

Towards a circular economy for plastics in China:

Opportunities and recommendations



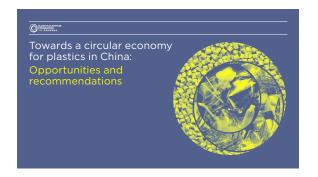
### **Preamble**

### Towards a circular economy for plastics in China report

Today, the circular economy for plastics is at a turning point. There is a widespread understanding and sense of urgency around the need to tackle the plastic problem at source. This is the time for China to activate circular solutions to drastically shift the way plastics are made and used in China and globally. This report intends to show how this can be done.

By taking China's plastic packaging industry as the entry point, the report highlights the path and opportunities of the circular economy transformation for plastics and identifies a set of specific actions. A series of recommendations are also provided for policymakers and businesses to enable the circular economy transition.

Drawing on the <u>New Plastics Economy vision</u>, and two previous reports <u>The New Plastics Economy: Rethinking the future of plastics</u> (2016) and <u>The New Plastics Economy – Catalysing action</u> (2017), this new report is the Ellen MacArthur Foundation's first China-focused study on plastic. Written in collaboration with Tsinghua University, it aims to inspire and empower a wide range of actors towards a circular economy for plastics in China.





- As the biggest manufacturer, user, and exporter of plastics in the world, China has a unique role to play in driving the transition to a circular global plastics economy
- A fundamental rethink of the way plastic is produced, used, and reused is required to solve plastic pollution
- A circular economy for plastic is essential for China to meet its plastic objectives, and support its carbon emission goals and broader environmental agenda

### Challenges and opportunities for China to transition to a circular economy

- The foundation of a policy framework for the circular economy is already in place, but gaps remain
- The voluntary efforts of the plastics industry provide a useful starting point but are still siloed and focused on waste management practices
- There are great opportunities for upstream innovation to design out waste
- Successful examples in China and internationally provide inspiration

### **Action plan for China**

- Policymakers and businesses can take action in three main areas: design, system and Infrastructure, and incentives
- Establish a cross-value chain dialogue to achieve a common vision and targets
- China can play an active and leading role in the development of an ambitious UN treaty on plastic pollution

Now is the time for China to accelerate a circular economy for plastics



# As the biggest manufacturer, user, and exporter of plastics in the world, China has a unique role to play in driving the transition to a circular global plastics economy.

- In China, 60 million tonnes of plastic waste were generated in 2020, of which approximately 35% was landfilled, 37% incinerated, and only 26.7% (16 million tonnes) was recycled.
- China's packaging production has been growing since 2018 with an average annual growth rate of 8.7%, reaching 45 million tonnes in 2020.
- We take raw materials out of the ground, make products and packaging, and throw them away as waste. This linear plastics system causes environmental issues, affects the health and livelihoods of some of the poorest communities but also creates a significant economic value loss.
- Globally, the cost of negative externalities associated with plastic packaging escaping collection systems has been conservatively estimated by UNEP at USD 40 billion (~RMB 258 billion).
- Most efforts to tackle plastic pollution have focused on waste management and environmental clean-ups. These downstream efforts, including collection, sorting and recycling, are needed, and will require investment globally, but they cannot alone represent an effective response to the problem.

32%

of global plastic materials production

### **USD 64 billion**

RMB 430 billion, China's total revenue for plastic packaging in 2020

### 45 million

**tonnes of plastic** is produced annually for China's packaging sector

# A fundamental rethink of the way plastic is produced, used, and reused is required to solve plastic pollution.

The circular economy for plastics offers a vision in which plastic never becomes waste. It presents a fundamental rethink of plastics and plastic packaging, envisioning a more effective system to achieve <u>better economic and environmental outcomes</u>.

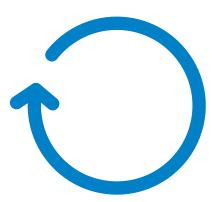
The circular economy for plastics provides an actionable framework around 3 principles:





**Innovate** to ensure that all necessary plastics are reusable, recyclable, or compostable

Over 1,000 businesses, governments, NGOs, and other actors across the world have united behind a common vision of a circular economy for plastics and committed to concrete 2025 targets.



**Circulate** all the plastic items we use to keep them in the economy and out of the environment

# A circular economy for plastics is essential for China to meet its plastic objectives, and support its carbon emission goals and broader environmental agenda.

