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# Reducing Single-Use Plastics in Food Delivery and Takeaway

Documentation of the webinar on 30 July 2020 with experiences and best practices from Europe and East- and Southeast Asia



## INTRODUCTION

### Why it is important to tackle single-use plastics in food delivery and takeaway

**Single-use plastic consumption is rapidly increasing, especially in food packaging for better transportation and durability.** Plastic packaging supports “on-the-go” lifestyles with ready-made meals and single-use plastic items like cups, straws and bags for takeaway, which have become an inherent part of everyday lives around the world. Single-use plastics are present when people buy street food, eat in and takeaway food from restaurants or order food delivery to their homes and offices. They are perceived as convenient, cheap, hygienic, stable and light in weight. Recently, plastics in food delivery, takeaway and online commerce saw an additional rise due to COVID-19 related closures and distancing measures.

**At the same time however, single-use plastics cause environmental pollution.** They are only used once for a relatively short period of time before they are thrown away. Dumped and in the absence of functioning waste management systems, parts of plastic waste get openly burned, and contribute to air pollution and greenhouse gas emissions. Other parts are buried or littered on land, contributing to soil pollution. Plastic waste also gets dumped along canals and rivers, from where it enters water systems. Every year, an estimated 5-13 million tonnes of plastics leak into the oceans worldwide.<sup>1</sup> Marine animals get entangled or ingest them, leading to infections and deaths.<sup>2</sup> Plastics can remain in the marine environment for several hundreds of years, breaking down into smaller pieces and dispersing throughout the oceans from the surface to the

<sup>1</sup> Jambeck, J.R. et al. (2015) 'Plastic waste inputs from land into the ocean'. Science, vol. 347, issue 6223, p. 768-771.

<sup>2</sup> See e.g. Secretariat of the Convention on Biological Diversity (2016) Marine Debris: Understanding, Preventing and Mitigating the Significant Adverse Impacts on Marine and Coastal Biodiversity. CBD Technical Series No. 83. <https://www.cbd.int/doc/publications/cbd-ts-83-en.pdf>

bottom of the sea.<sup>3</sup> They become part of plankton and mussels, sea salt and the food chain – with the potential to return to our plates.

**As marine litter and through its contribution to climate change, plastic waste has become a global challenge.** It has attracted the attention of the international community, activists, individuals, policymakers, and more and more companies. It has led to the adoption of strategies and action plans at international level and in several countries and has stimulated a discourse on reduction measures to prevent plastic waste ending up in the environment and in the ocean, for example in Europe and in several countries in East- and Southeast Asia. These measures need to address several barriers and face questions such as: Which alternative materials and services are available and more sustainable if all environmental aspects throughout the life cycle are taken into account? How to engage and provide incentives to public, private, academic and civil society stakeholders?



“The COVID-19 crisis has definitely increased the need for guidance on how to deal with single-use plastic. Increased demand for food delivery and takeaway responds well to concerns on health and hygiene but results in an important and worrying increase in single-use plastic waste. The webinar tackled some of the key questions and has provided concrete examples of policies and business models that try to address this challenge.”

Ms Maria-Chiara Femiano, Programme Manager, Foreign Policy Instruments/Regional Team for Asia & Pacific, Delegation of the European Union to Thailand

**This documentation gathers insights on how to reduce single-use plastics in food delivery and takeaway.** It is based on a webinar with the same title organised on 30 July 2020 by the “Rethinking Plastics – Circular Economy Solutions to Marine Litter” project, which is funded by the European Union (EU) and the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and Expertise France.

**The webinar highlighted current developments and efforts as well as examples and best practices on single-use plastics reduction and avoidance with a specific focus on Europe, China and Thailand.** The following contributions and quotes reflect the speaker’s presentations and opinions as outlined in the webinar. It is part of a series of webinars, which also features topics such as Extended Producer Responsibility for packaging waste and plastic recycling standards. The webinar series intends to provide a platform for the exchange of experiences and

<sup>3</sup> See e.g. Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) (2019) *Guidelines for the Monitoring and Assessment of Plastic Litter in the Ocean*. <http://www.gesamp.org/publications/guidelines-for-the-monitoring-and-assessment-of-plastic-litter-in-the-ocean>

to create bridges between Asia and Europe to jointly tackle the marine litter and plastic waste challenge.

Overall, “Rethinking Plastics” supports a transition towards a circular economy for plastics in seven countries in East and South East Asia to contribute to a significant reduction of marine litter. The project works, amongst others, in the areas of plastic waste management, sustainable consumption and production of plastics as well as the reduction of litter from sea-based sources to reduce plastic waste and its leakage into the sea. For more information, please visit: <https://beatplasticpollution.eu/rethinking-plastics/>.

