to develop green finance.									

11:57	C7: The General Office of the State Council on accelerating the construction of	Promote the application of green financial instruments such as green credit, green bonds, and green trusts, and guide financial institutions to increase support for waste recycling projects in accordance with the principles of marketization and rule of law.				Target finance technology …					
11:57	C7: The General Office of the State Council on accelerating the construction of	Promote the application of green financial instruments such as green credit, green bonds, and green trusts, and guide financial institutions to increase support for waste recycling projects in accordance with the principles of marketization and rule of law.				Target recycling ….					
			13:129	EU2: A new Circular Economy Action Plan 2020	integrating the circular economy objective under the EU Taxonomy Regulation, and carrying out preparatory work on EU Ecolabel criteria for financial products.	Adjust criteria …					
			17:17	EU6: Green Deal	Promoting new forms of collaboration with industry and investments in strategic value chains are essential. The Commission will continue to implement the Strategic Action Plan on Batteries and support the European Battery Alliance. It will propose legislation in 2020 to ensure a safe, circular and sustainable battery value chain for all batteries, including to supply the growing market of electric vehicles.	Target batteries….					
9:18	C4: 12th 5YP V1	We will enhance planning guidance and policy support on finance and taxation, perfect laws and regulations and standards, implement producers' accountability extension system, formulate technological and product catalogues of circular economy, establish a renewable products' identification system, and set up a sound statistics and evaluation system for circular economy.	1:69	EU1: EU action plan for the circular economy	encourage better product design by differentiating the financial contribution paid by producers under extended producer responsibility schemes on the basis of the end-of-life costs of their products. This should create a direct economic incentive to design products that can be more easily recycled or reused.	Use extended producer responsibility schemes for …	… waste fees …				
4:99	C5: Circular Economy Promotion Law of the PRC	The people's government of a province, autonomous region or municipality directly under the Central Government may, in light of the economic and social development situations of this administrative region, charge fees for the discharge of wastes. Such fees charged shall be exclusively used for sorting, collecting, transporting, storing, utilizing and disposing of refuse, and may not be used for any other purpose.	13:134	EU2: A new Circular Economy Action Plan 2020	continue to encourage the broader application of well-designed economic instruments, such as environmental taxation, including landfill and incineration taxes, and enable Member States to use value added tax (VAT) rates to promote circular economy activities that target final consumers, notably repair services.	Use (general) …					
11:55	C7: The General Office of the State Council on accelerating the construction of	Elaborate the environmental protection standards and requirements for the storage or disposal of solid waste, comprehensively consider the environmental hazards of solid waste, environmental protection standards, tax collection and management foundation and other factors, improve the policy implementation caliber of solid waste environmental protection tax, and increase collection and management Efforts should be made to guide the priority recycling of industrial solid waste.									
11:56	C7: The General Office of the State Council on accelerating the construction of	Orderly implement domestic waste classification, pricing, and metering and charging.									
			13:134	EU2: A new Circular Economy Action Plan 2020	continue to encourage the broader application of well-designed economic instruments, such as environmental taxation, including landfill and incineration taxes, and enable Member States to use value added tax (VAT) rates to promote circular economy activities that target final consumers, notably repair services.	Target incineration …					
12:303	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	For sludge treatment and disposal costs, we will study and implement policies that include sewage treatment charges and financial subsidies to be shared. Study the policy of reducing sewage treatment fees for enterprises and parks that achieve "zero discharge" of waste water, and strictly implement the policy of exempting enterprises that achieve "zero discharge" of waste water from sewage discharge fees.				Target sewage sludge …					
12:304	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Research pricing policies that encourage collaborative resource utilization in the production process to process waste. Study and establish a charging system for construction waste discharge, reform the charging method for domestic waste treatment, and increase the collection rate. Study and establish a charging system for food waste disposal.				Target construction and food …					
12:306	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement and improve the subsidy policy for collecting funds for the disposal of waste electrical and electronic products.				Target electronics …					
5:31	C3: 13th 5YP	We will establish a national royalty system for mineral resources and improve mineral resource tax and fee systems. We will carry out the mineral exploration initiative.				Target mineral extraction…	… royalties …				

12:9	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	We have deepened the price reform of resource products and implemented differential electricity prices, punitive electricity prices, tiered water prices, and desulfurization price increase policies for coal-fired power generation. The reform of refined oil prices and taxes was implemented, the unit tax amount of refined oil consumption tax was increased, and refined oil prices were gradually rationalized.				(general)	… in pricing …				
			1:92	EU1: EU action plan for the circular economy	Member States are therefore encouraged to provide incentives and use economic instruments, such as taxation, to ensure that product prices better reflect environmental costs.	Internalise environmental externalities…					
4:97	C5: Circular Economy Promotion Law of the PRC	The state adopts a price policy that contributes to the conservation and reasonable utilization of resources so as to guide entities and individuals to save and reasonably use water, electric power, gas and other resource products. The competent department of price under the State Council and those under the people's governments of provinces, autonomous regions and municipalities directly under the Central Government shall apply restrictive price policies to the restricted items in industries of high resource consumption.				Factor resource consumption …					
7:30	C2: 14th 5YP	We will improve the paid use system for natural resources by developing new mechanisms for pricing the use of natural resources, the treatment of wastewater and refuse, and the consumption of water and energy.									
12:302	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Trial the tiered electricity price system for residential electricity, improve the time-of-use electricity price policy for power peaks and valleys, increase the implementation of differential electricity prices and punitive electricity prices, improve the price policy that encourages power generation from coal gangue, waste heat and pressure, garbage and methane, and trial the denitrification price policy .				Factor electricity consumption					
4:98	C5: Circular Economy Promotion Law of the PRC	For the grid-connected power generation projects with waste heat, waste pressure, coalbed gas, coal slack, slime, refuse and other low-calorie fuels, the competent department of price shall determine its on-grid power price under the principle of being good for the comprehensive utilization of resources.									
5:17	C3: 13th 5YP	We will move more quickly toward water conservancy in agriculture, industry, and cities, make steady progress in the comprehensive price reform of water for agricultural purposes, and carry out demonstrations of comprehensive improvements in water-saving equipment and technologies.				Factor waster consumption …					
7:30	C2: 14th 5YP	We will improve the paid use system for natural resources by developing new mechanisms for pricing the use of natural resources, the treatment of wastewater and refuse, and the consumption of water and energy.									
12:301	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement a stepped price system for domestic water use for urban residents and a progressive price increase system for non-residential water use exceeding the quota.									
5:30	C3: 13th 5YP	We will improve mechanisms to keep the prices of superior minerals stable through limiting production.				Target minerals ….					
12:342	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Encourage the establishment of national, regional, and industrial waste reverse logistics trading platforms, trading centers, or trading markets. Encourage the establishment of display, exhibition, and trading platforms for circular economy products, technologies, equipment, etc.				Establish waste …					
			1:125	EU1: EU action plan for the circular economy	In order to address this situation, the Commission will propose a revision of the EU regulation on fertilisers. This will involve new measures to facilitate the EU wide recognition of organic and waste-based fertilisers, thus stimulating the sustainable development of an EU-wide market.	Establish fertiliser …					
			1:132	EU1: EU action plan for the circular economy	It is also essential to facilitate the cross-border circulation of secondary raw materials to ensure that they can be traded easily across the EU. Action in this area will include the simplification of cross-border formalities through the use of electronic data exchange. The Commission is examining other barriers to the smooth circulation of waste in the EU. To improve the availability of data on secondary raw materials the Commission will further develop the recently initiated Raw Materials Information System and support EU-wide research on raw materials flows. It will also support the improvement of data reporting on waste shipment, including through the use of data available in the context of cross-border electronic data exchange.					

			13:11	EU2: A new Circular Economy Action Plan 2020	Further measures will be put in place to reduce waste and ensure that the EU has a wellfunctioning internal market for high quality secondary raw materials. The capacity of the EU to take responsibility for its waste will be also strengthened.	Establish secondary raw materials…				
			13:120	EU2: A new Circular Economy Action Plan 2020	ensure that the EU does not export its waste challenges to third countries. Actions on product design, quality and safety of secondary materials and enhancing their markets will contribute to making “recycled in the EU” a benchmark for qualititative secondary materials.					
			17:15	EU6: Green Deal	The Commission will consider legal requirements to boost the market of secondary raw materials with mandatory recycled content (for instance for packaging, vehicles, construction materials and batteries). To simplify waste management for citizens and ensure cleaner secondary materials for businesses, the Commission will also propose an EU model for separate waste collection. The Commission is of the view that the EU should stop exporting its waste outside of the EU and will therefore revisit the rules on waste shipments and illegal exports.					
10:38	C6: 14th 5YP CE	Standardise the development of the second-hand goods market.				Establish second-hand goods …	…. Markets …			
10:39	C6: 14th 5YP CE	Improve the regulations on the circulation of second-hand commodities, establish and improve the identification, evaluation and grading standards for second-hand commodities such as vehicles, home appliances and mobile phones, and regulate the order of second-hand commodity circulation and trading behaviour. Encourage the development of the "Internet + second-hand" model, strengthen the management responsibility of the Internet trading platform, strengthen the supervision of trading behaviour, provide standardised and regulated services for second-hand commodity trading, and encourage platform enterprises to introduce third-party second-hand commodity professional operators to improve the efficiency of second-hand commodity trading. Promote the standardised construction and operation of offline physical second-hand markets, and encourage the construction of centralised and standardised "flea markets". Encourage schools at all levels to set up used book sharing corners and days to promote the exchange of used books among teachers and students. Encourage communities to organise secondhand goods trading activities on a regular basis, and promote the trading and circulation of idle goods among residents' families under their jurisdiction.								
10:43	C6: 14th 5YP CE	Support the construction of a trading platform for remanufactured products.								
11:28	C7: The General Office of the State Council on accelerating the construction of	Support qualified regions to build centralized and standardized second-hand commodity trading markets. Improve the second-hand goods trading management system, study and formulate management methods for online secondhand goods trading, and improve the talent training and management mechanism in the second-hand goods appraisal and appraisal industry.								
11:31	C7: The General Office of the State Council on accelerating the construction of	Support the export of second-hand cars that meet quality and other relevant requirements.				Export second-hand automobiles via international				
12:341	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Explore the promotion and application of advanced and applicable technologies through government buyouts. Implement the "going global" strategy of circular economy and accelerate the export of competitive key technologies and equipment for circular economy.				Export key technology via international				
11:69	C7: The General Office of the State Council on accelerating the construction of	Strengthen international cooperation. Actively participate in the setting of issues in the international circular economy field, and strengthen international cooperation in frameworks and multilateral mechanisms such as the United Nations and the World Trade Organization. Establish bilateral cooperation mechanisms in the field of circular economy with more key countries and regions, and deepen bilateral cooperation in the form of policy dialogue, economic and trade cooperation, experience sharing, and capacity building.	13:144	EU2: A new Circular Economy Action Plan 2020	ensure that Free Trade Agreements reflect the enhanced objectives of the circular economy;	Make use of international …				
			13:17	EU2: A new Circular Economy Action Plan 2020	At the same time, the single market provides a critical mass enabling the EU to set global standards in product sustainability and to influence product design and value chain management worldwide.	Use power in international …				
12:269	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Expand the types and scale of renewable resource imports. Strictly supervise the import of renewable resources, implement zoned management of enterprises and projects in coastal areas that mainly process and utilize imported renewable resources, and promote the clean, safe and efficient use of imported renewable resources.				Import renewable resources via international …				

4:94	C5: Circular Economy Promotion Law of the PRC	The state shall offer tax preferences to industrial activities promoting the development of circular economy, and use tax measures to encourage the import of advanced energy-saving, watersaving and material-saving technologies, equipment and products and limit the export of products with high energy-consumption or serious pollution. The specific measures shall be formulated by the public finance department and the tax department under the State Council. Enterprises using or producing the technologies, techniques or products listed in the catalogue of clean production, the catalogue of comprehensive utilization of resources or any other encouraged catalogue shall enjoy tax preferences in accordance with the relevant state provisions.				Import important CE technology via international …		… for systemic changes			
4:94	C5: Circular Economy Promotion Law of the PRC	The state shall offer tax preferences to industrial activities promoting the development of circular economy, and use tax measures to encourage the import of advanced energy-saving, watersaving and material-saving technologies, equipment and products and limit the export of products with high energy-consumption or serious pollution. The specific measures shall be formulated by the public finance department and the tax department under the State Council. Enterprises using or producing the technologies, techniques or products listed in the catalogue of clean production, the catalogue of comprehensive utilization of resources or any other encouraged catalogue shall enjoy tax preferences in accordance with the relevant state provisions.	13:120	EU2: A new Circular Economy Action Plan 2020	ensure that the EU does not export its waste challenges to third countries. Actions on product design, quality and safety of secondary materials and enhancing their markets will contribute to making "recycled in the EU" a benchmark for qualititative secondary materials.	Restrict export …					
			17:15	EU6: Green Deal	The Commission will consider legal requirements to boost the market of secondary raw materials with mandatory recycled content (for instance for packaging, vehicles, construction materials and batteries). To simplify waste management for citizens and ensure cleaner secondary materials for businesses, the Commission will also propose an EU model for separate waste collection. The Commission is of the view that the EU should stop exporting its waste outside of the EU and will therefore revisit the rules on waste shipments and illegal exports.					
4:83	C5: Circular Economy Promotion Law of the PRC	The state encourages and advocates the construction of a waste recovery system. The local people's governments shall, according to the urban and rural planning, reasonably position the waste recycling outlets and trading markets, and support waste recycling enterprises and other organizations in the collection, storage, transport and information exchange of wastes. Waste trading markets shall conform to the state provisions on environmental protection, security and fire control.				Factor the location of recycling facilities …	… in public planning …				
5:28	C3: 13th 5YP	We will support technological and process upgrading in mining enterprises, guide the merging and reorganization of small mines, and shut down mining activities that use outdated techniques or are environmentally undesirable.				Reorganise enterprises …					
12:219	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Accelerate the cultivation of leading enterprises in renewable resources, encourage mergers, reorganizations, joint ventures, etc. to accelerate industry integration and increase industry concentration.									
12:341	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Explore the promotion and application of advanced and applicable technologies through government buyouts. Implement the "going global" strategy of circular economy and accelerate the export of competitive key technologies and equipment for circular economy.				Use government buyouts of enterprises …					
12:10	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Pilot resource tax reform has been carried out, and preferential tax policies have been formulated to encourage the production and purchase of special energy-saving and water-saving equipment, small-displacement vehicles, comprehensive resource utilization products and services.	15:14	EU4: Regulation proposal Critical Rawmaterials Act	Member States retain important competences in the field of circularity, for example in the area of waste collection and treatment systems. These should be used to increase collection and recycling rates for waste streams with a high potential for recovery of critical raw materials, making use for example of financial incentives such as discounts, monetary rewards or deposit-refund systems.						