In line with the Chinese government targets for carbon neutrality by 2060 and the creation of a 'green, low-carbon society', the circular economy offers a systems solution framework that builds a resilient economy and delivers both long-term prosperity and addresses global challenges such as climate change, biodiversity loss, waste and pollution.

This transformation, which reaches far beyond incremental or end-of-pipe actions to simply improve waste management and better recycling, can help China achieve its vision of Ecological Civilisation.

Compared with a business-as-usual scenario, a comprehensive global circular economy approach has the potential to

reduce the annual volume of plastics entering our oceans by over

80%

reduce greenhouse gas emissions by

25%

generate savings of USD 200 billion per year

700,000

net additional jobs by 2040

### Now is the time for China to accelerate a circular economy for plastics

- As the biggest manufacturer, user, and exporter of plastics in the world, China has a unique role to play in driving the transition to a circular global plastics economy
- A fundamental rethink of the way plastic is produced, used, and reused is required to solve plastic pollution
- A circular economy for plastic is essential for China to meet its plastic objectives, and support its carbon emission goals and broader environmental agenda

### Challenges and opportunities for China to transition to a circular economy

- The foundation of a policy framework for the circular economy is already in place, but gaps remain
- The voluntary efforts of the plastics industry provide a useful starting point but are still siloed and focused on waste management practices
- There are great opportunities for upstream innovation to design out waste
- Successful examples in China and internationally provide inspiration

### Action plan for China

- Policymakers and businesses can take action in three main areas: design, system and Infrastructure, and incentives
- Establish a cross-value chain dialogue to achieve a common vision and targets
- China can play an active and leading role in the development of an ambitious UN treaty on plastic pollution

Challenges and opportunities for China to transition to a circular economy



**Circular Economy Law** 

Stage 1. Targeted bans and the first

the beginning of the fight against plastic pollution in China.

To curb the "white pollution", certain types of single-use items (styrofoam food containers and ultra-thin plastic shopping bags) are banned, marking

As early as 2005, the Chinese government launches circular economy demonstration projects, including a pilot project on plastic recycling.

### The foundation of a policy framework for the circular economy is already in place...

Since the 1990s, China has gradually developed a plastic pollution policy framework:

#### The rollout of a 3R strategy is included in the 2008 first Circular Economy Promotion Law. economy Key policy/regulation related to circular eco Several opinions Law on the Prevention and **Control of Environmental** Law on Promoting on speeding up the **Circular Economy** development of the **Pollution by Solid Waste Clean Production Promotion Law** circular economy Establish legislative basis Establish legislative basis for Establish legislative basis for pollutant management during Initiate the development for the management of solid the development of the circular waste in China production process of the circular economy in China economy in China 1998 1999 2005 2007 2009 2001 Key policy/regulation related to plastic 1995 2002 2008 Several opinions Urgent notice on **Catalogue for the Guidance** Administrative measures on strengthening the immediately stopping the of Industrial Structure for the paid use of plastic management of plastic production of disposable Adjustment (2005 version) bags at commodity packaging waste in key foamed plastic tableware retailing places Restricted category - Production traffic arteries, river basins, line of ultra-thin plastic bag Plastic shopping bags fee starts and tourist attractions (<0.015mm) from 1 Jun 2008 **Notice on catering enterprises** Restrict the use of disposable to stop using disposable foam Elimination category foamed (styrofoam) plastic plastic tableware single-use disposable plastic tableware foam tableware **Notice on controlling** excessive packaging Notice on strengthening of commodities Catalogue for the Notice on restricting the the supervision of the phase elimination of obsolete High level plan out of single-use disposable production, sale, and use Stop the production and sale means of production, of excessive packaging of plastic shopping bags foamed plastic tableware Legal document technologies and products Develop relevant standards The Plastic Ban - stop the Regulatory document Immediately stop the production, Phase out disposable foamed sale, and use of disposable production, sale, and use (styrofoam) plastic tableware Technical document of ultra-thin plastic bags plastic foam tableware by 2000 (incl. standards, specification, (<0.025mm) Promote alternatives (single-use or catalogue) degradable tableware)

### Stage 2. Plastic recycling system established with the development of the circular economy

After successive action plans in 2013 and 2015, the circular economy becomes a national development strategy.

With increased recycling capacity, China becomes the largest plastic waste importer, and processes one-quarter of global plastic waste.