**Agenda of the webinar:**  
**Reducing Single-Use Plastics in Food Delivery and Takeaway**  
**Experiences from Europe and East- and Southeast Asia**  
**Thursday, 30 July 2020, 14.00-16.30 (Bangkok time), MS Teams**



Moderation: Mr Ittinat SEEBOONRUANG

**14.00-14.10:** **Welcome and presentation** of the “Rethinking Plastics” project, topic, agenda, speakers and technical aspects – Ms Maria-Chiara FEMIANO, Programme Manager, Delegation of the EU to Thailand; Mr Ittinat SEEBOONRUANG

**14.10-15.05:** **Policy Insights**

- *EU policies on phasing-out certain single-use plastics and their relevance for food delivery and takeaway* – Mr Sébastien PAQUOT, Head of Section, Counselor Climate and Environment, Delegation of the European Union to China
- *Thailand’s Roadmap on Plastic Waste Management and current initiatives on single-use plastics in food delivery and takeaway* – Ms. Wassana JANGPRAJAK, Environmentalist, Waste Minimization Sub-Division, Pollution Control Department, Thailand
- *China’s Opinion on Further Strengthening the Control of Plastic Pollution as policy guideline for phasing out certain single-use plastic items* – Mr. Lu DONGSEN, Director of Division of Circular Economy Development, Department of Resource Conservation and Environmental Protection, National Development and Reform Commission (NDRC), China

**15.05-15.15:** **Questions and Answers**

**15.15-16.15:** **Practical Experiences**

- *How a restaurant in Bangkok promotes reusable Thai pintos and lotus leaves for home delivery* – Mr Thontheep TUANWACHAT, RISE Café
- *How a start-up has introduced a voluntary deposit-return scheme for reusable boxes, cups and cutlery in over 1,000 restaurants and takeaways in Europe* – Ms Jeanette MORATH, Founder of reCIRCLE
- *How a food delivery platform in China is reducing plastic waste* – Ms GUAN Li, Senior Program Manager, Meituan Waimai CS
- *How to engage food delivery companies in a voluntary agreement* – Ms Stefanie BEITIEN, Head of Market Transformation, WWF Singapore

**16.15-16.25:** **Questions and Answers**

**16.25-16.30:** **Conclusions and Outlook**



## POLICY INSIGHTS

### Public policies for reducing certain single-use plastic products

Public policies can contribute to accelerating and up-scaling good practices and to creating a reliable framework for a transition towards more sustainable consumption and production patterns and a circular economy. However, decision-makers deal with questions such as: Which policy instruments can be applied for reducing certain single-use plastics in food delivery and takeaway and other sectors? How to effectively engage public, private, academic and civil society stakeholders for their implementation? The European Union, Thailand and China for example have adopted ambitious strategies in this regard with overlapping but also diverse approaches and instruments. During the webinar, Sébastien Paquot from the Delegation of the European Union to China, Wassana Jangprajak from Thailand's Pollution Control Department (PCD) and Lu Dongsen from the National Development and Reform Commission (NDRC) in China shared insights into policies and current activities. The following paragraphs summarise their presentations and messages.

## The European Union's policy and legal framework on single-use plastics

As outlined in the presentation "EU policies on phasing-out certain single-use plastics and their relevance for food delivery and takeaway" by Sébastien PAQUOT, Head of Section, Counselor Climate and Environment, Delegation of the European Union to China.

In 2015, the European Commission launched its first Circular Economy Action Plan.<sup>4</sup> Three years later, the so-called 2018 Circular Economy Package followed. It included amongst others the **European Strategy for Plastics in a Circular Economy**.<sup>5</sup> This new Plastics Strategy addresses the whole value chain of plastics from raw material suppliers, manufacturers and consumer goods companies to retailers, citizens, plastic waste collectors, sorters and recyclers. It sets out the vision that "all plastics packaging placed on the EU market is either reusable or can be recycled in a cost-effective manner" by 2030.<sup>6</sup> It also envisions to prevent plastic leakage into the environment and avoid marine plastic litter.

**Going one step further, the European Commission, the European Parliament and the European Council agreed in June 2019 on a new legislative framework for certain single-use plastics**, the "Directive on the reduction of the impact of certain plastic products on the environment". The 27 EU Member States have time to transpose the directive into national laws and regulations until 3 July 2021.<sup>7</sup>

**Overall, the Directive promotes circular approaches that give priority to sustainable reusable products and systems rather than to single-use products with the aim to reduce the waste generated.** Amongst others, the Directive addresses the Top 10 single-use plastic items found at European beaches<sup>8</sup>.