4:94	C5: Circular Economy Promotion Law of the PRC	The state shall offer tax preferences to industrial activities promoting the development of circular economy, and use tax measures to encourage the import of advanced energy-saving, watersaving and material-saving technologies, equipment and products and limit the export of products with high energy-consumption or serious pollution. The specific measures shall be formulated by the public finance department and the tax department under the State Council. Enterprises using or producing the technologies, techniques or products listed in the catalogue of clean production, the catalogue of comprehensive utilization of resources or any other encouraged catalogue shall enjoy tax preferences in accordance with the relevant state provisions.				Use (general) …	… tax and subsidy schemes…				
7:29	C2: 14th 5YP	We will implement tax policies conducive to energy conservation, environmental protection, and comprehensive utilization of resources, and initiate a major push to develop green finance.									
12:303	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	For sludge treatment and disposal costs, we will study and implement policies that include sewage treatment charges and financial subsidies to be shared. Study the policy of reducing sewage treatment fees for enterprises and parks that achieve "zero discharge" of waste water, and strictly implement the policy of exempting enterprises that achieve "zero discharge" of waste water from sewage discharge fees.									
12:314	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Continue to implement and improve preferential tax policies for comprehensive utilization of resources. Research, formulate and improve tax policies that promote the construction of a renewable resource recycling system.									
11:42	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling of low-value recyclables. Guide local governments to improve the catalog of low-value recyclables, and continuously improve the classification accuracy of low-value recyclables such as waste glass and low-value waste plastics in domestic waste classification. Support local governments to include the recycling of low-value recyclables into the scope of government procurement services. Encourage all localities to explore ways such as franchising to promote the recycling of low-value recyclables. Encourage qualified places to implement subsidy policies for the recycling of low-value recyclables.				Target low-value recyclables …					
10:79	C6: 14th 5YP CE	Implement tax incentives for the comprehensive utilisation of resources, and expand the scope of the catalogue of corporate income tax incentives for environmental protection, energy and water conservation.				Adjust corporate income tax for CE-contributions in the …					
11:54	C7: The General Office of the State Council on accelerating the construction of	Implement value-added tax and corporate income tax preferential policies for comprehensive utilization of resources.									
11:54	C7: The General Office of the State Council on accelerating the construction of	Implement value-added tax and corporate income tax preferential policies for comprehensive utilization of resources.	13:134	EU2: A new Circular Economy Action Plan 2020	continue to encourage the broader application of well-designed economic instruments, such as environmental taxation, including landfill and incineration taxes, and enable Member States to use value added tax (VAT) rates to promote circular economy activities that target final consumers, notably repair services.	Adjust the VAT in the …					
12:310	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Farmers who have scrapped old agricultural machinery and obtained recycling and dismantling certificates will be given priority in purchasing subsidies for agricultural machinery.				Target agricultural machinery in the …					
12:315	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Study and improve tax policies to reduce the use of disposable consumer goods.				Target disposable consumer goods in the …					
12:316	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	For circular economy technology and equipment that cannot be produced domestically and whose introduction is encouraged by the state, import tariffs will be reduced or exempted within the prescribed scope. Study and improve tariff policies that encourage the import of resource products.				Factor domestically missing CE technology in …	… tariff schemes …				

4:100	C5: Circular Economy Promotion Law of the PRC	The state encourages the recycling of wastes by way of exchanging the old for the new or paying cash deposits.	15:14	EU4: Regulation proposal Critical Rawmaterials Act	Member States retain important competences in the field of circularity, for example in the area of waste collection and treatment systems. These should be used to increase collection and recycling rates for waste streams with a high potential for recovery of critical raw materials, making use for example of financial incentives such as discounts, monetary rewards or deposit-refund systems.	Use (general) …	… take-back and deposit schemes …				
12:228	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Carry out the work of consumers returning old parts and purchasing remanufactured products at replacement prices (exchanging old parts for new ones)									
12:335	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Study and trial the deposit recycling system for used products such as mobile phones, chargers, and beverage bottles.	13:55	EU2: A new Circular Economy Action Plan 2020	EU-wide take back scheme to return or sell back old mobile phones, tablets and chargers;	Target electronics …					
12:310	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Farmers who have scrapped old agricultural machinery and obtained recycling and dismantling certificates will be given priority in purchasing subsidies for agricultural machinery.				Establish certificates for disposal …					
12:335	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Study and trial the deposit recycling system for used products such as mobile phones, chargers, and beverage bottles.				Target recycling in …					
			15:31	EU4: Regulation proposal Critical Rawmaterials Act	introduction of financial incentives, such as discounts, monetary rewards or depositrefund systems, to encourage the re-use of products with high critical raw materials recovery potential and the collection of waste from such products.	Target recycling of CRMs in					
			15:14	EU4: Regulation proposal Critical Rawmaterials Act	Member States retain important competences in the field of circularity, for example in the area of waste collection and treatment systems. These should be used to increase collection and recycling rates for waste streams with a high potential for recovery of critical raw materials, making use for example of financial incentives such as discounts, monetary rewards or deposit-refund systems.						
5:24	C3: 13th 5YP	We will strictly control the amount of rural land designated for collective construction projects, explore the establishment of a rural land purchase and reserve system, and put idle rural land designated for construction to better use.				Use (general) …	… purchase and reserve schemes …				
5:45	C3: 13th 5YP	We will establish a sound initial allocation system for the right to use energy, the right to use water, and the right to emit carbon, develop markets for the trading of these rights, and create new mechanisms in this area for compensated use, budgetary management, investment, and financing.				Establish …	Right-of-use system				
5:49	C3: 13th 5YP	We will establish a unified and standardized platform for the sale of state-owned natural resource assets.									
12:196	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strictly implement the "Plastic Restriction Order", prohibit the sale and use of ultra-thin plastic shopping bags,and implement the policy of paid use of plastic shopping bags.				Target plastic bags in …					
7:22	C2: 14th 5YP	We will expand the sectors relating to energy conservation and environmental protection, clean production, clean energy, ecosystems and the environment, green upgrading of infrastructure, and green services, and promote energy performance contracting, water-saving management contracting, and third-party governance of environmental pollution.				Use …	… contracting …				
9:37	C4: 12th 5YP V1	We will speed up the promotion of the contract energy management and of the power demand side management.									
			15:17	EU4: Regulation proposal Critical Rawmaterials Act	Finally, Member States should promote the recovery of critical raw materials from extractive waste by improving the availability of information and by addressing legal, economic and technical barriers. One possible solution that Member States should look into are risk-sharing mechanisms between operators and the Member State to promote recovery from closed waste facilities.	Use risk sharing...					

			13:29	EU2: A new Circular Economy Action Plan 2020	incentivising product-as-a-service or other models where producers keep the ownership of the product or the responsibility for its performance throughout its lifecycle;	Use product-as-a-service …	… business models …				
			13:85	EU2: A new Circular Economy Action Plan 2020	incentives and support to productas-service models, circular materials and production processes, and increasing transparency through international cooperation;						
9:37	C4: 12th 5YP V1	We will speed up the promotion of the contract energy management and of the power demand side management.				Use …	… demand side management …				

China			EU			Statement/Theme	Statement/Theme	Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content			
7:20	C2: 14th 5YP	The reduction, standardization, and recycling of express delivery packaging will also be advanced.	1:65	EU1: EU action plan for the circular economy	promote a better design of these products, the Commission will emphasise circular economy aspects in future product design requirements under the Ecodesign Directive, the objective of which is to improve the efficiency and environmental performance of energy-related products.	Regulate (general) …	… product design …	
7:27	C2: 14th 5YP	We will establish a unified standards, certification, and identification system for green products, and improve the mechanism for promoting energy-saving household appliances, efficient lighting, and water-saving devices.	1:68	EU1: EU action plan for the circular economy	Ecodesign directive, the Commission has developed and will propose shortly to Member States mandatory product design and marking requirements to make it easier and safer to dismantle, reuse and recycle electronic displays (e.g. flat computer or television screens)			
10:28	C6: 14th 5YP CE	Promote the green design of key products. Improve the policy mechanism for green design of products, and guide enterprises to use environmentally friendly raw materials such as non-toxic, lowtoxic, low-harm, and low (no) volatile organic compounds (VOCs) content in the production process. Promote product design solutions that are easy to disassemble, classify and recycle, and increase the proportion of alternative use of recycled raw materials. Promote the reduction of packaging and packaging printing. Accelerate the improvement of technical specifications for green design evaluation of key products, encourage industry associations to issue guidelines on green design of products, and promote cases of green design.	13:17	EU2: A new Circular Economy Action Plan 2020	At the same time, the single market provides a critical mass enabling the EU to set global standards in product sustainability and to influence product design and value chain management worldwide.			
			13:21	EU2: A new Circular Economy Action Plan 2020	In order to make products fit for a climate-neutral, resource-efficient and circular economy, reduce waste and ensure that the performance of front-runners in sustainability becomes the norm, the Commission will propose a sustainable product policy legislative initiative.			
			13:22	EU2: A new Circular Economy Action Plan 2020	The core of this legislative initiative will be to widen the Ecodesign Directive beyond energy-related products so as to make the Ecodesign framework applicable to the broadest possible range of products and make it deliver on circularity.			
4:48	C5: Circular Economy Promotion Law of the PRC	Enterprises engaging in the design of products, equipment, products and packages shall, in accordance with the requirement of reducing the consumption of resources and the generation of wastes, give preference to the materials which are recyclable, dismountable, degradable, innocuous, harmless or slightly harmful or poisonous, and the compulsory requirements in the relevant state standards shall be satisfied.	13:61	EU2: A new Circular Economy Action Plan 2020	The Commission will also propose to revise the rules on end-of-life vehicles with a view to promoting more circular business models by linking design issues to end-of-life treatment, considering rules on mandatory recycled content for certain materials of components, and improving recycling efficiency.	Regulate material selection for …		
4:49	C5: Circular Economy Promotion Law of the PRC	For any electric apparatus or electronic product that may cause environmental pollution in the process of dismantling and disposal, it is prohibited to use any poisonous or harmful substance. The directory of poisonous and harmful substances prohibited from use in electric apparatus and electronic products shall be worked out by the administrative department of circular economy development under the State Council together with the environmental protection department and other competent departments under the State Council.	13:108	EU2: A new Circular Economy Action Plan 2020	EU chemicals policy and legislation, in particular REACH, encourage a shift to 'safe-by design chemicals' through the progressive substitution of hazardous substances to better protect citizens and the environment.			
4:56	C5: Circular Economy Promotion Law of the PRC	Enterprises manufacturing combustion engines and motor vehicles shall, in accordance with the fuel economy standards of the state for combustion engines and motor vehicles, use oil-saving technologies to reduce the consumption of petroleum products.				Regulate oil consumption …		
9:34	C4: 12th 5YP V1	We will perfect laws, regulations, and standards on energy conservation, and formulate, perfect, and strictly implement measures on energy consumption quota of major energy consumption products and on products' energy efficiency standards.	13:18	EU2: A new Circular Economy Action Plan 2020	Notably, the Ecodesign Directive successfully regulates energy efficiency and some circularity features of energy-related products.	Regulate energy-efficiency …		
7:5	C2: 14th 5YP	We will implement key projects to optimize energy systems and upgrade energy saving technologies, and accelerate the formulation and revision of mandatory national standards for energy consumption quotas and energy efficiency of products and equipment.	13:51	EU2: A new Circular Economy Action Plan 2020	regulatory measures for electronics and ICT including mobile phones, tablets and laptops under the Ecodesign Directive so that devices are designed for energy efficiency and durability, reparability, upgradability, maintenance, reuse and recycling.			

4:48	C5: Circular Economy Promotion Law of the PRC	Enterprises engaging in the design of products, equipment, products and packages shall, in accordance with the requirement of reducing the consumption of resources and the generation of wastes, give preference to the materials which are recyclable, dismountable, degradable, innocuous, harmless or slightly harmful or poisonous, and the compulsory requirements in the relevant state standards shall be satisfied.	13:51	EU2: A new Circular Economy Action Plan 2020	regulatory measures for electronics and ICT including mobile phones, tablets and laptops under the Ecodesign Directive so that devices are designed for energy efficiency and durability, reparability, upgradability, maintenance, reuse and recycling.	Regulate for CE-contribution in …		
11:41	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling of used power batteries. Strengthen the traceability management of new energy vehicle power batteries. Organize and carry out producer recycling target responsibility system actions. Establish and improve standard systems for power battery ecological design and carbon footprint accounting, actively participate in the formulation of international standards for power battery recycling, and promote international cooperation and mutual recognition of standards and specifications. Vigorously promote the quality certification of power battery cascade utilization products, and study and formulate technical specifications for waste power battery recycling and dismantling enterprises. Carry out a joint special inspection operation of "workshopstyle recycling" of used power batteries.				Regulate batteries' …		
			13:52	EU2: A new Circular Economy Action Plan 2020	Printers and consumables such as cartridges will also be covered unless the sector reaches an ambitious voluntary agreement within the next six months;	Regulate cartridges'		
10:81	C6: 14th 5YP CE	Strengthen the standardised management of enterprises recycling end-of-life motor vehicles, waste electrical and electronic products and waste batteries, crack down on illegal modification and assembling, dismantling and processing, and increase investigation and punishment. Strengthen market supervision, crack down on the illegal production and sale of plastic products banned by the state, and strictly investigate and deal with the behaviour of degradable plastics such as false labelling and pseudo-labelling. Strengthen the environmental supervision of recycling, utilisation and disposal of waste materials.	1:88	EU1: EU action plan for the circular economy	Green claims may not always meet legal requirements for reliability, accuracy and clarity.The Commission is working with stakeholders to make green claims more trustworthy, and will ensure better enforcement of the rules in place, including through updated guidance on unfair commercial practices.	Regulate green claims …		
			13:128	EU2: A new Circular Economy Action Plan 2020	regulatory framework for certification of carbon removals based on robust and transparent carbon accounting to monitor and verify the authenticity of carbon removals.			
12:231	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Establish a remanufactured product quality assurance system and sales system to promote the integration of remanufactured product production and after-sales service.	1:93	EU1: EU action plan for the circular economy	Aspects relating to guarantees, such as the legal guarantee period and the reversal of the burden of proof, are also an important part of the consumption puzzle, as they can protect consumers against defective products and contribute to products' durability and reparability, preventing them from being thrown away.	Regulate product guarantee …		
			13:37	EU2: A new Circular Economy Action Plan 2020	In addition, the Commission will work towards establishing a new 'right to repair' and consider new horizontal material rights for consumers for instance as regards availability of spare parts or access to repair and, in the case of ICT and electronics, to upgrading services. Regarding the role that guarantees can play in providing more circular products, the Commission will explore possible changes also in the context of the review of Directive 2019/77115 .			
			13:36	EU2: A new Circular Economy Action Plan 2020	To enhance the participation of consumers in the circular economy, the Commission will propose a revision of EU consumer law to ensure that consumers receive trustworthy and relevant information on products at the point of sale, including on their lifespan and on the availability of repair services, spare parts and repair manuals. The Commission will also consider further strengthening consumer protection against green washing and premature obsolescence, setting minimum requirements for sustainability labels/logos and for information tools.			

10:63	C6: 14th 5YP CE	(7) Actions to improve the quality of the recycling of waste electrical and electronic products Using Internet information technology and encouraging diversified participation, we will build a recycling network for waste electrical and electronic products that integrates online and offline, and continue to carry out pilot projects on the extension of producer responsibility for electrical and electronic products. Support for electrical and electronic product manufacturers to establish a recycling system through independent recycling, joint recycling or entrusted recycling, guide and regulate the production enterprises and recycling enterprises, e-commerce platforms to share information. Guide the flow of waste electrical and electronic products into standardised dismantling enterprises. Guarantee the security of personal privacy information throughout the recycling process of mobile phones, computers and other electronic products. Strengthen scientific and technological innovation, encourage the promotion and application of new technologies, new techniques and new equipment, support the upgrading and transformation of processes and equipment of standardised dismantling enterprises, promote intelligent and refined dismantling, and promote high-value utilisation.				Regulate product data policy …	… in non-design product issues …	
11:29	C7: The General Office of the State Council on accelerating the construction of	Promulgated regulations on how to clear information when second-hand goods trading companies trade tablets, mobile phones and other electronic products to ensure the security of sellers' information when trading second-hand goods.						
			1:95	EU1: EU action plan for the circular economy	requirements concerning the availability of spare parts and repair information (e.g. through online repair manuals) will be considered, including through exploring the possibility of horizontal requirements on the provision of repair information.	Regulate repairability …		
			13:51	EU2: A new Circular Economy Action Plan 2020	regulatory measures for electronics and ICT including mobile phones, tablets and laptops under the Ecodesign Directive so that devices are designed for energy efficiency and durability, reparability, upgradability, maintenance, reuse and recycling.			
			13:36	EU2: A new Circular Economy Action Plan 2020	To enhance the participation of consumers in the circular economy, the Commission will propose a revision of EU consumer law to ensure that consumers receive trustworthy and relevant information on products at the point of sale, including on their lifespan and on the availability of repair services, spare parts and repair manuals. The Commission will also consider further strengthening consumer protection against green washing and premature obsolescence, setting minimum requirements for sustainability labels/logos and for information tools.			
			13:37	EU2: A new Circular Economy Action Plan 2020	In addition, the Commission will work towards establishing a new 'right to repair' and consider new horizontal material rights for consumers for instance as regards availability of spare parts or access to repair and, in the case of ICT and electronics, to upgrading services. Regarding the role that guarantees can play in providing more circular products, the Commission will explore possible changes also in the context of the review of Directive 2019/77115 .			
			13:53	EU2: A new Circular Economy Action Plan 2020	focus on electronics and ICT as a priority sector for implementing the 'right to repair', including a right to update obsolete software;			
			1:151	EU1: EU action plan for the circular economy	Another area where action might be needed concerns date marking, in particular the "best before" date. This can be wrongly interpreted as an expiry date and lead to the discarding of safe, edible food. The Commission will examine ways of promoting a better use and understanding of date marking by the various actors of the food chain. The EU has also adopted measures to prevent edible fish being thrown back into the sea from fishing vessels.	Regulate food best before date …		
4:85	C5: Circular Economy Promotion Law of the PRC	Any recycled electric apparatus or electronic product to be sold after repair must meet the standards for reutilized products and be labeled it as a reutilized product at an eye-catching place.				Regulate label of CE products …		
4:88	C5: Circular Economy Promotion Law of the PRC	Any reproduced or renewed product to be sold shall satisfy the prescribed quality standards of the state and be labeled as a reproduced or renewed product at an eye-catching place.						