In 2015, the vision of Ecological Civilisation and plan was developed.

National Environmental Protection '12th Five-Year' Plan

National Circular Economy Development '12th Five-Year' Plan

Reduction of the Total Emission of Major Pollutants '12th Five-Year' Plan

Law on Promoting Clean Production (Amendment) the Ecological Civilisation Construction

Opinions on accelerating

Integrated Reform Plan for Promoting Ecological Progress

Propose an overall plan for the construction of Ecological Civilisation Notice on plan for promoting the Extended Producer Responsibility System

Guiding opinions on building a Green Financial System

Propose the overall structure of green finance construction

2016

2011

Opinions on establishing a complete and advanced recycling system for waste and used commodities

Develop recycling system to increase waste recycling rate

2012

Provisions on the administration of prevention and control of environmental pollution by processing and utilisation of waste plastics

Improve environmental requirements for waste plastic recycling industry

Encourage the development of centralised waste management and recycling facilities

Notice on further restricting the production, sale, and use of plastic shopping bags

**Circular Economy** 

**Development Strategy and** 

resource productivity (energy.

2013

**Near-Term Action Plan** 

Focus on the increase of

water, land, minerals)

Cumulative reduction of plastic shopping bags usage in major retail outlets reached to 67 billion since 2007 2015

Pollution prevention management regulations on waste plastics processing and utilisation

Specification for waste plastics utilisation industry (interim)

VAT reduction catalogue for resource utilisation of products and services

Implementation Plan for Promoting Green Packaging for the Express Delivery Industry

Set direction of the development for plastic recycling industry (green, circular, coordinated, specialised, and clustered to produce high-value products)

Guiding opinions on accelerating the development of renewable resource industry

Improve the efficiency of resource utilisation in the field of express packaging, reduce packaging consumption, and environmental pollution

### Stage 3. From a foreign waste ban to a more integrated approach

2017 marks a breakthrough with the policy banning imports of waste materials including plastics, paper, and metal scrap, whilst China aims to improve the domestic waste recycling market by upgrading regulations and standards.

The 14th Five-Year Plan leverages circular economy strategies to manage plastic pollution and recommends sets of actions such as redesign of key products; increasing waste collection and recycling; governance for plastic pollution, etc.

#### Leading Actions of Circular Economy

Promote circular economy development in companies and industrial parks

Improve the urban recycling system

Work plan for the pilot programme of 'Zero-Waste City' Building

Initiated the zero waste city pilots

#### Overall action plan for launching Green Living

Green Living includes: Green family (consumption), school (education and procurement), transportation, shopping mall (energy and water saving), architecture

2019

Beverage paper-based packaging Extended Producer Responsibility system implementation plan

Started EPR pilot on paper-based packaging

Law on Prevention and Control of Environmental Pollution by Solid Waste (Second Amendment)

2020

Development of waste sorting schemes in cities, kitchen waste management, waste disposal charging system

Action plan for peaking carbon emissions before 2030

National circular economy '14th Five-Year' plan

Emphasise the full-chain governance of plastic pollution

Guiding opinions on accelerating the establishment of a sound economic system with green, low-carbon and circular development

Implementation plan to promote green consumption

Promote the development of green, low-carbon and circular system in production, distribution, and consumption

Circular Economy
Promotion Law
(under amendment)

2022

2017

Notice on printing and distributing the Implementation Plan for Prohibiting the Entry of Foreign Wastes and Promoting the Reform of the Solid Waste Import Management System

National Sward (Foreign Waste Ban)

Guiding opinions on coordinating the promotion of green packaging in the express delivery industry

Promote green packaging use in the delivery industry (Green means reusable, biodegradable, and reduction at source)

Opinio

Implementation of the Foreign Waste Ban

Adjusting the Imported

**Waste Management** 

Catalogue

2018

Opinions on further strengthening the control of plastic pollution

Expand the plastic ban to a list of single-use plastics (the new plastic ban)

Notice on solidly promoting plastic pollution control

Opinions on accelerating the green tranformations of express packaging

Measures for reporting the use and recycling of disposable plastic products in the commercial field (trial)

Demand standard for express packaging in government procurement (trial) Demand standard for commodity packaging in government procurement (trial)