It applies the following policy instruments to different types of products:

- **Restrictions on market placement ("bans"):** By 3 July 2021, certain single-use plastic items, some related to food delivery and takeaway, will be banned from selling within the EU market. This includes oxo-degradable plastics as well as cutlery (forks, knives, spoons, chopsticks); plates; straws; beverage stirrers; cups, food and beverage containers made of expanded polystyrene; cotton bud sticks and sticks for balloons.
- **Consumption reduction:** The EU Member States can choose between different instruments to quantitatively reduce the consumption of certain single-use plastic products between 2022 and 2026 and need to report about these measures by 3 July 2021. Potential instruments include the adoption of national reduction targets, approaches to

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<sup>4</sup> European Commission (2015) Closing the loop – An EU action plan for the Circular Economy. COM (2015) 614 final; 2<sup>nd</sup> of December 2015. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0614> Overall summary of further development: [https://ec.europa.eu/environment/circular-economy/first\\_circular\\_economy\\_action\\_plan.html](https://ec.europa.eu/environment/circular-economy/first_circular_economy_action_plan.html)

<sup>5</sup> European Commission (2018) A European Strategy for Plastics in a Circular Economy. COM (2018) 28 final; 16<sup>th</sup> of January 2018. <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1516265440535&uri=COM:2018:28:FIN>

<sup>6</sup> Ibid. P. 5

<sup>7</sup> Official Journal of the European Union (2019) Directive (EU) 2019/904 of the European Parliament and of the Council on the reduction of the impact of certain plastic products on the environment. <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32019L0904>

<sup>8</sup> See also European Commission (2018) Reducing Marine Litter: action on single use plastics and fishing gear. Commission Staff Working Document – Impact Assessment. p. 11. [https://ec.europa.eu/environment/circular-economy/pdf/single-use\\_plastics\\_impact\\_assessment.pdf](https://ec.europa.eu/environment/circular-economy/pdf/single-use_plastics_impact_assessment.pdf)

increase the availability of reusable alternatives at the points of sale and economic instruments, e.g. to avoid that single-use plastic items are provided free of charge. The concerned products are cups for beverages, including their covers and lids, as well as food containers (e.g. boxes) for immediate consumption or ready to be consumed food without any further preparation.

- **Product design requirements:** Caps and lids need to remain attached to bottles to avoid their leakage into the environment. The EU Member States have until 3 July 2024 to implement respective national regulations and joint European standards will be developed. Furthermore, the Directive introduces a new minimum recycled content quota for beverage bottles. By 2025, PET bottles need to contain at least 25% of recycled plastics. By 2030, all kinds of single-use plastic bottles need to contain at least 30% of recycled plastics.
- **Marking requirements:** Through harmonised labels on products and packaging, consumers will be informed about the presence of plastics in the product, how it should be disposed and which negative environmental impacts arise from littering. Concerned products include cups for beverages; tobacco products with filters; wet wipes; sanitary towels, tampons and tampon applicators. National regulation needs to be in place by 3 July 2021.
- **Extended Producer Responsibility (EPR):** EPR is a proven policy instrument, which is already widely applied within the EU for different types of packaging and regulated within the EU Waste Framework Directive and the EU Directive on Packaging and Packaging Waste.<sup>9</sup> The Directive on single-use plastics introduces additional EPR obligations for the following items: food and beverage containers as well as packets and wrappers for immediate consumption on-the-spot or takeaway; cups for beverages including caps and lids; lightweight plastic carrier bags; wet wipes; balloons and tobacco. Producers of these products need to cover the costs for awareness raising, waste collection, cleaning up litter and/or data gathering and reporting. The EU Member States have to implement these regulations until 31 December 2024 (for tobacco products until 5 January 2023).



<sup>9</sup> Directive 2008/98/EC on waste and repealing certain Directives. (See article 8 on EPR) <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02008L0098-20180705> Directive 94/62/EC on packaging and packaging waste. Last amended on 14<sup>th</sup> of June 2018. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:01994L0062-20180704>

- **Separate collection:** The Directive introduces a new separate collection target for plastic beverage bottles: 77% by 2025 and 90% by 2029. Member States can e.g. introduce deposit-refund schemes for this purpose or establish separate collection targets for extended producer responsibility schemes.
- **Awareness raising:** Consumers should be informed about reusable alternatives to single-use plastics, on how to correctly dispose of their waste and the negative environmental impacts of littering. The same applies for users of fishing gear. The 27 EU Member States will raise awareness in this regard. The following single-use plastic items are covered: food containers as well as packets and wrappers for immediate consumption on-the-spot or takeaway; beverage containers; cups for beverages; tobacco products; wet wipes; balloons; lightweight plastic carrier bags; sanitary towels, tampons and tampon applications.