			13:70	EU2: A new Circular Economy Action Plan 2020	rules for the safe recycling into food contact materials of plastic materials other than PET.	Regulate product safety …		… to create technology push
			15:12	EU4: Regulation proposal Critical Rawmaterials Act	A joint review is being carried out of the End-of-Life Vehicles Directive 2000/53/EC12, in conjunction with Directive EN 5 EN 2005/64/EC13 on the type-approval of motor vehicles regarding their reusability, recyclability and recoverability, aiming to reduce waste from end-of-life vehicles and their components and increase the circularity of both conventional and electric vehicles, which contain significant amounts of CRMs. The legislative initiative based on this review will complement the horizontal recyclability requirements included in this Regulation by introducing more specific requirements to improve the recyclability of permanent magnets in vehicles, which will make their waste treatment and recycling easier.	Regulate recyclability …		
4:35	C5: Circular Economy Promotion Law of the PRC	Enterprises producing products or packages listed in the catalogue of articles subject to compulsory recycle must be responsible for recycling deserted products or packages. For those usable, the producers thereof shall be responsible for using them, while for those products which are inappropriate for reutilization due to the absence of technical or economic conditions, the producers shall make them harmless.	13:65	EU2: A new Circular Economy Action Plan 2020	In order to ensure that all packaging on the EU market is reusable or recyclable in an economically viable way by 2030, the Commission will review Directive 94/62/EC27 to reinforce the mandatory essential requirements for packaging to be allowed on the EU market	Mandate compulsory recycling as …	… producer responsibility …	
4:38	C5: Circular Economy Promotion Law of the PRC	The catalogue of products and packages subject to compulsory recycle and the administrative measures therefor shall be determined by the administrative department of circular economy development under the State Council.						
12:326	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Study and establish a producer responsibility system for mandatory recycling of products and packaging, cars, tires, mobile phones, and chargers.						
			13:90	EU2: A new Circular Economy Action Plan 2020	revision of the Construction Product Regulation , including the possible introduction of recycled content requirements for certain construction products, taking into account their safety and functionality;	Mandate compulsory recycled content as…		
			13:61	EU2: A new Circular Economy Action Plan 2020	The Commission will also propose to revise the rules on end-of-life vehicles with a view to promoting more circular business models by linking design issues to end-of-life treatment, considering rules on mandatory recycled content for certain materials of components, and improving recycling efficiency.			
			13:73	EU2: A new Circular Economy Action Plan 2020	To increase uptake of recycled plastics and contribute to the more sustainable use of plastics, the Commission will propose mandatory requirements for recycled content and waste reduction measures for key products such as packaging, construction materials and vehicles, also taking into account the activities of the Circular Plastics Alliance.			
4:35	C5: Circular Economy Promotion Law of the PRC	Enterprises producing products or packages listed in the catalogue of articles subject to compulsory recycle must be responsible for recycling deserted products or packages. For those usable, the producers thereof shall be responsible for using them, while for those products which are inappropriate for reutilization due to the absence of technical or economic conditions, the producers shall make them harmless.	13:67	EU2: A new Circular Economy Action Plan 2020	driving design for re-use and recyclability of packaging, including considering restrictions on the use of some packaging materials for certain applications, in particular where alternative reusable products or systems are possible or consumer goods can be handled safely without packaging;	Mandate compulsory reuse as …		
			13:132	EU2: A new Circular Economy Action Plan 2020	enhance disclosure of environmental data by companies in the upcoming review of the non-financial reporting directive;	Mandate reporting as …		
			15:36	EU4: Regulation proposal Critical Rawmaterials Act	Operators of existing waste facilities shall submit the study referred to in paragraph 1 to the competent authority as defined in Article 3 of Directive 2006/21/EC by [OP please insert: 3 years after the date of entry into force of this Regulation]. Operators of new waste facilities shall submit this study to the competent authority when submitting their waste management plans in accordance with Article 5 of Directive 2006/21/EC.			

			15:9	EU4: Regulation proposal Critical Rawmaterials Act	Second, the EU's waste framework governs the collection, reduction, recycling and treatment of waste, including of waste streams containing critical raw materials. The Extractive Waste Directive requires any operator responsible for managing extractive waste (i.e. the waste generated by mining operations) to obtain a permit. This proposal will complement this by requiring operators (for waste facilities currently operating) and Member States (for closed and abandoned waste facilities) to analyse the CRMs recovery potential in extractive waste.	Mandate CRM potential analysis as …	
			15:21	EU4: Regulation proposal Critical Rawmaterials Act	In elaborating this study, operators should gather the necessary information, including concentrations and quantities of critical raw materials in the extractive waste, and perform an assessment of multiple options regarding processes, operations or business arrangements that could enable an economically viable recovery of critical raw materials. This obligation comes in addition to obligations laid down in Directive 2006/21/EC and the national laws transposing it and is directly applicable. In its implementation, operators and competent authorities should seek to minimise administrative burden and integrate procedures to the extent possible.		
4:37	C5: Circular Economy Promotion Law of the PRC	For products or packages listed in the catalogue of articles subject to compulsory recycle, consumers shall deliver the deserted ones to the producers or the distributors or other organizations entrusted by the producers for recycle.				Mandate compulsory disposal as …	… consumer responsibility …
12:292	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement the "Guidance Catalog for Industrial Structural Adjustment", "Guidance Catalog for Foreign Investment Industries", "Catalogue of Restricted Land Use Projects" and "Catalogue of Prohibited Land Use Projects".				Regulate (general) …	… product catalogues …
12:294	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Publish a list of technologies, processes, equipment, materials and products that are encouraged, restricted and eliminated by the state, a list of remanufactured products and a list of disposable products with restricted production and sales, as well as management measures.					
4:47	C5: Circular Economy Promotion Law of the PRC	The administrative department of circular economy development under the State Council shall, together with the environmental protection department and other competent departments under the State Council, issue a catalogue of the encouraged, restricted and eliminated techniques, equipment, materials and products on a regular basis. It is prohibited to produce, import or sell any equipment, material or product listed in the eliminated category, and it is also prohibited to use any technique, equipment or material listed in the eliminated category.	13:41	EU2: A new Circular Economy Action Plan 2020	assessing options for further promoting circularity in industrial processes in the context of the review of the Industrial Emissions Directive, including the integration of circular economy practices in upcoming Best Available Techniques reference documents;	Regulate equipment and technology in …	
4:49	C5: Circular Economy Promotion Law of the PRC	For any electric apparatus or electronic product that may cause environmental pollution in the process of dismantling and disposal, it is prohibited to use any poisonous or harmful substance. The directory of poisonous and harmful substances prohibited from use in electric apparatus and electronic products shall be worked out by the administrative department of circular economy development under the State Council together with the environmental protection department and other competent departments under the State Council.				Regulate harmful substances in …	
5:11	C3: 13th 5YP	We will launch the "100, 1,000, 10,000" energy conservation initiative to put the top 100 energy consuming enterprises in China under national regulation, the top 1,000 energy consuming enterprises under the regulation of their respective provincial- level governments, and other high energy consuming enterprises under the regulation of lower-level governments; encourage enterprises to take voluntary measures to reduce energy consumption; facilitate the development of energy management systems, energy measurement systems, and online energy consumption monitoring systems; and carry out energy reviews and efficiency evaluations.				Regulate state intervention in…	

10:29	C6: 14th 5YP CE	Strengthen clean production in key industries. In accordance with the law, the "double over double high energy-consuming" industry to implement mandatory cleaner production audits, and guide other industries to carry out audits voluntarily. Further regulate the cleaner production audit behaviour and improve the quality of cleaner production audits. Promote petrochemical, chemical, coking, cement, non-ferrous metals, electroplating, printing and dyeing, packaging and printing and other key industries, "a line a policy" to develop cleaner production transformation and upgrading plans. Accelerate cleaner production technology innovation, transformation and standard system construction, establish and improve the differentiation of reward and punishment mechanism, and explore the development of regional, industrial parks and industry cleaner production audit pilot demonstration work as a whole.				Target clean production in …	… enterprise operation …	
4:50	C5: Circular Economy Promotion Law of the PRC	Industrial enterprises shall use advanced or applicable water-saving technologies, techniques and equipment, work out and implement water-saving plans, strengthen water-saving management and exercise control over the use of water in the whole process of production.				Regulate water use in …		
4:51	C5: Circular Economy Promotion Law of the PRC	Industrial enterprises shall strengthen quantitative management of water use, be equipped with and use acceptable water measurement instrument, and set up a water consumption statistics system and a water use status analysis system.						
4:52	C5: Circular Economy Promotion Law of the PRC	Any newly built, rebuilt or enlarged construction project shall have water-saving facilities, which shall be planned, built and put into use simultaneously with the main body of the project.						
7:33	C2: 14th 5YP	We will strengthen management of water quotas in water-consuming industries.						
4:55	C5: Circular Economy Promotion Law of the PRC	Enterprises in such industries as electric power, oil processing, chemical industry, steel, non-ferrous metal and building materials must replace fuel oil with clean energy, e.g., clean coal, petroleum coke, natural gas, etc. within the scope and time limit prescribed by the state, and must stop using fuel generator sets and oil boilers that fail to satisfy the relevant state provisions.				Regulate fuel oil in …		
4:57	C5: Circular Economy Promotion Law of the PRC	A mining enterprise shall make overall plans, work out reasonable mineral resource exploitation and utilization plans and take reasonable mining sequences, methods and milling techniques. The mining license issuing organ shall examine the mining recovery rate, impoverishment rate, milling recovery rate, water reutilization rate in mines, land re-reclamation rate and other indicators stated in the development and utilization plan submitted by an applicant, and, where any indicator fails to reach the prescribed standards, shall not issue a mining license to the applicant. The mining license issuing organ shall strengthen supervision and administration over the exploitation of mineral resources according to law.				Regulate mining …		
4:58	C5: Circular Economy Promotion Law of the PRC	A mining enterprise shall, at the same time of mining the major mineral resources, make comprehensive exploitation and reasonable utilization of the intergrown and associated ores which have industrial values, and take protection measures against the minerals which must be mined simultaneously but may not be used temporarily as well as the tailings which have useful components so as to prevent the loss of resources and damage to the ecological environment.						
4:59	C5: Circular Economy Promotion Law of the PRC	Entities in architectural design and construction industry shall, according to the relevant state provisions and standards, use energy-saving, water-saving, land-saving and material-saving technologies and techniques as well as small, light and recyclable products for construction. Areas shall, where possible, make sufficient utilization of solar energy, geothermal energy, wind energy and other renewable energy resources.						

12:235	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strictly control the design process, strengthen the review of construction drawings, and ensure that 100% of the urban building design stages meet energy-saving standards. Strengthen construction supervision and inspection to ensure project quality and safety, and the implementation rate of energy-saving standards during the construction phase has reached more than 95%. Strictly implement special energy-saving acceptance inspections. Those that fail to meet energy-saving standards will not pass the completion acceptance and will be forced to make rectifications. Encourage qualified regions to improve building energy efficiency standards.				Regulate construction …		
4:62	C5: Circular Economy Promotion Law of the PRC	The people's governments at or above the county level and the agricultural departments and other competent departments thereunder shall promote the intensive use of land, encourage agricultural producers to take advanced water-saving, fertilizer-saving and pesticide-saving planting, cultivating and irrigating technologies, improve the energy efficiency of agricultural machinery and give priority to the development of ecological agriculture.				Regulate agriculture …		
11:44	C7: The General Office of the State Council on accelerating the construction of	Promote the recycling of waste in new infrastructure fields such as data centers and communication base stations. Study and revise the "Catalogue for Disposal of Waste Electrical and Electronic Products", strengthen the management of new electrical and electronic waste, and improve supporting environmental management policies such as qualification licenses for the disposal of waste electrical and electronic products.				Regulate business licenses for …		
11:51	C7: The General Office of the State Council on accelerating the construction of	Investigate and punish illegal recycling and dismantling of scrapped motor vehicles and discarded electrical and electronic products in accordance with the law.						
11:52	C7: The General Office of the State Council on accelerating the construction of	Crack down on illegal activities in renewable resource recycling and second-hand commodity transactions in accordance with the law.						
12:328	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strengthen the registration management of renewable resource recycling enterprises. Strict qualification management shall be implemented in accordance with the law for enterprises dismantling scrapped cars and discarded electrical and electronic products.						
5:43	C3: 13th 5YP	We will impose binding limits on the total consumption and the intensity of consumption of energy and water resources as well as on the amount of land designated for construction purposes.				Set energy, water, land …	… mandatory quotas …	
			1:158	EU1: EU action plan for the circular economy	The recycling of construction and demolition waste is encouraged by an EU-wide mandatory target, but challenges on the ground still have to be addressed if waste management in this sector is to improve.	Set construction waste recycling …		
			1:166	EU1: EU action plan for the circular economy	The Commission will work on identifying and sharing best practices in this sector and promote innovation; the revised legislative proposals on waste also include a mandatory EU-level target on recycling wood packaging waste.	Set wood packaging recycling …		
5:16	C3: 13th 5YP	We will plan industrial production and urban development based on water resources and impose stricter control over industrial development and water quotas in regions affected by water scarcity.				Set water use …		
7:6	C2: 14th 5YP	Water conservation programs will come into effect nationwide, with mandatory limits being imposed on the use of water resources.						
9:42	C4: 12th 5YP V1	We will enforce the strictest water resources management system, strengthen control over the total volume of water utilization and the fixed rate management, enforce measures on protecting water resources, accelerate the formulation of the plans on the distribution of the water volume at various rivers, enhance the establishment of the water right system, and build a water conservation type society.						
5:22	C3: 13th 5YP	We will strictly control the amount of additional land designated for construction projects and bring under effective control the disorderly expansion of new cities, new districts, and development areas.						