Green packaging specification for mail express

National Plastic Pollution Action '14th Five-Year' Plan

2021

Emphasise the full-chain governance of plastic pollution

National E-commerce '14th Five-Year' Development Plan

Notice on promoting the green development of e-commerce enterprises

VAT Reduction Catalogue for Resource Utilisation Products and Services (updated)

### ...but gaps remain

By now, a strong interaction between plastic pollution management policy and the circular economy development plan has been established, which provides an opportunity to advance a more comprehensive policy framework for plastic in China. **However, currently, gaps in the policy agenda still remain:** 

- Policies and standards for the packaging value chain are currently mostly voluntary (e.g. design-for-recycling guidelines), siloed or overlapping with each other. Coordination and harmonisation efforts can be made under the current discussion on "eco-design". Common standards must be harmonised and adopted.
- EPR scheme for all packaging, as a key mechanism for financing the collection, sorting and recycling of packaging, can be explored, given that it is a proven way to make the economics of packaging recycling work.
- Circular development for the plastic packaging industry is not fully integrated within current policy initiatives, such as Zero-Waste Cities initiatives and waste sorting schemes.
- To date, to avoid plastics waste and pollution, and meet China's objectives, the focus has been mainly on end-of-pipe waste management and only limited solutions to avoid waste from being generated in the first place have been adopted.

### China's objectives to control plastic pollution (from the 14th FYP)

Reduce single-use plastic production and consumption at source

Improve plastic waste collection and recycling

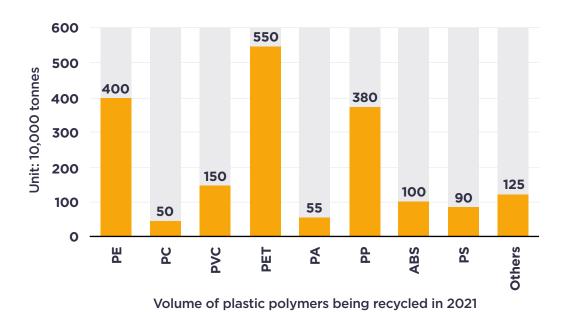
Establish the whole chain management system of plastic pollution

Reduce plastic waste leakage

# The voluntary efforts of the plastics industry provide a useful starting point but are still siloed and focused on waste management practices.

The current plastic system is linear and not fully monitored, which requires further coordination and integration.





### 2 There are efforts downstream, but much more is needed.

- Plastic recycling has covered a variety of types, amounting to 19 million tonnes in total in 2021, but it is not clear how much is postconsumer waste. (see the figure on the left)
- Although recycled PET amounts to 4.8 million tonnes, 78% is used for the fibre industry, and close-loop recycling (i.e. bottle-to-bottle) is very limited.
- The plastic recycling industry involves
   0.9 million workers, with a majority (nearly
   80%) being self-employed or small businesses (referred to as the informal sector).

More importantly, the transition to a circular plastics economy requires prioritisation of upstream efforts.

# There are great opportunities for upstream innovation to design out waste.

To unlock the full opportunity, it is necessary to move beyond focusing on incremental packaging improvements. Design is the fundamental starting point to achieving the circular economy vision, and a key step to eliminating plastic waste at source. Packaging redesign goes beyond the appearance and function of the packaging itself, and instead includes the design of the product, business model, and distribution system.



**ELIMINATION** Packaging is eliminated while the user experience is maintained or enhanced.

- Direct elimination
- Innovative elimination



**REUSE** Packaging is reused, rather than discarded after one use, creating value for both users and businesses.

- Refill at home
- Return from home
- Return on the go
- Refill on the go
- Business to business



**MATERIAL CIRCULATION** Packaging is designed so that the materials it is made from can be recycled or composted.

- Plastics recycling
- Plastics composting
- Substitution to a non-plastic material



### Successful examples in China and internationally provide inspiration.

To understand how to apply the upstream innovation mindset to achieve the three key circular economy innovation strategies: **elimination**, **reuse**, and **material circulation**, find <a href="here">here</a> more than 110 innovation case studies and references. This database shows what good looks like in practice.

In China, local brands set ambitious circular economy targets for plastic packaging: Nongfu and Mengniu for example have pledged to achieve 100% reusable, recyclable or compostable packaging by 2025.

Other businesses are exploring circular business models such as:



#### **ELIMINATION**

 65% of e-commerce delivery has eliminated additional packaging by 2020.