5:24	C3: 13th 5YP	We will strictly control the amount of rural land designated for collective construction projects, explore the establishment of a rural land purchase and reserve system, and put idle rural land designated for construction to better use.				Set land use …		
9:50	C4: 12th 5YP V1	In line with the principle of conserving, intensifying, and of controlling the overall volume of land, we will rationally define the scale, structure, and time order of the newly increase in the land for construction use.						
7:11	C2: 14th 5YP	No more than 1.97 million hectares of land will be newly designated for construction, and steady steps will be taken to lower the total area of land allotted to construction per unit of GDP.						
			13:86	EU2: A new Circular Economy Action Plan 2020	providing guidance to achieve high levels of separate collection of textile waste, which Member States have to ensure by 2025;	Set textile waste …		
5:27	C3: 13th 5YP	We will tighten planning and management of mineral resources; put in place strict systems which ensure their regional management, control total exploitation, and require mining authorization; and we will better coordinate multiple mining activities.				Set mining …		
			1:108	EU1: EU action plan for the circular economy	The revised waste proposals also includes increased recycling targets for packaging materials, which will reinforce the targets on municipal waste and improve the management of packaging waste in the commercial and industrial sectors. More packaging waste (from households and industrial/commercial sources) has been recycled in the EU since the introduction of EU-wide targets for paper, glass, plastics, metal and wood packaging, and there is potential for more recycling, with both economic and environmental benefits.	Set recycling packages, municipal waste	… not mandatory (not-specified) quotas …	
			13:93	EU2: A new Circular Economy Action Plan 2020	considering a revision of material recovery targets set in EU legislation for construction and demolition waste and its material-specific fractions;	Set construction waste recovery …		
			13:99	EU2: A new Circular Economy Action Plan 2020	Therefore, in line with the Sustainable Development Goals and as part of the review of Directive 2008/98/EC38 referred to in section 4.1, the Commission will propose a target on food waste reduction, as a key action under the forthcoming EU Farm-to-Fork Strategy, which will address comprehensively the food value chain.	Set food waste reduction …		
			13:104	EU2: A new Circular Economy Action Plan 2020	waste reduction targets for specific streams as part of a broader set of measures on waste prevention in the context of a review of Directive 2008/98/EC.	Set waste reduction …		
12:224	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	standardize the dismantling and utilization of renewable resources,	1:121	EU1: EU action plan for the circular economy	The development of such standards should increase trust in secondary raw materials and in recycled materials, and help support the market. The Commission will therefore launch work on EU-wide quality standards for secondary raw materials where needed, in consultation with the industries concerned.	Regulate secondary-raw materials …		
10:39	C6: 14th 5YP CE	Improve the regulations on the circulation of second-hand commodities, establish and improve the identification, evaluation and grading standards for second-hand commodities such as vehicles, home appliances and mobile phones, and regulate the order of second-hand commodity circulation and trading behaviour. Encourage the development of the "Internet + second-hand" model, strengthen the management responsibility of the Internet trading platform, strengthen the supervision of trading behaviour, provide standardised and regulated services for second-hand commodity trading, and encourage platform enterprises to introduce third-party second-hand commodity professional operators to improve the efficiency of second-hand commodity trading. Promote the standardised construction and operation of offline physical second-hand markets, and encourage the construction of centralised and standardised "flea markets". Encourage schools at all levels to set up used book sharing corners and days to promote the exchange of used books among teachers and students. Encourage communities to organise secondhand goods trading activities on a regular basis, and promote the trading and circulation of idle goods among residents' families under their jurisdiction.				Regulate second-hand goods …		

			1:125	EU1: EU action plan for the circular economy	In order to address this situation, the Commission will propose a revision of the EU regulation on fertilisers. This will involve new measures to facilitate the EU wide recognition of organic and waste-based fertilisers, thus stimulating the sustainable development of an EU-wide market.	Regulate fertilisers …	… standardisation	… for systemic change
			1:128	EU1: EU action plan for the circular economy	Water reuse in agriculture also contributes to nutrients recycling by substitution of solid fertilisers. The Commission will take a series of actions to promote the reuse of treated wastewater, including legislation on minimum requirements for reused water.	Regulate reused water …		
10:36	C6: 14th 5YP CE	The implementation of scrap iron and steel, waste non-ferrous metals, waste plastics, waste paper, waste tyres, waste mobile phones, waste power batteries and other renewable resources recycling industry norms and management, to enhance the level of standardisation of the industry, and promote the resources to the advantage of the enterprise agglomeration.				Regulate recycling …		
11:62	C7: The General Office of the State Council on accelerating the construction of	Improve the standard system for recycled materials.						
12:312	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Establish a promotion mechanism for state-certified recycled products.						
10:69	C6: 14th 5YP CE	Increase the promotion and application of green recycling shared standardised crates.				Regulate crates …		
10:72	C6: 14th 5YP CE	Strengthen the construction of the traceability management platform for power batteries of new energy vehicles, and improve the traceability management system for the recycling of power batteries of new energy vehicles. Promote new energy vehicle manufacturers and used power battery laddering enterprises to build standardised recycling service outlets through self-built, co-built, authorised and other means. Promote the standardised laddering use of power batteries, and improve the technical level of residual energy detection, residual value assessment, restructuring and utilisation, and safety management. Strengthen the recycling of waste power batteries and the promotion and application of complete sets of advanced technology and equipment for secondary use. Improve the standard system of power battery recycling. Cultivate backbone enterprises for comprehensive utilisation of waste power batteries, and promote the development of waste power battery recycling industry.				Regulate battery …		
11:41	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling of used power batteries. Strengthen the traceability management of new energy vehicle power batteries. Organize and carry out producer recycling target responsibility system actions. Establish and improve standard systems for power battery ecological design and carbon footprint accounting, actively participate in the formulation of international standards for power battery recycling, and promote international cooperation and mutual recognition of standards and specifications. Vigorously promote the quality certification of power battery cascade utilization products, and study and formulate technical specifications for waste power battery recycling and dismantling enterprises. Carry out a joint special inspection operation of "workshopstyle recycling" of used power batteries.						
12:224	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	standardize the dismantling and utilization of renewable resources,				Regulate dismantling …		

12:236	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Focus on promoting the implementation of green building standards in party and government agencies, schools, hospitals, theaters, museums, science and technology museums, gymnasiums and other buildings.				Regulate construction …		
			13:76	EU2: A new Circular Economy Action Plan 2020	developing labelling, standardisation, certification and regulatory measures on unintentional release of microplastics, including measures to increase the capture of microplastics at all relevant stages of products' lifecycle;	Regulate microplastics …		
			13:54	EU2: A new Circular Economy Action Plan 2020	regulatory measures on chargers for mobile phones and similar devices, including the introduction of a common charger, improving the durability of charging cables, and incentives to decouple the purchase of chargers from the purchase of new devices;	Regulate auxiliary equipment …		
5:46	C3: 13th 5YP	We will improve standards for conserving energy, water, land, materials, and minerals, raise building energy efficiency standards, and ensure that energy conservation standards cover all key industries and equipment.				Regulate (general) product ...		
12:8	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	A system of regulations and standards has been initially established. The Circular Economy Promotion Law came into effect on January 1, 2009, marking that my country's circular economy has entered the legal management track. The Regulations on the Management of Recycling and Disposal of Waste Electrical and Electronic Products and the Measures on the Management of Recycling of Renewable Resources have been announced and implemented, and more than 200 national standards related to circular economy have been issued. Some regions have formulated local circular economy promotion regulations.						
10:76	C6: 14th 5YP CE	Improve the standard system of circular economy, improve the standards and norms for green design, clean production, remanufacturing, recycled raw materials, green packaging, wasteful building materials, etc., and deepen the pilot work of national standardisation of circular economy.						
12:321	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Accelerate the formulation of product standards for degradable products, recycled products, kitchen waste resource products, waste-recycling building materials and agricultural machinery prohibition and scrapping standards, and improve energy-saving, water-saving, and comprehensive resource utilization product standards. Improve standards for excessively packaged goods.						
10:14	C6: 14th 5YP CE	At present, the development of China's circular economy is still faced with such outstanding problems as low resource output efficiency in key industries, low level of standardisation of recycling of renewable resources, lack of land security for recycling facilities, difficulty in recycling low-value recyclables, high intensity of generation of bulk solid wastes, insufficient utilisation, and low valueadded of comprehensively utilised products.				Address (general) …	… policy problems ….	
			1:150	EU1: EU action plan for the circular economy	EU action is also important in areas where food waste can result from the way EU legislation is interpreted or implemented. This is the case for rules concerning food donation to food banks, and the use of safe unsold food as a resource in animal feed – the Commission will take measures in these two areas.	Adress food waste …		
			13:19	EU2: A new Circular Economy Action Plan 2020	At the same time, instruments such as the EU Ecolabel or the EU green public procurement (GPP) criteria are broader in scope but have reduced impact due to the limitations of voluntary approaches.	Adress voluntarity as …		
5:4	C3: 13th 5YP	We will put into effect industry negative lists in key ecosystem service areas.				Establish (general) …		
4:61	C5: Circular Economy Promotion Law of the PRC	It is prohibited to damage or destroy arable land to bake bricks. It is prohibited to produce, sell or use clay bricks within the time limit or areas prescribed by the State Council or the people's government of a province, autonomous region or municipality directly under the Central Government.						

12:331	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Further progress will be made to ban the production and use of solid clay bricks.				Establish brick baking …	… prohibition …	
4:68	C5: Circular Economy Promotion Law of the PRC	The state encourages and supports the use of recycled water. Areas with the conditions for using recycled water shall restrict or forbid the use of tap water for urban road cleaning, planting and landscape purposes.				Establish tap water use …		
12:333	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Study and formulate management measures to restrict the use of urban tap water as water for urban road cleaning, urban greening and landscape in areas where conditions permit the use of recycled water.						
4:69	C5: Circular Economy Promotion Law of the PRC	The state sets restrictions on the production and distribution of one-off consumption goods under the precondition of safeguarding product security and sanitation. The specific directory of the one-off consumption goods under restriction shall be formulated by the administrative department of circular economy development under the State Council together with the public finance department and the environmental protection department under the State Council. For the production and distribution of the one-off consumption goods listed in the directory as mentioned in the preceding paragraph, the public finance department, the tax department and the foreign trade department under the State Council shall work out corresponding restrictive tax and export policies.	13:59	EU2: A new Circular Economy Action Plan 2020	addressing non-rechargeable batteries with a view to progressively phasing out their use where alternatives exists;	Establish single-use products …		
5:41	C3: 13th 5YP	We will restrict the use of single-use disposable products.						
10:65	C6: 14th 5YP CE	(9) Special action on the whole chain management of plastic pollution Scientific and reasonable promotion of plastic source reduction, strictly prohibit the production of ultra-thin agricultural film, daily chemical products containing plastic microbeads and other products that endanger the environment and human health, and encourage the public to reduce the use of disposable plastic products. In-depth assessment of the resource and environmental impacts of various types of plastic substitutes throughout their life cycle. Promote degradable plastics according to local conditions, actively and steadily, improve the standard system, enhance inspection and testing capacity, and regulate the application and disposal of degradable plastics. Promote the application of standard films and improve the recycling level of used agricultural films. Strengthen the classification, recycling and reuse of plastic waste, accelerate the construction of domestic waste incineration and treatment facilities, and reduce the amount of plastic waste in landfills. Carry out plastic rubbish cleanup in rivers, lakes and coastlines, and implement special actions to clean up marine rubbish. Strengthen policy interpretation and publicity and guidance to create a good social atmosphere.	13:75	EU2: A new Circular Economy Action Plan 2020	restricting intentionally added microplastics and tackling pellets taking into account the opinion of the European Chemicals Agency;	Establish plastics …		
12:196	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strictly implement the "Plastic Restriction Order", prohibit the sale and use of ultra-thin plastic shopping bags, and implement the policy of paid use of plastic shopping bags.						
12:330	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Continue to consolidate the results of "plastic restriction" and study and expand the scope of "plastic restriction" in a timely manner.						
12:257	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Consumers are encouraged to purchase and use energy-saving and environmentally friendly products, energy-saving and land-saving residences, and reduce the use of disposable items. It is encouraged to bring your own shopping bags, and the use of ultra-thin plastic shopping bags is prohibited. Strengthen the construction of regulations and standards, restrict companies from over-packaging goods, and guide consumers to boycott over-packaged goods.				Establish packaging …		

12:296	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Study and formulate policies to restrict the mining of natural gypsum in areas with large amounts of desulfurized gypsum.				Establish gypsum mining …		… to stir demand pull
			13:28	EU2: A new Circular Economy Action Plan 2020	introducing a ban on the destruction of unsold durable goods;	Establish unsold consumer goods destruction …		
4:103	C5: Circular Economy Promotion Law of the PRC	Any enterprise producing or selling any product or equipment listed in the eliminated category shall be punished in accordance with the Product Quality Law of the People's Republic of China.				Regulate law violation (general) …	… punishment …	
4:104	C5: Circular Economy Promotion Law of the PRC	Where any enterprise uses any technology, technique, equipment or material listed in the eliminated category, the administrative department of circular economy development under the local people's government at or above the county level shall order it to stop such use, confiscate the illegally used equipment or material, and impose a fine of not more than 200,000 yuan but not less than 50,000 yuan. If the circumstances are serious, the administrative department of circular economy development may submit its opinions to the people's government at the same level and request the latter to order, within its authority prescribed by the State Council, the enterprise to wind up its business or close down. Where any enterprise, in violation of this Law, imports any equipment, material or product listed in the eliminated category, the customs shall order it to return such equipment, material or product, and may impose a fine of not more than one million yuan but not less than 100,000 yuan. If the importer is unidentified, the carrier shall be responsible for returning the goods or paying the relevant disposal costs.						
4:105	C5: Circular Economy Promotion Law of the PRC	Where any enterprise designs the use of any poisonous and harmful substance listed in the prohibited category of the state in any electric apparatus, electronic product or other product which may cause environmental pollution in the process of dismantlement or disposal, the product quality control department of the local people's government at or above the county level shall order it to correct within a certain time limit, impose a fine of not more than 200,000 yuan but not less than 20,000 yuan upon it if it refuses to correct within the time limit, and, if the circumstances are serious, notify the administrative department for industry and commerce of the situation and the latter shall revoke the business license of the enterprise according to law.				Regulate violation of harmful substance mandate …		
4:106	C5: Circular Economy Promotion Law of the PRC	Where any enterprise in electric power, petroleum processing, chemical industry, steel, non-ferrous metal or building materials, as in violation of this Law, fails to stop using a fuel generator set or oil boiler which fails to meet the prescribed standards of the state within a prescribed scope or time limit, the administrative department of circular economy development under the local people's government at or above the county level shall order it to correct within a certain time limit, and, if it fails to correct within the time limit, order it to dismantle the fuel generator set or oil boiler, and impose a fine of not more than 500,000 yuan but not less than 50,000 yuan upon it.				Regulate violation of fuel oil mandate …		
4:107	C5: Circular Economy Promotion Law of the PRC	Where any mining enterprise, as in violation of this Law, fails to reach such indicators predetermined upon examination as mining recovery rate, impoverishment rate, milling recovery rate, water reutilization rate in mines, and land re-reclamation rate, the administrative department of circular economy development under the local people's government at or above the county level shall order it to correct within a certain time limit and impose a fine of not more than 500,000 yuan but not less than 50,000 yuan upon it. If the enterprise fails to correct within the time limit, the organ issuing the mining license to the enterprise shall revoke its mining license according to law.				Regulate violation mining mandate …		

4:108	C5: Circular Economy Promotion Law of the PRC	Where any enterprise, as in violation of this Law, produces, sells or uses clay bricks in a period or area when or where the production, sale or use of clay bricks is prohibited by the State Council or the people's government of a province, autonomous region or municipality directly under the Central Government, the department appointed by the local people's government at or above the county level shall order it to correct within a certain time limit and confiscate the illegal gains, if any. If it continues to do so after the prescribed time limit expires, the administrative department for industry and commerce of the local people's government shall revoke its business license according to law.				Regulate brick baking mandate …		
			13:121	EU2: A new Circular Economy Action Plan 2020	EU rules on waste shipments. The review will also aim at restricting exports of waste that have harmful environmental and health impacts in third countries or can be treated domestically within the EU by focusing on countries of destination, problematic waste streams, types of waste operations that are source of concern, and enforcement to counteract illegal shipments. The Commission will also support measures at multilateral, regional and bilateral levels to combat environmental crime notably in the areas of illegal exports and illicit trafficking, strengthen controls of shipments of waste,	Regulate illegal exports …		
4:65	C5: Circular Economy Promotion Law of the PRC	State organs and other organizations using funds from the public finance shall be frugal, put an end to extravagance, take the lead in using energy-saving, water-saving, land-saving, materialsaving and environment-friendly products, equipment and facilities, and use office supplies in an economic way. The offices administrations under the State Council and the local people's governments at or above the county level shall, together with other relevant departments at the same level, work out energy use quotas and water use quotas for the state organs at the same level, and the public finance departments shall work out disbursement standards according to such quotas.				Mandate frugality of …		
11:58	C7: The General Office of the State Council on accelerating the construction of	All localities should coordinate the construction of recycling facilities such as classified collection, transfer and storage of social waste in the region, and include them within the scope of public infrastructure land to ensure reasonable land use needs. Encourage urban people's governments to improve the land guarantee mechanism for resource recycling projects and set aside certain space in planning for guaranteeing resource recycling projects.				Regulate recycling facility planning in …		
4:66	C5: Circular Economy Promotion Law of the PRC	The people's governments and the owners or users of buildings in cities shall take measures to better maintain and manage buildings and prolong their life. For any building which meets the urban planning and the construction standards and is in the reasonable service life, a city people's government may not make a decision to dismantle it unless it does so for public interests.				Regulate construction under …		
10:29	C6: 14th 5YP CE	Strengthen clean production in key industries. In accordance with the law, the "double over double high energy-consuming" industry to implement mandatory cleaner production audits, and guide other industries to carry out audits voluntarily. Further regulate the cleaner production audit behaviour and improve the quality of cleaner production audits. Promote petrochemical, chemical, coking, cement, non-ferrous metals, electroplating, printing and dyeing, packaging and printing and other key industries, "a line a policy" to develop cleaner production transformation and upgrading plans. Accelerate cleaner production technology innovation, transformation and standard system construction, establish and improve the differentiation of reward and punishment mechanism, and explore the development of regional, industrial parks and industry cleaner production audit pilot demonstration work as a whole.				Regulate auditing by …		
11:37	C7: The General Office of the State Council on accelerating the construction of	Strengthen cleaner production audits and results application of enterprises in key industries.						

10:37	C6: 14th 5YP CE	Strengthen the standardised management and environmental supervision of dismantling and utilisation enterprises of waste electrical and electronic products, end-of-life motor vehicles, end-of-life ships, and waste lead storage batteries, etc., and intensify the remediation of non-compliant enterprises, so as to create a fair environment for market competition.				Regulate enterprise supervision by …	… public administration	
10:81	C6: 14th 5YP CE	Strengthen the standardised management of enterprises recycling end-of-life motor vehicles, waste electrical and electronic products and waste batteries, crack down on illegal modification and assembling, dismantling and processing, and increase investigation and punishment. Strengthen market supervision, crack down on the illegal production and sale of plastic products banned by the state, and strictly investigate and deal with the behaviour of degradable plastics such as false labelling and pseudo-labelling. Strengthen the environmental supervision of recycling, utilisation and disposal of waste materials.						
11:41	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling of used power batteries. Strengthen the traceability management of new energy vehicle power batteries. Organize and carry out producer recycling target responsibility system actions. Establish and improve standard systems for power battery ecological design and carbon footprint accounting, actively participate in the formulation of international standards for power battery recycling, and promote international cooperation and mutual recognition of standards and specifications. Vigorously promote the quality certification of power battery cascade utilization products, and study and formulate technical specifications for waste power battery recycling and dismantling enterprises. Carry out a joint special inspection operation of "workshopstyle recycling" of used power batteries.						
12:322	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Formulate relevant specifications for collaborative resource treatment of waste in the production process, quality control of renewable resource recovery, dismantling, utilization and remanufacturing.						
			16:39	EU5: Ecodesign requirements for sustainable products	Two or more economic operators may submit a self-regulation measure establishing ecodesign requirements for products to the Commission as an alternative to a delegated act adopted pursuant to Article 4. Those operators shall provide evidence that the criteria referred to in paragraph 3, points (a) to (e), are fulfilled. With respect to paragraph 3, point (a), that evidence shall consist of a structured technical, environmental and economic analysis, justifying the ecodesign requirements and objectives of the self-regulation measure, and assessing the impacts of the ecodesign requirements set in that self-regulation measure.	Allow self-regulation of enterprises by …		

China			EU			Statement/Theme	Statement/Theme	Statement/Theme		
ID	Document	Quotation content	ID	Document	Quotation content					
4:44	C5: Circular Economy Promotion Law of the PRC	The state shall set up a system of labeling the resource consumption level (such as energy efficiency) of products and constantly improve it.	1:90	EU1: EU action plan for the circular economy	The voluntary EU Ecolabel identifies products that have a reduced environmental impact throughout their lifecycle. The Commission will examine how to increase its effectiveness and contribution to the circular economy.	Use product sustainability ...	.... labelling	.. to stir demand pull		
7:27	C2: 14th 5YP	We will establish a unified standards, certification, and identification system for green products, and improve the mechanism for promoting energy-saving household appliances, efficient lighting, and water-saving devices.	13:19	EU2: A new Circular Economy Action Plan 2020	At the same time, instruments such as the EU Ecolabel or the EU green public procurement (GPP) criteria are broader in scope but have reduced impact due to the limitations of voluntary approaches.					
9:18	C4: 12th 5YP V1	We will enhance planning guidance and policy support on finance and taxation, perfect laws and regulations and standards, implement producers' accountability extension system, formulate technological and product catalogues of circular economy, establish a renewable products' identification system, and set up a sound statistics and evaluation system for circular economy.								
			13:129	EU2: A new Circular Economy Action Plan 2020	integrating the circular economy objective under the EU Taxonomy Regulation, and carrying out preparatory work on EU Ecolabel criteria for financial products.	Target financial products for sustainability ...				
12:334	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Research and establish a labeling management system for compulsory recycling of products and packaging, key recycled products, auto parts and other remanufactured products.				Use recycling ...				
			13:30	EU2: A new Circular Economy Action Plan 2020	mobilising the potential of digitalisation of product information, including solutions such as digital passports, tagging and watermarks;	Use digital information for ...				
			13:76	EU2: A new Circular Economy Action Plan 2020	developing labelling, standardisation, certification and regulatory measures on unintentional release of microplastics, including measures to increase the capture of microplastics at all relevant stages of products' lifecycle;	Targets microplastic ...				
			15:38	EU4: Regulation proposal Critical Rawmaterials Act	From [OP please insert: 3 years after the date of entry into force of this Regulation], any natural or legal person that places on the market magnetic resonance imaging devices, wind energy generators, industrial robots, motor vehicles, light means of transport, cooling generators, heat pumps, electric motors, including where they are integrated in other products, automatic washing machines, tumble driers, microwaves, vacuum cleaners or dishwashers shall ensure that those products bear a conspicuous, clearly legible and indelible label indicating: (a) whether or not those products incorporate one or more permanent magnets; EN 42 EN (b) if the product incorporates one or more permanent magnets, whether those magnets belong to any of the following types: (i) Neodymium-Iron-Boron; (ii) Samarium-Cobalt; (iii) Aluminium-Nickel-Cobalt; (iv) Ferrite.	Target magnet ...				
			16:34	EU5: Ecodesign requirements for sustainable products	Where the information requirements referred in Article 7(1) specify that information shall be included in a label pursuant to Article 6(6), point (d), the delegated acts adopted pursuant to Article 4 shall specify: (a) the content of the label; (b) the layout of the label taking account visibility and legibility; (c) the manner in which the label shall be displayed to customers including in case of distance selling, taking into account the requirements set out in Article 26 and the implications for the relevant economic operators; (d) where appropriate, electronic means for generating labels.	Regulations for ...				
			16:44	EU5: Ecodesign requirements for sustainable products	Manufacturers shall ensure that their products bear a type, batch or serial number or other element allowing their identification, or, where the size or nature of the product does not allow so, that the required information is provided on the packaging or in a document accompanying the product.					
4:44	C5: Circular Economy Promotion Law of the PRC	The state shall set up a system of labeling the resource consumption level (such as energy efficiency) of products and constantly improve it.	1:91	EU1: EU action plan for the circular economy	Earlier this year, the Commission proposed an improved labelling system for the energy performance of household appliances and other energy-related products, which will help consumers choose the most efficient products. The proposed system will also allow for the displaying to consumers of information on the environmental performance, including durability, of energy-related products.	Use energy-efficiency				
7:27	C2: 14th 5YP	We will establish a unified standards, certification, and identification system for green products, and improve the mechanism for promoting energy-saving household appliances, efficient lighting, and water-saving devices.								
5:19	C3: 13th 5YP	We will establish a water efficiency labeling system and promote the adoption of water-saving technologies and products.								

7:27	C2: 14th 5YP	We will establish a unified standards, certification, and identification system for green products, and improve the mechanism for promoting energy-saving household appliances, efficient lighting, and water-saving devices.				Use water-efficiency ...				
10:67	C6: 14th 5YP CE	The implementation of express packaging green product certification system.				Use green packaging ...	certification			
			13:128	EU2: A new Circular Economy Action Plan 2020	regulatory framework for certification of carbon removals based on robust and transparent carbon accounting to monitor and verify the authenticity of carbon removals.	Use carbon removal ...				
			15:42	EU4: Regulation proposal Critical Rawmaterials Act	The Commission should be empowered to adopt implementing acts recognising certification schemes that should be considered comprehensive and trustworthy, providing a common basis for authorities and market participants for assessing the sustainability of critical raw materials. Recognition should be given only to certification schemes that cover a broad range of sustainability aspects, including environmental protection, human rights including labour rights and business transparency, and which contain provisions for independent third party verification and monitoring of compliance.	Use CRM ...				
11:63	C7: The General Office of the State Council on accelerating the construction of	Research and establish a certification system for recycled materials and promote international cooperation and mutual recognition.				Use recycled material ...				
7:28	C2: 14th 5YP	Extensive campaigns will be carried out to promote eco-friendly lifestyles.	1:148	EU1: EU action plan for the circular economy	Awareness campaigns are needed to change behaviour. The Commission supports awareness raising at national, regional and local levels and the dissemination of good practices in food waste prevention.	Increase public awareness				
9:39	C4: 12th 5YP V1	Campaigns on energy saving and on practicing low carbon economy will be promoted among enterprises.	13:106	EU2: A new Circular Economy Action Plan 2020	Other aspects that facilitate consumer involvement will also be considered, such as common bin colours, harmonised symbols for key waste types, product labels, information campaigns and economic instruments.					
9:40	C4: 12th 5YP V1	Drives on saving energy and reducing emissions will be promoted in-depth among the populace.								
11:68	C7: The General Office of the State Council on accelerating the construction of	Integrate circular economy knowledge concepts into relevant education and training systems. At important time nodes such as National Ecology Day, National Energy Conservation Week, National Low Carbon Day, and Environment Day, we carry out various publicity and education activities to vigorously promote the importance of waste recycling and related policies and measures. Timely summarize and promote advanced experiences and typical practices.								
12:185	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Vigorously advocate low-carbon travel modes, strengthen ecological science publicity and education in tourist attractions, spread green and low-carbon concepts, reduce the use of disposable items, guide tourists to classify waste, and consciously protect the environment of scenic spots.								
12:345	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Organize and carry out various publicity and training activities to popularize circular economy knowledge through radio and television, newspapers and magazines, the Internet, mobile phones and other channels, publicize typical cases, and promote demonstration experience. News units should increase the publicity of circular economy and increase the frequency of reports on important pages, important channels, and important time periods. Encourage various forms of recycling cultural and creative activities. Build a number of circular economy education demonstration bases across the country with advanced technology, standardized management, distinctive features, and strong educational demonstration effects. Carry out the "anti-food waste action" to promote food conservation in catering companies, government agencies, canteens of enterprises and institutions, official banquets, families and other aspects.								
4:25	C5: Circular Economy Promotion Law of the PRC	Citizens have the right to report acts of wasting resources and damaging the environment, and have the right to access to government information about the development of circular economy and propose their opinions and suggestions				Enable citizens' participation				
			1:28	EU1: EU action plan for the circular economy	The aim is to ensure that the right regulatory framework is in place for the development of the circular economy in the single market, and to give clear signals to economic operators and society at large on the way forward with long term waste targets as well as a concrete, broad and ambitious set of actions, to be carried out before 2020	Use the information function of policy				

10:45	C6: 14th 5YP CE	Under the premise of information sharing among regulatory authorities and risk control, support the exploration of bonded maintenance and remanufacturing re-export business for aviation, CNC machine tools, communication equipment, etc. in the Pilot Free Trade Zone.	1:99	EU1: EU action plan for the circular economy	Other actions can be taken to reduce the amount of household waste. This is often more effective at national and local level, where it can be better targeted: awareness campaigns and economic incentives have proven particularly effective. The Commission promotes waste prevention and reuse through the exchange of information and best practices and by providing Cohesion Policy funding for projects at local and regional level, including interregional cooperation.	Provide information about policy			
			1:112	EU1: EU action plan for the circular economy	The Commission is also committed to providing technical assistance to Member states experiencing difficulties in implementation and to facilitating exchange of best practices with countries and regions that have successfully improved their waste management.				
12:340	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Publish a list of circular economy technologies, processes, and equipment encouraged by the state.	1:77	EU1: EU action plan for the circular economy	best available technique reference documents' (BREFs) that Member States have to reflect when issuing permit requirements for industrial installations, and promote best practices on mining waste	best practice			
10:45	C6: 14th 5YP CE	Under the premise of information sharing among regulatory authorities and risk control, support the exploration of bonded maintenance and remanufacturing re-export business for aviation, CNC machine tools, communication equipment, etc. in the Pilot Free Trade Zone.	1:148	EU1: EU action plan for the circular economy	Awareness campaigns are needed to change behaviour. The Commission supports awareness raising at national, regional and local levels and the dissemination of good practices in food waste prevention.				
			1:160	EU1: EU action plan for the circular economy	It will help to spread best practices by developing voluntary recycling protocols based on the highest common standards for each waste stream. The Commission is also currently conducting a study to identify the obstacles to, and drivers for, the recycling of construction and demolition waste, and best practices in this area.				
			13:40	EU2: A new Circular Economy Action Plan 2020	support capacity building with guidance, training and dissemination of good practices and encouraging public buyers to take part in a "Public Buyers for Climate and Environment" initiative, which will facilitate exchanges among buyers committed to GPP implementation.				
11:64	C7: The General Office of the State Council on accelerating the construction of	Conduct research on carbon footprint accounting standards and methods for key recycled materials.	1:89	EU1: EU action plan for the circular economy	It is testing the Product Environmental Footprint, a methodology for measuring environmental performance, and will explore its use to measure or communicate environmental information	Use product footprint ...	.... measurement		
			15:43	EU4: Regulation proposal Critical Rawmaterials Act	Commission should be empowered to develop a system for the calculation of the environmental footprint of critical raw materials, including a verification process, to ensure that critical raw materials placed on the Union market publicly display information on such footprint. The system should be based on taking into account scientifically sound assessment methods and relevant international standards in the area of life cycle assessment.				
			1:161	EU1: EU action plan for the circular economy	Given the long lifetime of buildings, it is essential to encourage design improvements that will reduce their environmental impacts and increase the durability and recyclability of their components. The Commission will develop indicators to assess environmental performance throughout the lifecycle of a building, and promote their use for building projects through large demonstration projects and guidance on GPP.				
			1:110	EU1: EU action plan for the circular economy	The revised waste proposals will also address key issues relating to the calculation of recycling rates. This is essential to ensure comparable, high-quality statistics across the EU, and to simplify the current system and encourage higher rates of effective recycling for separately collected waste.	Adjust the calculation of recycling rates for ...			
			1:95	EU1: EU action plan for the circular economy	requirements concerning the availability of spare parts and repair information (e.g. through online repair manuals) will be considered, including through exploring the possibility of horizontal requirements on the provision of repair information.				
			13:36	EU2: A new Circular Economy Action Plan 2020	To enhance the participation of consumers in the circular economy, the Commission will propose a revision of EU consumer law to ensure that consumers receive trustworthy and relevant information on products at the point of sale, including on their lifespan and on the availability of repair services, spare parts and repair manuals. The Commission will also consider further strengthening consumer protection against green washing and premature obsolescence, setting minimum requirements for sustainability labels/logos and for information tools.				