#### **REUSE MODELS**

#### For the Chinese express delivery industry,

- the take-up rate of reusable **B2B** bags is over 90%.
- A target "to increase the use of B2C reusable delivery packaging to 10 million by 2025" was set in the 14th Five Year Plan.



#### **MATERIAL CIRCULATION**

- Production capacity for closed-loop recycling (i.e. bottle-to-bottle) is growing, with four companies having their production lines in China approved by the U.S. Food & Drug Administration (FDA) to produce food-contact packaging material (at an annual capacity of nearly 300,000 tonnes) - Veolia Huafei, Incom, Guolong, Ceville
- Use post-consumer recycled plastic in packaging Mengniu





### Now is the time for China to accelerate a circular economy for plastics

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### **Action plan for China**

- Policymakers and businesses can take action in three main areas: design, system and Infrastructure, and incentives
- Establish a cross-value chain dialogue to achieve a common vision and targets
- China can play an active and leading role in the development of an ambitious UN treaty on plastic pollution

### **Action plan for China**



**5** Key objectives

And actions can happen in

**7** Priority areas

**Activating** mechanism

**Enabling** condition

The government and businesses need to develop comprehensive and ambitious circular economy strategies and action plans, aiming to:

- Eliminate unnecessary or problematic packaging
- Significantly increase the use of reusable packaging
- Ensure all packaging is recyclable and recycled in practice
- Increase the use of recycled content, to decouple plastic use from fossil resource consumption
- Carefully assess the use of compostable packaging where relevant

Policymakers and businesses can take action in three main areas:

- 1 Design
- 2 Systems and infrastructure
- **3 Incentives**

Establish a cross-value chain dialogue to achieve the above objectives.

### A <u>legally binding UN</u> <u>Plastic Treaty</u> on plastic pollution that:

- Focus on ways to stop the plastic pollution at source, beyond clean ups.
- Set global standards.
- Support all countries to play their part.

Policymakers and businesses can take action in three main areas:	1 Design  Designing out waste by rethinking the packaging, the product, and the business model in order to eliminate unnecessary or problematic plastics and ensure all plastic packaging is reusable, recyclable, or compostable.	2 Systems and infrastructure  Collecting, sorting, and cleaning to enable reuse of packaging and recycling of packaging materials in practice and at scale.	3 Incentives  Promoting the uptake of circular packaging solutions, new delivery models, and recycled material input.
Policy priorities:	1 Establish mandatory design requirements	2 Lead the creation of necessary systems and infrastructure	3 Develop regulatory and financial incentives
<b>Business priorities:</b>	1 Develop design guidance	2 Work across the value chain to build systems and infrastructure	3 Develop incentives for customers
Activating mechanism could:	Break the silo, bridge communications, enhance collaborations, lead to concerted actions		
Enabling condition could:	Deliver industry-scale change and end plastic pollution		

#### 1 Design 2 Systems and infrastructure **3 Incentives** 1 Develop mandatory design requirements/ 1 Establish Extended Producer Responsibility 1 Establish policy instruments, such as landfill Key initial priorities standards for packaging. tax, incineration gate fees to further reduce (EPR) schemes for all packaging, as the for **policymakers**: implementation of EPR is likely to drive the waste and incentivise the elimination of 2 Develop elimination catalogue (commonly companies to take action. unnecessary or problematic packaging. identified problematic packaging materials) with a phase-out plan. 2 Hold e-commerce companies and food delivery platforms accountable for their crucial role in the transition to a circular economy for plastic packaging. 1 Embed a packaging assessment in all 1 Support EPR policy and projects. 1 Charge for single-use packaging Key initial priorities product development processes to assess for **businesses**: 2 Develop and share evidence on the the necessity of packaging usage. environmental considerations of packaging 2 Develop a phase-out plan for commonly choices. identified problematic packaging materials. **3** Communicate and explain the changes 3 Innovate towards 100% reusable, recyclable, to staff and customers to ensure buy-in. or compostable packaging.

### Key initial priorities

### Develop reusable packaging targets and standards to increase the proportion of

1 Design

reusable packaging.

2 Improve the health and safety standards for reusable/refill appliances with an implementation plan.

### Key initial priorities for **businesses**:

for **policymakers**:

- 1 Develop a clear reuse strategy with tangible ambitions and clear implementation plans.
- 2 Standardise containers to enhance reuse efficiency.
- 3 Review packaging ranges and portfolios to identify opportunities for reuse.