			16:45	EU5: Ecodesign requirements for sustainable products	Manufacturers shall ensure that that a product covered by a delegated act adopted pursuant to Article 4 is accompanied by instructions that enable consumers and other end-users to safely assemble, install, operate, store, maintain, repair and dispose of the product in a language that can be easily understood by consumers and other endusers, as determined by the Member State concerned. Such instructions shall be clear, understandable and legible and include at least the information specified in the delegated acts adopted pursuant to Article 4 and pursuant to Article 7(2)(b), point (ii).	Provide repair ...	... information about products			
			17:12	EU6: Green Deal	Reliable, comparable and verifiable information also plays an important part in enabling buyers to make more sustainable decisions and reduces the risk of 'green washing'. Companies making 'green claims' should substantiate these against a standard methodology to assess their impact on the environment. The Commission will step up its regulatory and non-regulatory efforts to tackle false green claims. Digitalisation can also help improve the availability of information on the characteristics of products sold in the EU. For instance, an electronic product passport could provide information on a product's origin, composition, repair and dismantling possibilities, and end of life handling.					
			1:151	EU1: EU action plan for the circular economy	Another area where action might be needed concerns date marking, in particular the "best before" date. This can be wrongly interpreted as an expiry date and lead to the discarding of safe, edible food. The Commission will examine ways of promoting a better use and understanding of date marking by the various actors of the food chain. The EU has also adopted measures to prevent edible fish being thrown back into the sea from fishing vessels.	Provide use and operation ...				
			13:36	EU2: A new Circular Economy Action Plan 2020	To enhance the participation of consumers in the circular economy, the Commission will propose a revision of EU consumer law to ensure that consumers receive trustworthy and relevant information on products at the point of sale, including on their lifespan and on the availability of repair services, spare parts and repair manuals. The Commission will also consider further strengthening consumer protection against green washing and premature obsolescence, setting minimum requirements for sustainability labels/logos and for information tools.					
			13:30	EU2: A new Circular Economy Action Plan 2020	mobilising the potential of digitalisation of product information, including solutions such as digital passports, tagging and watermarks;					
			16:31	EU5: Ecodesign requirements for sustainable products	The information requirements referred to in paragraph 1 shall enable the tracking of all substances of concern throughout the life cycle of products, unless such tracking is already enabled by another delegated act adopted pursuant to Article 4 covering the products concerned, and shall include at least the following: EN 53 EN (a) the name of the substances of concern present in the product; (b) the location of the substances of concern within the product; (c) the concentration, maximum concentration or concentration range of the substances of concern, at the level of the product, its main components, or spare parts; (d) relevant instructions for the safe use of the product; (e) information relevant for disassembly.					
			16:45	EU5: Ecodesign requirements for sustainable products	Manufacturers shall ensure that that a product covered by a delegated act adopted pursuant to Article 4 is accompanied by instructions that enable consumers and other end-users to safely assemble, install, operate, store, maintain, repair and dispose of the product in a language that can be easily understood by consumers and other endusers, as determined by the Member State concerned. Such instructions shall be clear, understandable and legible and include at least the information specified in the delegated acts adopted pursuant to Article 4 and pursuant to Article 7(2)(b), point (ii).					
			17:12	EU6: Green Deal	Reliable, comparable and verifiable information also plays an important part in enabling buyers to make more sustainable decisions and reduces the risk of 'green washing'. Companies making 'green claims' should substantiate these against a standard methodology to assess their impact on the environment. The Commission will step up its regulatory and non-regulatory efforts to tackle false green claims. Digitalisation can also help improve the availability of information on the characteristics of products sold in the EU. For instance, an electronic product passport could provide information on a product's origin, composition, repair and dismantling possibilities, and end of life handling.					

			17:12	EU6: Green Deal	Reliable, comparable and verifiable information also plays an important part in enabling buyers to make more sustainable decisions and reduces the risk of 'green washing'. Companies making 'green claims' should substantiate these against a standard methodology to assess their impact on the environment. The Commission will step up its regulatory and non-regulatory efforts to tackle false green claims. Digitalisation can also help improve the availability of information on the characteristics of products sold in the EU. For instance, an electronic product passport could provide information on a product's origin, composition, repair and dismantling possibilities, and end of life handling.	Establish a digital product passport with ...				
			13:30	EU2: A new Circular Economy Action Plan 2020	mobilising the potential of digitalisation of product information, including solutions such as digital passports, tagging and watermarks;					
			13:138	EU2: A new Circular Economy Action Plan 2020	Digital technologies can track the journeys of products, components and materials and make the resulting data securely accessible. The European data space for smart circular applications referred to in section 2 will provide the architecture and governance system to drive applications and services such as product passports, resource mapping and consumer information.					
11:16	C7: The General Office of the State Council on accelerating the construction of	Continue to promote the classification of domestic waste.	13:106	EU2: A new Circular Economy Action Plan 2020	Other aspects that facilitate consumer involvement will also be considered, such as common bin colours, harmonised symbols for key waste types, product labels, information campaigns and economic instruments.	Provide waste classification ...				
11:56	C7: The General Office of the State Council on accelerating the construction of	Orderly implement domestic waste classification, pricing, and metering and charging.	13:69	EU2: A new Circular Economy Action Plan 2020	EU-wide labelling that facilitates the correct separation of packaging waste at source.					
11:42	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling of low-value recyclables. Guide local governments to improve the catalog of low-value recyclables, and continuously improve the classification accuracy of low-value recyclables such as waste glass and low-value waste plastics in domestic waste classification. Support local governments to include the recycling of low-value recyclables into the scope of government procurement services. Encourage all localities to explore ways such as franchising to promote the recycling of low-value recyclables. Encourage qualified places to implement subsidy policies for the recycling of low-value recyclables.								
10:77	C6: 14th 5YP CE	It will study and improve the statistical system of circular economy, gradually establish a statistical system including the consumption and recycling of important resources, optimise the statistical accounting methods, and enhance the supporting capacity of statistical data for the work on circular economy. Improve the evaluation index system for the development of circular economy, improve the evaluation system of circular economy, and encourage third-party evaluation.	13:34	EU2: A new Circular Economy Action Plan 2020	establish a common European Dataspace for Smart Circular Applications with data on value chains and product information;	general statistics				
4:42	C5: Circular Economy Promotion Law of the PRC	the state shall set up a circular economy statistical system, strengthen the statistical management of resource consumption, comprehensive utilization and waste production, and publish the major statistical indicators to the public on a regular basis.	13:44	EU2: A new Circular Economy Action Plan 2020	promoting the use of digital technologies for tracking, tracing and mapping of resources;					
9:18	C4: 12th 5YP V1	We will enhance planning guidance and policy support on finance and taxation, perfect laws and regulations and standards, implement producers' accountability extension system, formulate technological and product catalogues of circular economy, establish a renewable products' identification system, and set up a sound statistics and evaluation system for circular economy.								
4:82	C5: Circular Economy Promotion Law of the PRC	The state upholds producers and operators to set up an industrial waste information exchange system for enterprises to better exchange information about industrial wastes.				Gain wastes'				
			1:132	EU1: EU action plan for the circular economy	It is also essential to facilitate the cross-border circulation of secondary raw materials to ensure that they can be traded easily across the EU. Action in this area will include the simplification of cross-border formalities through the use of electronic data exchange. The Commission is examining other barriers to the smooth circulation of waste in the EU. To improve the availability of data on secondary raw materials the Commission will further develop the recently initiated Raw Materials Information System and support EU-wide research on raw materials flows. It will also support the improvement of data reporting on waste shipment, including through the use of data available in the context of cross-border electronic data exchange.	Gain secondary raw materials' ...		systemic		

			1:147	EU1: EU action plan for the circular economy	this makes it particularly hard to quantify: today, there is no harmonised, reliable method to measure food waste in the EU, which makes it more difficult for public authorities to assess its scale, origins, and trends over time. Addressing the measurement issue is an important step towards a better understanding of the problem, a coherent monitoring and reporting as well as effective exchange of good practices across the EU. The Commission will elaborate a common EU methodology to measure food waste in close cooperation with Member States and stakeholders.	Gain food wastes' ...				
			1:155	EU1: EU action plan for the circular economy	Other barriers include insufficient information exchange between manufacturers and recyclers of electronic products, the absence of recycling standards, and a lack of data for economic operators on the potential for recycled critical raw materials. Such materials could also be recovered in landfills (e.g. from discarded electronic devices) or in certain cases from mining waste. The Commission is developing R&I programmes, data and information exchange, and will promote best practices on all these issues. In order to ensure a coherent and effective approach, to provide key data sources and to identify options for further action, it will prepare a report on critical raw materials in the circular economy.	Gain CRMs' ...				
			15:17	EU4: Regulation proposal Critical Rawmaterials Act	Finally, Member States should promote the recovery of critical raw materials from extractive waste by improving the availability of information and by addressing legal, economic and technical barriers. One possible solution that Member States should look into are risk-sharing mechanisms between operators and the Member State to promote recovery from closed waste facilities.					
			15:22	EU4: Regulation proposal Critical Rawmaterials Act	To address the current lack of information on the critical raw materials potential of closed extractive waste facilities, Member States should draw up a database containing all information relevant to promote the recovery, notably the quantities and concentrations of critical raw materials in the extractive waste facility, in compliance with Union competition rules. The information should be made publicly available and in a user-friendly and digital form, enabling access to more detailed, technical information. To facilitate user-friendly access to the information, Member States should for instance provide a point of contact to enable more in-depth exchanges with potential developers of critical raw materials recovery projects. The database should be designed to allow potential project promoters to easily identify facilities with a high potential for economically viable recovery. To focus limited resources, Member States should follow a staged approach in the collection of information and perform the more demanding information collection steps only for the most promising facilities. The information collection activities should be aimed at providing accurate and representative information on the extractive waste facilities and gaining the best possible indication of the critical raw materials recovery potential.					
			16:41	EU5: Ecodesign requirements for sustainable products	An economic operator that discards unsold consumer products directly, or on behalf of another economic operator, shall disclose: (a) the number of unsold consumer products discarded per year, differentiated per type or category of products; EN 63 EN (b) the reasons for the discarding of products; (c) the delivery of discarded products to preparing for re-use, remanufacturing, recycling, energy recovery and disposal operations in accordance with the waste hierarchy as defined by Article 4 of Directive 2008/98/EC. The economic operator shall disclose that information on a freely accessible website or otherwise make it publicly available, until a delegated act adopted pursuant to paragraph 3 starts applying to the category of unsold consumer products discarded by the operator in question.					

10:39	C6: 14th 5YP CE	Improve the regulations on the circulation of second-hand commodities, establish and improve the identification, evaluation and grading standards for second-hand commodities such as vehicles, home appliances and mobile phones, and regulate the order of second-hand commodity circulation and trading behaviour. Encourage the development of the "Internet + second-hand" model, strengthen the management responsibility of the Internet trading platform, strengthen the supervision of trading behaviour, provide standardised and regulated services for second-hand commodity trading, and encourage platform enterprises to introduce third-party second-hand commodity professional operators to improve the efficiency of second-hand commodity trading. Promote the standardised construction and operation of offline physical second-hand markets, and encourage the construction of centralised and standardised "flea markets". Encourage schools at all levels to set up used book sharing corners and days to promote the exchange of used books among teachers and students. Encourage communities to organise secondhand goods trading activities on a regular basis, and promote the trading and circulation of idle goods among residents' families under their jurisdiction.				Gain second-hand commodities' ...	stock and flow information (through the economy)			
10:64	C6: 14th 5YP CE	(8) Promoting actions to promote the management of the entire life cycle of automobile use It will study and formulate a programme for the management of the entire life cycle of automobile use, build an interactive system of information on the entire life cycle of automobile use covering automobile manufacturers, dealers, maintenance enterprises and recycling and dismantling enterprises, and strengthen the interconnection and interactive sharing of information on automobile production, import, sales, registration, maintenance, used-car trading, scrapping, and the direction of the flow of key parts and components. Establishing a labelling system and information query system for certified parts, remanufactured parts and reused exterior parts. Carrying out pilot projects on the extension of producer responsibility for automobile products. Selecting some regions to take the lead in carrying out pilot projects on the whole life-cycle management of automobile use, and promoting them nationwide when conditions are ripe.				Gain automobiles' ...				
	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Establish information management systems for recycling old remanufactured parts, product marketing, and traceability.				Gain remanufactured parts' ...				
			15:39	EU4: Regulation proposal Critical Rawmaterials Act	From [OP please insert: 3 years after the date of entry into force of this Regulation], any natural or legal person that places on the market products referred to in paragraph 1 incorporating one or more permanent magnets of the types referred in paragraph 1, point (b), points (i) to (iii), shall ensure that a data carrier is present on or in the product. 4. The data carrier referred to in paragraph 3 shall be linked to a unique product identifier that provides access to the following: (a) the name, registered trade name or registered trade mark and the postal address of the responsible natural or legal person and, where available, electronic means of communication where they can be contacted; (b) information on the weight, location and chemical composition of all individual permanent magnets included in the product, and on the presence and type of magnet coatings, glues and any additives used; (c) information enabling access and removal of all permanent magnets incorporated in the product, at least including the sequence of all removal steps, tools or technologies required for the access and removal of the permanent magnet, without prejudice to Article 15(1) of Directive 2012/19/EU.	Gain magnets' ...			
			15:40	EU4: Regulation proposal Critical Rawmaterials Act	From either [OP please insert: 3 years after the date of entry into force of this Regulation] or 2 years after the entry into force of the delegated act referred to in paragraph 2, whichever is later, any natural or legal person that places on the market products referred to in Article 27(1) which incorporate one or more permanent magnets referred to in Article 27(1), point (b)(i) to (iii) and for which the total weight of all such permanent magnets exceeds 0.2 kg shall make publicly available on a free access website the share of neodymium, dysprosium, praseodymium, terbium, boron, samarium, nickel and cobalt recovered from post-consumer waste present in the permanent magnets incorporated in the product.				