### 2 Systems and infrastructure

- Establish Extended Producer Responsibility (EPR) schemes for all packaging, as EPR can be an incentive to drive companies towards reuse.
- 2 Promote harmonisation of shared infrastructure to facilitate/enable scaling of reuse models.
- **3** Facilitate cross-value chain collaborations to enhance reuse models development (incl. collecting, sorting, and cleaning systems).
- 4 Ensure e-commerce companies play a leading coordination role to increase reuse in the e-commerce sector.
- 1 Start pilot reuse projects and proactively work towards addressing the barriers to taking pilots to scale.
- 2 Actively engage with supply chain to test the design of reusable packaging, products, and delivery systems, and set up reuse delivery and distribution models.
- **3** Share learnings from reuse pilots.

#### **3 Incentives**

- 1 Introduce fiscal incentives and subsidies (e.g., VAT deduction or expanding the scope of tax preferential to the reusable businesses) to encourage the development of reusable packaging and related business models.
- **2** Eco-modulation of EPR fees to incentivise design for reuse and recycling.
- **3** Encourage the integration of reusable model in the national "green consumption" promotion.

- 1 With bulk sale options, encourage and accept customers' own reusable containers.
- 2 Set up discount or rewards scheme for reuse and recycling.
- **3** Test deposit and return schemes with retailer involvement to incentivise packaging collection.

### Key initial priorities for **policymakers**:

### 2 Systems and infrastructure

- 1 Develop harmonised labels for recyclability to facilitate effective collection and recycling for plastic packaging.
- 2 Establish Extended Producer Responsibility (EPR) schemes for all packaging, as EPR drives the market towards better design and recycling.
- 3 Develop an inclusive waste management system to gradually incorporate the informal sector.
- 4 Improve the information management of waste collection and recycling.
- 5 Raise social awareness to enhance public perception of recycling and use of high-quality recycled materials.

#### **3 Incentives**

- 1 Introduce fiscal incentives and subsidies (e.g., VAT deduction or expanding the scope of tax preferential to the recycling businesses) to encourage the development of recycling system and material innovations.
- 2 Establish policy instruments, such as landfill tax, incineration gate fees to further reduce waste and incentivise recycling.
- **3** Eco-modulation of EPR fees to incentivise design for reuse and recycling.

### Key initial priorities for **businesses**:

1 Innovate towards 100% reusable, recyclable, or compostable packaging.

Develop harmonised standards to support

packaging recyclability assessment.

2 Follow local or international design-for-recycling guidelines for packaging design.

1 Design

- 1 Support EPR policy and projects.
- 2 Actively engage with supply chain to convey the recyclability requirements.
- **3** Use clear and harmonised labels to indicate recyclables.

- 1 Set up discount or reward schemes for reuse and recycling.
- 2 Test deposit and return schemes with retailer involvement to incentivise packaging collection.

#### 1 Design 2 Systems and infrastructure **3 Incentives** Develop mandatory design requirements 1 Develop a legal framework to allow the use 1 Develop public procurement requirements to Key initial priorities for packaging to require the use of recycled of recycled content in packaging. increase the use of recycled materials. for **policymakers**: content. 2 Improve the information management 2 Set mandatory requirements of minimal levels of waste collection and recycling. of recycled content in packaging to increase the use of recycled materials. 3 Raise social awareness to enhance public perception of recycling and use of high-quality recycled materials. 1 Set recycled content target. 1 Communicate and explain the changes Key initial priorities to staff and customers to enhance 2 Improve packaging design to enhance the for **businesses**: public perception of recycling and use economics and quality of recycled material. of high-quality recycled materials. 3 Review packaging ranges and portfolios to 2 Innovate towards more efficient identify opportunities to improve the use recycling technology. of recycled content.

### 1 Design

Key initial priorities for **policymakers**:

Key initial priorities for **businesses**:

 Cautiously evaluate the use of biodegradable and compostable plastics and develop guidance/criteria.

### 2 Systems and infrastructure

- Develop harmonised labels for compostability to facilitate effective collection.
- 2 Assess China's composting infrastructure and regional variability, and match these findings with existing compostability standards and certifications.
- **3** Enhance the collection system and composting infrastructure.
- 4 Provide guidance on when and where to use compostable packaging.
- 1 Work with composting facilities to ensure all composting materials put on the market are collected and composted.

## Establish a cross-value chain dialogue to achieve a common vision and targets.

To enable a shift in economic models requires the engagement of a diverse mix of private, public, and civil society organisations, including stakeholders from across the value chain.

It is important to start establishing strong partnerships and cooperation, working in an inclusive and collaborative process especially ensuring strong representation of the informal sectors, to harness expertise and break down traditionally siloed areas within and outside of government and industry, and facilitate the necessary policy coherence and alignment to catalyse concerted actions at all levels.

- R&D towards recyclable, reusable packaging
- Use monomaterial for packaging
- Use recycled content

### Illustration of how stakeholder collaboration can activate Chinese vision and beyond

- Ask for recyclable/reusable packaging
- Create packaging reduction strategy and plan
- · Pilot on reusable models
- Collaborate to build reverse logistics for reuse models

Brand owners

Support and participate in the EPR

### packaging producers Policymakers · Create policy framework, aligned regulations and harmonised standards · Guide the direction of travel Support circular economy innovations Implement waste separation scheme, build an inclusive waste management system Individuals · Support the 'green consumption' campaign led by the Chinese government Actively conduct waste sorting and separation Polymer producers

- Set up a charging scheme for single-use packaging
- Create packaging reduction strategy
   and plan
- Pilot on reusable models with up- and down-stream stakeholders
- Collaborate to build reverse logistics for reuse models
- Support and participate in the EPR

- R&D for alternative materials
- · Invest in R&D for renewable materials
- Develop capacity for production of recycled material

 Develop the recycling capacity for high-value products

R&D for recycling technology

• Collaborate to construct an inclusive recycling system

## China can play an active and leading role in the development of an ambitious UN treaty on plastic pollution.

In March 2022, at the United Nations Environment Assembly, nearly 200 countries agreed to start negotiations on a legally binding agreement to take action on plastic pollution. This landmark decision to put in place a treaty that set rules for the production, use, and disposal of plastics globally will be looking at all major levers to tackle plastic pollution, including product design alongside recycling. Building a common vision and harmonised standards that strengthen coordination and a shared approach to address plastic pollution, the treaty is a key milestone towards a circular economy for plastics. As the biggest manufacturer, user, and exporter of plastics in the world, China can play a unique role in driving this agenda forward and raise global ambition.

In parallel, through bilateral and multilateral cooperation initiatives, such as the China-EU Memorandum of Understanding on Circular Economy Cooperation, the China-US Joint Declaration on Enhancing Climate Action in the 2020s, and the World Trade Organization (WTO) mechanism, China can help drive a global transition to a circular economy for plastics.

The current 14th Five Year Plan presents the foundations for a comprehensive transition to a circular economy for plastics that supports China's carbon emission goals and broader environmental agenda. International cooperation efforts can support this ambition further and position China as a leading actor to deliver industry-scale change and end plastic pollution.

### The time to act is now....



### **Acknowledgements**

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The recommendations presented in this work solely reflect the views of the project team. The team's views have been formed on the basis of existing literature, expert interviews, workshops with the expert panel, and in-house analysis.

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#### About the Ellen MacArthur Foundation

The Ellen MacArthur Foundation is an international charity that develops and promotes the circular economy in order to tackle some of the biggest challenges of our time, such as climate change, biodiversity loss, waste, and pollution. We work with our network of private and public sector decision-makers, as well as academia, to build capacity, explore collaborative opportunities, and design and develop circular economy initiatives and solutions. Increasingly based on renewable energy, a circular economy is driven by design to eliminate waste, circulate products and materials, and regenerate nature, to create resilience and prosperity for business, the environment, and society.

**Further information:** www.ellenmacarthurfoundation.org | @circulareconomy **Further information:** Our Network | network@ellenmacarthurfoundation.org

### About the Ellen MacArthur Foundation (UK) Beijing Representative Office

The Ellen MacArthur Foundation (UK) Beijing Representative Office has obtained official registration as an international NGO in China.

Since 2018, the Foundation has started working collaboratively with partners in China, recognising the rising momentum in the country towards transitioning to a circular economy, supported by policy and industry initiatives. With the guidance of the Ministry of Ecology and Environment of China, the Foundation obtained official registration in 2022, which enables the Foundation to scale up its operations, better collaborate with local stakeholders, and more effectively work towards our mission to accelerate the global transition to a circular economy and mobilise system solutions at scale.

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