			15:41	EU4: Regulation proposal Critical Rawmaterials Act	A precondition for effective magnet recycling is for recyclers to have access to the necessary information on the amount, type and chemical composition of magnets in a product, their location and the coating, glues and additives used, as well as information on how to remove the permanent magnets from the product. In addition, to ensure a business case for magnet recycling, permanent magnets incorporated in products placed on the Union market should, over time, contain an increasing amount of recycled materials. While providing transparency on the recycled content in a first stage, a minimum content of recycled content should be set after a dedicated assessment of the appropriate level and likely impacts.					
			13:91	EU2: A new Circular Economy Action Plan 2020	promoting measures to improve the durability and adaptability of built assets in line with the circular economy principles for buildings design and developing digital logbooks for buildings;	Gain buildings'				
			1:130	EU1: EU action plan for the circular economy	The promotion of non-toxic material cycles and better tracking of chemicals of concern in products will facilitate recycling and improve the uptake of secondary raw materials.					
			16:31	EU5: Ecodesign requirements for sustainable products	The information requirements referred to in paragraph 1 shall enable the tracking of all substances of concern throughout the life cycle of products, unless such tracking is already enabled by another delegated act adopted pursuant to Article 4 covering the products concerned, and shall include at least the following: EN 53 EN (a) the name of the substances of concern present in the product; (b) the location of the substances of concern within the product; (c) the concentration, maximum concentration or concentration range of the substances of concern, at the level of the product, its main components, or spare parts; (d) relevant instructions for the safe use of the product; (e) information relevant for disassembly.	Gain substances' of concern ...				
			13:111	EU2: A new Circular Economy Action Plan 2020	harmonised systems to track and manage information on substances identified as being of very high concern and other relevant substances,					
11:41	C7: The General Office of the State Council on accelerating the construction of	Strengthen the recycling of used power batteries. Strengthen the traceability management of new energy vehicle power batteries. Organize and carry out producer recycling target responsibility system actions. Establish and improve standard systems for power battery ecological design and carbon footprint accounting, actively participate in the formulation of international standards for power battery recycling, and promote international cooperation and mutual recognition of standards and specifications. Vigorously promote the quality certification of power battery cascade utilization products, and study and formulate technical specifications for waste power battery recycling and dismantling enterprises. Carry out a joint special inspection operation of "workshopstyle recycling" of used power batteries.				Gain batteries'				
			13:132	EU2: A new Circular Economy Action Plan 2020	enhance disclosure of environmental data by companies in the upcoming review of the non-financial reporting directive;					
			16:21	EU5: Ecodesign requirements for sustainable products	Delegated acts referred to in the first subparagraph may also supplement this Regulation by: (a) requiring manufacturers, their authorised representatives or importers to make parts of the technical documentation related to the relevant product digitally available to the Commission or market surveillance authorities without request, in accordance with Article 30(3); (b) requiring manufacturers, their authorised representatives or importers to make available to the Commission information on the quantities of a product covered by those delegated acts placed on the market or put into service, in accordance with Article 31(1);	Improve reporting/disclosure of ...	... producers' information			
5:5	C3: 13th 5YP	We will establish monitoring and early- warning mechanisms for environmental and resource carrying capacity and take restrictive measures in regions which have reached or are approaching the warning lines. We will survey, evaluate, and monitor land, minerals, and other resources. We will increase surveying, mapping, and geoinformation service capabilities, carry out regular geographical monitoring, and promote the development of global geoinformation resources.				Use environmental monitoring				
11:69	C7: The General Office of the State Council on accelerating the construction of	Strengthen international cooperation. Actively participate in the setting of issues in the international circular economy field, and strengthen international cooperation in frameworks and multilateral mechanisms such as the United Nations and the World Trade Organization. Establish bilateral cooperation mechanisms in the field of circular economy with more key countries and regions, and deepen bilateral cooperation in the form of policy dialogue, economic and trade cooperation, experience sharing, and capacity building.	13:143	EU2: A new Circular Economy Action Plan 2020	Global Circular Economy Alliance to identify knowledge and governance gaps in advancing a global circular economy and take forward partnership initiatives, including with major economies;					

12:347	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Strengthen exchanges and cooperation with relevant international organizations and governments in the field of circular economy, study and learn from advanced international experience, and encourage the introduction of high-level talents in circular economy technology and management from overseas. Make circular economy an important part of China's foreign aid training and use various international exchange platforms to promote circular economy concepts and models. Build a circular economy demonstration base among China, Japan and South Korea. Actively carry out exchanges and cooperation between the three places across the Taiwan Strait. Strengthen exchanges with Hong Kong, Macau, and Taiwan in the field of circular economy, carry out in depth cooperation in talents, technologies, and projects, continuously expand cooperation content, innovate cooperation methods, and jointly promote green development.				international information exchange				
			1:78	EU1: EU action plan for the circular economy	The Commission is also helping SMEs to benefit from the business opportunities of increased resource efficiency with the creation of the European Resource Efficiency Excellence Centre. Facilitating substitution of chemicals of concern or supporting SME access to innovative technologies are examples of actions in this area.	Provide access to technology	technology push			
12:338	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Formulate a circular economy science and technology development plan, and increase support for the research and development of common key technologies for the circular economy in national and local science and technology plans (special projects). Support the establishment of various circular economy technology support institutions. Promote the establishment of circular economy industrial alliances in key areas, strengthen the integration of industry, academia, and research, and jointly study and solve key and common technical issues in the circular economy. Introduce, digest, absorb and reinnovate key technologies and equipment for circular economy.	1:149	EU1: EU action plan for the circular economy	The Commission will also create a platform dedicated to food waste, bringing together Member States and all actors in the food chain. This platform will support the achievement of the food waste reduction target under the Sustainable Development Goals through appropriate steps, the involvement of stakeholders, the sharing of valuable and successful innovation and relevant benchmarking.	Enable information exchange via stakeholder networking				
			13:46	EU2: A new Circular Economy Action Plan 2020	The new SME Strategy will foster circular industrial collaboration among SMEs building on training, advice under the Enterprise Europe Network on cluster collaboration, and on knowledge transfer via the European Resource Efficiency Knowledge Centre.					
			13:107	EU2: A new Circular Economy Action Plan 2020	organise high-level exchanges on the circular economy and waste and step up cooperation with Member States, regions and cities in making the best use of EU funds. Where necessary, the Commission will also use its enforcement powers.					
			13:123	EU2: A new Circular Economy Action Plan 2020	Skills Agenda, launching a Pact for Skills with large-scale multistakeholder partnerships, and the Action Plan for Social Economy. Further investment in education and training systems, lifelong learning, and social innovation will be promoted under the European Social Fund Plus.					
			16:40	EU5: Ecodesign requirements for sustainable products	Member States shall take appropriate measures to help SMEs apply ecodesign requirements set out in delegated acts adopted pursuant to Article 4.. Those measures shall at least include ensuring the availability of one-stop shops or similar mechanisms to raise awareness and create networking opportunities for SMEs to adapt to requirements. In addition, without prejudice to applicable State aid rules, such measures may include: (a) financial support, including by giving fiscal advantages and providing physical and digital infrastructure investments; (b) access to finance; (c) specialised management and staff training; (d) organisational and technical assistance.					
11:68	C7: The General Office of the State Council on accelerating the construction of	Integrate circular economy knowledge concepts into relevant education and training systems. At important time nodes such as National Ecology Day, National Energy Conservation Week, National Low Carbon Day, and Environment Day, we carry out various publicity and education activities to vigorously promote the importance of waste recycling and related policies and measures. Timely summarize and promote advanced experiences and typical practices.	1:181	EU1: EU action plan for the circular economy	The transition to a circular economy will also require a qualified workforce with specific and sometimes new skills, and opportunities for employment and social dialogue. If the right skills at all levels are to be developed, they will have to be espoused by the education and training systems. The Commission is following up on its Green Employment Initiative with action to anticipate needs and encourage the development of skills and other measures to support job creation in the green economy. It is also acting through its forthcoming New Skills Agenda for Europe.					
12:346	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Incorporate circular economy concepts and knowledge into relevant courses of basic education, vocational education, and higher education, and study the establishment of circular economy majors in colleges and vocational schools. Formulate a circular economy training outline, prepare circular economy training materials, and implement a circular economy training plan. Encourage the reuse of teaching materials and reduce recycling costs. Utilize the training power of party schools, administrative colleges and universities at all levels to strengthen circular economy training for leading cadres, government and enterprise managers at all levels.	13:46	EU2: A new Circular Economy Action Plan 2020	The new SME Strategy will foster circular industrial collaboration among SMEs building on training, advice under the Enterprise Europe Network on cluster collaboration, and on knowledge transfer via the European Resource Efficiency Knowledge Centre.					

			13:123	EU2: A new Circular Economy Action Plan 2020	Skills Agenda, launching a Pact for Skills with large-scale multistakeholder partnerships, and the Action Plan for Social Economy. Further investment in education and training systems, lifelong learning, and social innovation will be promoted under the European Social Fund Plus.	Provide education and training				
			13:137	EU2: A new Circular Economy Action Plan 2020	Marie Sklodowska Curie Actions can in addition support development of skills, training and mobility of researchers in this area.					
			14:9	EU3: A Green Deal Industrial Plan for the Net-Zero Age	Modelled on the European Battery Alliance Academy, the Commission will propose to establish Net-Zero Industry Academies to roll out up-skilling and re-skilling programmes in strategic industries for the green transition, such as raw materials, hydrogen and solar technologies, The Commission will initiate an Academy to offer onand offline trainings for sustainable construction with a focus on the use of biobased materials, circularity and digital technologies.					
			14:12	EU3: A Green Deal Industrial Plan for the Net-Zero Age	As set out in the REPowerEU Plan, boosting industrial competitiveness will require both transforming industrial processes, massive speed-up and scale-up of renewable energy and stronger efforts for energy efficiency and reduction of energy demand as well as reskilling and upskilling of the workforce.					
			14:17	EU3: A Green Deal Industrial Plan for the Net-Zero Age	A Heat Pumps skills partnership will be established by the end of this year and efforts are under way to create a skills partnership on energy efficiency.					
			15:29	EU4: Regulation proposal Critical Rawmaterials Act	ensure that their workforce is equipped with the skills needed to support circularity of the critical raw materials value chain.					

China			EU			Statement/Theme	Statement/Theme	Statement/Theme
ID	Document	Quotation content	ID	Document	Quotation content			
4:91	C5: Circular Economy Promotion Law of the PRC	The State Council and the people's governments of the provinces, autonomous regions and municipalities directly under the Central Government shall set up funds specially for the development of circular economy so as to support the research and development of the science and technology relating to circular economy, the demonstration and promotion of technologies and products of circular economy, the implementation of important circular economy projects and information services for the development of circular economy. The specific measures shall be formulated by the public finance department under the State Council together with the administrative department of circular economy development and other competent departments under the State Council.	1:173	EU1: EU action plan for the circular economy	The Horizon 2020 work programme 2016-2017 includes a major initiative: "Industry 2020 in the circular economy", which will grant over €650 million for innovative demonstration projects that support the objectives of the circular economy and industrial competitiveness in the EU in a wide range of industrial and service activities, including process industries, manufacturing, and new business models. It also explores a pilot approach to help innovators facing regulatory obstacles (e.g. ambiguous legal provisions), by setting up agreements with stakeholders and public authorities ('innovation deals').			
4:92	C5: Circular Economy Promotion Law of the PRC	The State Council, the people's governments of the provinces, autonomous regions and municipalities directly under the Central Government and the relevant departments thereof shall bring the independent innovation research, application demonstration and industrialization of the key scientific and technological task force projects of circular economy into the state or provincial scientific and technological development plans or high-tech industry development plans, and allocate financial resources to support the implementation thereof.						
9:3	C4: 12th 5YP V1	There is a need to promote clean production, and promote clean production demonstration at agricultural, industrial, construction, commerce and trade service, and other key sectors.						
12:7	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Through pilot projects, 60 model cases for developing circular economy were summarized				Establish (general) …		
12:34	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Cultivate a number of circular economy demonstration models in various industries such as agriculture, industry, and service industries, at all levels of cities, parks, and enterprises, and in all links of production, circulation, and consumption, comprehensively promote typical circular economy models, and promote the circular economy to form a large scale.						
12:327	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Continue to carry out the identification of comprehensive resource utilization enterprises (products) and comprehensive resource utilization power plants. Carry out pilot projects, enterprises, and parks to identify circular economy projects.						
12:339	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Implement circular economy technology industrialization demonstration projects, focusing on supporting the comprehensive development and recycling of associated mines and tailings, waste resource utilization, recyclable materials, replacement of toxic and harmful raw materials, remanufacturing, high-value utilization of renewable resources, and extending the industrial chain Link with related industries and demonstrate the industrialization of key technologies and equipment such as "zero emission".						
12:277	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Support the transformation of 30 chemical, textile, tanning and other single industrial parks to promote the extension of the industrial chain;				Establish industrial symbiosis in		

12:278	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	support the transformation of 60 comprehensive parks and parks concentrated in heavy chemical industry to promote horizontal coupling, vertical extension and circular links between industries;				chemicals …	
			1:161	EU1: EU action plan for the circular economy	Given the long lifetime of buildings, it is essential to encourage design improvements that will reduce their environmental impacts and increase the durability and recyclability of their components. The Commission will develop indicators to assess environmental performance throughout the lifecycle of a building, and promote their use for building projects through large demonstration projects and guidance on GPP.	Establish construction …	
5:10	C3: 13th 5YP	We will develop and spur the adoption of energy- conserving technologies and products and demonstrate the application of major energy-conserving technologies.				Establish energy-conservation technology …	
7:40	C2: 14th 5YP	06 Economical use of resources Implement major demonstration projects for industrial application of energyconserving and low-carbon technologies; Carry out major demonstration projects for near-zero energy consumption buildings, near-zero carbon emissions, and carbon capture, utilization and storage (CCUS); Develop systems for recycling waste and used materials in 60 large and medium cities.					
12:288	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Cultivate 1,000 energy-saving and environmentally friendly demonstration enterprises in the retail industry.					
5:17	C3: 13th 5YP	We will move more quickly toward water conservancy in agriculture, industry, and cities, make steady progress in the comprehensive price reform of water for agricultural purposes, and carry out demonstrations of comprehensive improvements in water-saving equipment and technologies.				Establish water-saving technology …	
9:44	C4: 12th 5YP V1	We will promote water conservation in agriculture, increase efficiency, promote highly efficient water saving irrigation technology including pipeline water transportation popularization and drip irrigation, increase 50 million mu of highly efficient water saving irrigation area, and support the construction of drought-resistant demonstration bases.					
12:159	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote and popularize high-efficiency water-saving irrigation technologies such as piped water transmission, drip irrigation under film, and water-fertilizer integration, support the construction of dry farming demonstration bases, and increase the promotion of dry farming water-saving agricultural technologies.					
12:275	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build 20 seawater desalination demonstration projects, 20 rainwater collection and utilization and recycled water utilization demonstration projects.					
5:29	C3: 13th 5YP	We will promote the development of demonstration zones for green mining and the green mining industry, launch demonstration projects for the economical and multipurpose utilization of mineral resources as well as projects to preserve and build reserves of mineral resources, and work to increase the rates of exploitation of mineral resources, ore dressing recovery rates, and multipurpose utilization rates of mineral resources.					

12:271	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build 60 demonstration bases for comprehensive utilization of mineral resources. Construct 8 comprehensive utilization projects of kaolin and bauxite associated with coal systems and 30 comprehensive utilization projects of coal bed methane, coal gangue and mine water.				Establish mining …		
12:272	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Construct 30 ferrous and non-ferrous metal co-associated mines and tailings valuable component extraction and comprehensive utilization projects.						
12:273	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build 2-3 red mud comprehensive utilization demonstration bases, 3-5 highaluminum fly ash comprehensive utilization bases, and implement a number of gypsum comprehensive utilization projects for industrial by-products such as smelting waste residue, chemical waste residue, desulfurization gypsum and phosphogypsum.						
12:282	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build 50 national "urban mineral" demonstration bases with advanced technology, environmental protection standards, standardized management, large-scale utilization, and strong radiation effects, and promote the centralized dismantling, processing, and concentration of scrap steel, scrap nonferrous metals, waste plastics, waste rubber, and other renewable resources Control pollution, rationally extend the industrial chain, promote the high-value utilization and concentrated development of "urban mineral" resources, and effectively solve the problems of scattered operations, backward technology, low utilization levels and secondary pollution in the utilization of renewable resources.						
5:33	C3: 13th 5YP	We will make coordinated plans for industrial layouts based on material flow and industrial linkage, encourage industrial parks to adopt a more circular operational flow, establish hybrid industry-agriculture circular economy demonstration zones, and promote the coupled growth of enterprises, industrial parks, and industries.						
9:8	C4: 12th 5YP V1	We will, in line with the demands of circular economy, plan, build and transform various types of industrial parks, realize intensive land utilization, exchange utilization of waste, energy gradient utilization, waste water circular utilization, and concentrated disposal of pollutants. It is necessary to promote circular economy industrial chain and establish a circular linkage industrial system.						
10:30	C6: 14th 5YP CE	3. Promote the development of recycling parks. Promote the cyclic production of enterprises and the cyclic combination of industries, promote the comprehensive utilisation of wastes, the gradual utilisation of energy and the recycling of water resources, promote the resourceful utilisation of industrial residual pressure and heat, wastewater, waste gas and waste liquids, realise the green, lowcarbon and recycling development, and actively promote the centralised supply of gas and heat. Encourage the parks to promote the construction of green factories to achieve the intensification of plants, harmlessness of raw materials, clean production, resourcefulness of waste, low-carbon energy and green building materials. It has formulated guidelines for the development of circularisation in parks, and promoted typical models of circular economy development in key industries such as iron and steel, non-ferrous metals, metallurgy, petrochemicals, equipment manufacturing and light industry. Encourage the creation of national eco-industrial demonstration parks.						

12:146	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	In accordance with the requirements of "layout optimization, enterprise clusters, industrial chains, material circulation, and intensive development", promote the park-based and agglomerated development of newly built and relocated enterprises and projects, promote the implementation of circular transformation of various industrial parks, and build a circular economy industrial chain , realize the circular links between enterprises and industries, improve the degree of industrial correlation and recycling, and promote the green, low-carbon and circular development of the park.				Establish industrial symbiosis …		
12:278	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	support the transformation of 60 comprehensive parks and parks concentrated in heavy chemical industry to promote horizontal coupling, vertical extension and circular links between industries;						
12:279	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	support the transformation of 10 The industrial and agricultural complex industrial park promotes the deep processing and utilization of agricultural and forestry products and byproducts.						
12:276	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Select 100 national and provincial development zones with good basic conditions and high transformation potential to carry out circular transformation demonstrations.						
12:277	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Support the transformation of 30 chemical, textile, tanning and other single industrial parks to promote the extension of the industrial chain;						
12:291	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Select 1,000 key enterprises or parks to establish circular economy models. The resource output rate, land output rate, energy consumption per unit output value, material consumption, water consumption, industrial waste comprehensive utilization rate, industrial water reuse rate and other indicators of the demonstration enterprise (park) have reached the domestic leading level and the international advanced level.						
5:48	C3: 13th 5YP	We will establish sound mechanisms through which the central government can assess and reward the energy conservation and environmental protection efforts of local governments, and broaden the scope of comprehensive demonstrations of financial policies designed to promote energy conservation and emissions reduction.				Establish financial policies …		
5:51	C3: 13th 5YP	We will implement a demonstration project for circular agriculture through integrated planting and breeding, and promote the recovery of resources and safe disposal of waste materials from planting and breeding industries.						
5:52	C3: 13th 5YP	Implement the household refuse treatment project, make comprehensive improvements to the environment in 130,000 administrative villages, implement showcase projects for agricultural waste recycling, develop sewage and refuse collection and treatment facilities, progressively promote the treatment of household wastewater, and ensure that the household refuse of 90% of administrative villages is treated;						

7:37	C2: 14th 5YP	03 Soil contamination prevention and control and safe use of land Carry out demonstrations on the safe use of agricultural lands in 100 counties with large areas of contaminated soil; Implement 100 projects to control soil contamination at the source with a focus on chemical and non-ferrous metal industries.				Establish agriculture …	… demonstration projects …	… to push technology
7:51	C2: 14th 5YP	We will develop modern agriculture industrial parks and agricultural modernization demonstration zones.						
12:279	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	support the transformation of 10 The industrial and agricultural complex industrial park promotes the deep processing and utilization of agricultural and forestry products and byproducts.						
12:286	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Pilot demonstration projects for comprehensive utilization of straw will be implemented in 13 major grain-producing areas, areas with a high concentration of single varieties of straw such as cotton straw, and key areas along traffic arteries, airports, and highways.						
7:39	C2: 14th 5YP	05 Medical and hazardous waste disposal and comprehensive utilization of solid waste Address weaknesses in medical waste disposal facilities by building a national technology center for hazardous waste risk prevention and control along with six regional centers, as well as 20 regional centers for the centralized disposal of special hazardous waste; Launch 100 demonstration projects for comprehensively using bulk solid waste with a focus on tailings, associated minerals, coal gangue, fly ash, and construction refuse.				Establish bulk solid waste …		
10:59	C6: 14th 5YP CE	Focusing on fly ash, coal gangue, metallurgical slag, industrial by-product gypsum, tailings, coassociated minerals, crop residues, forestry residues and other key species, promoting advanced technology and equipment for the comprehensive utilisation of bulk solid wastes, implementing key projects with demonstrative effect, vigorously promoting the use of comprehensive utilisation of resources, and constructing 50 bases for the comprehensive utilisation of bulk solid wastes and 50 bases for the comprehensive utilisation of industrial resources.						
10:30	C6: 14th 5YP CE	3. Promote the development of recycling parks. Promote the cyclic production of enterprises and the cyclic combination of industries, promote the comprehensive utilisation of wastes, the gradual utilisation of energy and the recycling of water resources, promote the resourceful utilisation of industrial residual pressure and heat, wastewater, waste gas and waste liquids, realise the green, lowcarbon and recycling development, and actively promote the centralised supply of gas and heat. Encourage the parks to promote the construction of green factories to achieve the intensification of plants, harmlessness of raw materials, clean production, resourcefulness of waste, low-carbon energy and green building materials. It has formulated guidelines for the development of circularisation in parks, and promoted typical models of circular economy development in key industries such as iron and steel, non-ferrous metals, metallurgy, petrochemicals, equipment manufacturing and light industry. Encourage the creation of national eco-industrial demonstration parks.						
11:59	C7: The General Office of the State Council on accelerating the construction of	Carry out advanced technology demonstration projects for resource recycling and dynamically update the national catalog of advanced and applicable technology and equipment for comprehensive utilization of industrial resources.						

11:60	C7: The General Office of the State Council on accelerating the construction of	Encourage localities to organize waste recycling technology promotion docking, exchange and training, and promote the industrial application of technological achievements.				Establish recycling …		
12:281	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build a demonstration city for the renewable resource recycling system with about 80 outlets with reasonable layout, standardized management, diversified recycling methods, and high recovery rate of key varieties, standardize the construction of 100 waste commodity recycling and sorting gathering areas, and cultivate 100 organizations with high degree of scale , technologically advanced leading enterprises, promote a group of commercial circulation enterprises to participate in the recycling system, promote the trading and circulation of renewable resources, and increase the recycling rate of renewable resources.						
12:284	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Select 100 cities to carry out demonstration pilots for resource utilization and harmless treatment of kitchen waste to support recycling systems and capacity building. Through demonstration pilots, establish a management system that covers the entire process of kitchen waste generation, collection, transportation, and treatment in line with my country's national conditions, improve standards and specifications, improve process and technology routes, and achieve safe, efficient utilization and harmlessness of food waste deal with.						
12:230	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Support the construction of remanufacturing industry demonstration bases and promote the development of industrial clusters.				Establish remanufacturing …		
12:283	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build 5-10 national-level remanufacturing industry demonstration bases to promote the clustered development of the remanufacturing industry. About 30 auto parts remanufacturing companies with a certain foundation will be selected to carry out demonstrations, focusing on supporting the establishment of recycling, remanufacturing, testing and quality control systems for old parts such as engines and gearboxes. Select a group of enterprises to carry out pilot remanufacturing of machine tools, engineering machinery, agricultural machinery, mining machinery, office supplies, etc. Cultivate about 20 professional remanufacturing service organizations.						
10:60	C6: 14th 5YP CE	Construction of 50 demonstration cities for resource utilisation of construction waste. Promote the reduction of construction waste at source, establish a management system for the classification of construction waste, and regulate the construction and operation and management of places for dumping, transferring and resource utilisation of construction waste. Improve the policy on recycling and utilisation of construction waste and the certification standard system for recycled products, promote the resourceful utilisation of engineering residue, engineering slurry, demolition waste, engineering rubbish and renovation rubbish, and enhance the scale of market use of recycled products. Cultivate backbone enterprises in the construction waste resource utilisation industry, and accelerate the development, application and integration of new technologies, new techniques and new equipment for the resource utilisation of construction waste.				Establish construction waste …		
12:274	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Construct 6 construction and road waste resource utilization demonstration projects.						

10:63	C6: 14th 5YP CE	(7) Actions to improve the quality of the recycling of waste electrical and electronic products Using Internet information technology and encouraging diversified participation, we will build a recycling network for waste electrical and electronic products that integrates online and offline, and continue to carry out pilot projects on the extension of producer responsibility for electrical and electronic products. Support for electrical and electronic product manufacturers to establish a recycling system through independent recycling, joint recycling or entrusted recycling, guide and regulate the production enterprises and recycling enterprises, e-commerce platforms to share information. Guide the flow of waste electrical and electronic products into standardised dismantling enterprises. Guarantee the security of personal privacy information throughout the recycling process of mobile phones, computers and other electronic products. Strengthen scientific and technological innovation, encourage the promotion and application of new technologies, new techniques and new equipment, support the upgrading and transformation of processes and equipment of standardised dismantling enterprises, promote intelligent and refined dismantling, and promote high-value utilisation.				Establish producer responsiblity for electronics …		
10:64	C6: 14th 5YP CE	(8) Promoting actions to promote the management of the entire life cycle of automobile use It will study and formulate a programme for the management of the entire life cycle of automobile use, build an interactive system of information on the entire life cycle of automobile use covering automobile manufacturers, dealers, maintenance enterprises and recycling and dismantling enterprises, and strengthen the interconnection and interactive sharing of information on automobile production, import, sales, registration, maintenance, used-car trading, scrapping, and the direction of the flow of key parts and components. Establishing a labelling system and information query system for certified parts, remanufactured parts and reused exterior parts. Carrying out pilot projects on the extension of producer responsibility for automobile products. Selecting some regions to take the lead in carrying out pilot projects on the whole life-cycle management of automobile use, and promoting them nationwide when conditions are ripe.				Establish producer responsiblity for vehicles …		
10:68	C6: 14th 5YP CE	Carry out large-scale application of recyclable express packaging pilot, significantly increase the proportion of recycled transit bag (box) application.				Establish express packaging …		
12:51	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Promote the construction of demonstration projects such as coal-to-olefins, coal-to-ethylene glycol, and coal-to-synthetic ammonia that have been included in relevant national plans, and build coal-coking-chemical and other coalbased multi-generation industrial chains.				Establish coal …		
12:287	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	About 100 catering and accommodation companies with high management levels will be selected to carry out green transformation demonstration projects.				Establish catering and accomodation …		
5:70	C3: 13th 5YP	3. Renewable energy § Begin construction on 60 gigawatts of regular hydropower capacity, giving priority to hydropower development in the southwest; § Coordinate the development of end-use markets and power transmission routes; take ordered steps to optimize the development of wind energy and photovoltaic energy in the northern, northeastern, and northwestern regions and in coastal areas; § Accelerate the development of dispersed wind power and distributed photovoltaic power in the central, eastern, and southern regions; § Carry out solar thermal energy demonstration projects; § Build the national new energy integrated demonstration zone in Ningxia, and actively move forward with the development of demonstration zones for renewable energy such as those in Qinghai and Zhangjiakou.						

7:34	C2: 14th 5YP	And more intensive efforts will be made to support Shanxi in developing a national comprehensive experimental reform zone for resource-dependent economy transformation and carrying out comprehensive reform trials for an energy revolution.						
10:61	C6: 14th 5YP CE	(5) Circular economy key technology and equipment innovation project In-depth implementation of key technologies and equipment for the circular economy key special projects. Focusing on the ecological design of typical products, clean production in key industries, comprehensive utilisation of bulk solid waste, high-quality recycling of renewable resources, and remanufacturing of high-end equipment, a number of breakthroughs in green recycling key common technologies and major equipment; in the Beijing-Tianjin-Hebei, Yangtze River Delta, Pearl River Delta, and other regions, to carry out integrated demonstration of the green technology system for the recycling economy, and to promote the formation of the integration of government, industry, academia, research and application of the mode of transformation of scientific and technological achievements.				Select specific regions for …		
9:20	C4: 12th 5YP V1	There will be in-depth promotion of national circular economy demonstration, and organization and implementation of circular economy's "Tens-Hundreds-Thousands Demonstration" drives. We will promote circular economy's demonstrative pilot projects in Gansu, at the Qinghai Caidamu circular economy demonstration zone, and the construction of an experimental zone on comprehensive reform of supporting measures as part of an effort to transform Shanxi into practicing resources type economy.						
12:276	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Select 100 national and provincial development zones with good basic conditions and high transformation potential to carry out circular transformation demonstrations.						
5:70	C3: 13th 5YP	3. Renewable energy § Begin construction on 60 gigawatts of regular hydropower capacity, giving priority to hydropower development in the southwest; § Coordinate the development of end-use markets and power transmission routes; take ordered steps to optimize the development of wind energy and photovoltaic energy in the northern, northeastern, and northwestern regions and in coastal areas; § Accelerate the development of dispersed wind power and distributed photovoltaic power in the central, eastern, and southern regions; § Carry out solar thermal energy demonstration projects; § Build the national new energy integrated demonstration zone in Ningxia, and actively move forward with the development of demonstration zones for renewable energy such as those in Qinghai and Zhangjiakou.				Establish RE …		
10:60	C6: 14th 5YP CE	Construction of 50 demonstration cities for resource utilisation of construction waste. Promote the reduction of construction waste at source, establish a management system for the classification of construction waste, and regulate the construction and operation and management of places for dumping, transferring and resource utilisation of construction waste. Improve the policy on recycling and utilisation of construction waste and the certification standard system for recycled products, promote the resourceful utilisation of engineering residue, engineering slurry, demolition waste, engineering rubbish and renovation rubbish, and enhance the scale of market use of recycled products. Cultivate backbone enterprises in the construction waste resource utilisation industry, and accelerate the development, application and integration of new technologies, new techniques and new equipment for the resource utilisation of construction waste.						

12:281	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build a demonstration city for the renewable resource recycling system with about 80 outlets with reasonable layout, standardized management, diversified recycling methods, and high recovery rate of key varieties, standardize the construction of 100 waste commodity recycling and sorting gathering areas, and cultivate 100 organizations with high degree of scale , technologically advanced leading enterprises, promote a group of commercial circulation enterprises to participate in the recycling system, promote the trading and circulation of renewable resources, and increase the recycling rate of renewable resources.				Select cities for …		
12:282	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Build 50 national "urban mineral" demonstration bases with advanced technology, environmental protection standards, standardized management, large-scale utilization, and strong radiation effects, and promote the centralized dismantling, processing, and concentration of scrap steel, scrap nonferrous metals, waste plastics, waste rubber, and other renewable resources Control pollution, rationally extend the industrial chain, promote the high-value utilization and concentrated development of "urban mineral" resources, and effectively solve the problems of scattered operations, backward technology, low utilization levels and secondary pollution in the utilization of renewable resources.						
12:284	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Select 100 cities to carry out demonstration pilots for resource utilization and harmless treatment of kitchen waste to support recycling systems and capacity building. Through demonstration pilots, establish a management system that covers the entire process of kitchen waste generation, collection, transportation, and treatment in line with my country's national conditions, improve standards and specifications, improve process and technology routes, and achieve safe, efficient utilization and harmlessness of food waste deal with.						
12:290	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Select about 100 cities (counties) to create national circular economy demonstration cities (counties).						
12:345	C1: Notice of the State Council on Issuing the Circular Economy Development Strategy and Recent Action Plan	Organize and carry out various publicity and training activities to popularize circular economy knowledge through radio and television, newspapers and magazines, the Internet, mobile phones and other channels, publicize typical cases, and promote demonstration experience. News units should increase the publicity of circular economy and increase the frequency of reports on important pages, important channels, and important time periods. Encourage various forms of recycling cultural and creative activities. Build a number of circular economy education demonstration bases across the country with advanced technology, standardized management, distinctive features, and strong educational demonstration effects. Carry out the "anti-food waste action" to promote food conservation in catering companies, government agencies, canteens of enterprises and institutions, official banquets, families and other aspects.				Establish education …		

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