The Plastic Strategy and the Directive on single-use plastics are part of a broader policy and legislative framework on circular economy, which is continuously developing. On 11 March 2020, the European Commission adopted a new **Circular Economy Action Plan as part of its European Green Deal**.<sup>10</sup> Amongst others, it foresees to establish requirements for recycled plastic content in certain products, a framework for bio-based and biodegradable plastics as well as restrictions for intentionally added microplastics. The European Green Deal and the concept of circular economy are also part of the currently negotiated proposal for a recovery plan from the COVID-19 pandemic.<sup>11</sup>

“The use of durable or circular alternatives to single-use plastics should be promoted through regulatory or voluntary initiatives. For food delivery and take away, a good option is to put a price on what will soon turn into waste and to avoid giving away something that will become waste. Ask the consumers to pay a little extra for this or at least ask them to explicitly order single-use items which are not always necessary such as disposable cutlery. Do not include those systematically in the delivery. Be also careful with biodegradable solutions. Although called biodegradable they may take a long time to degrade depending on the environment where they end up.”



Mr. Sébastien Paquot, Head of Section, Counselor Climate and Environment, Delegation of the European Union to China

<sup>10</sup> European Commission (2020) ‘Changing how we produce and consume: New Circular Economy Action Plan shows the way to a climate-neutral competitive economy of empowered consumers’. *Press release*, 11 March 2020, [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_20\\_420](https://ec.europa.eu/commission/presscorner/detail/en/ip_20_420) ; European Commission (2020) Circular Economy Action Plan. [https://ec.europa.eu/environment/circular-economy/pdf/new\\_circular\\_economy\\_action\\_plan.pdf](https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf) Annex: [https://ec.europa.eu/environment/circular-economy/pdf/new\\_circular\\_economy\\_action\\_plan\\_annex.pdf](https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan_annex.pdf)

<sup>11</sup> European Commission (2020) Recovery plan for Europe. Website. [https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response-0/recovery-plan-europe\\_en](https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response-0/recovery-plan-europe_en)

## Thailand's Roadmap for Plastic Waste Management 2018-2030

As outlined in the presentation "Thailand's Roadmap on Plastic Waste Management and current initiatives on single-use plastics in food delivery and takeaway" by Ms Wassana JANGPRAJAK, Environmentalist, Waste Minimization Sub Division, Pollution Control Department (PCD), Thailand

During the last 10 years, about **2 million tonnes of plastic waste** were generated per year in Thailand, which represents about 12% of the total annual waste generation. About 0.5 million tonnes of plastic waste have been recovered per year and around 1.5 million tonnes have gone to sanitary landfills, waste incineration and dumpsites.

**Led by the Ministry of Natural Resources and Environment (MNRE), the Thai government has therefore developed Thailand's Roadmap on Plastic Waste Management 2018-2030.**<sup>12</sup>

It serves as a strategic framework on plastic waste, following a life-cycle and public private partnership approach, the 3R principle (reduce, reuse, recycle), the concept of circular economy as well as sustainable consumption and production. The Roadmap is also coherent to other policies in Thailand such as the National Strategy 2018-2037, the National Reform Plan on Natural Resources and the Environment, the 12<sup>th</sup> National Economic and Social Development Plan 2017-2021, the National Waste Management Master Plan 2016-2021 as well as the UN Sustainable Development Goals.

**Thailand's Plastic Roadmap includes ambitious targets:**

- By 2019: Stop using cap seals, oxo-degradable plastics and microbead plastics
- By 2022: Stop using plastic bags (thicker than 36 microns), foam food containers, single-use plastic cups (less than 100 microns) and plastic straws
- Achieve a 100% recycling rate of plastic waste

To support its implementation, the **Plastic and Electronic Waste Management Sub-Committee** under the National Environment Board and a working group on plastic waste management between the public and private sector were created.<sup>13</sup> Both assist in developing a **Plastic Waste Management Action Plan 2018-2022** under the Plastic Roadmap, which contains measures on reducing plastic waste at source, reducing single-use plastics during consumption, and managing post-consumer plastic waste.

**Specific on-going actions include:**

- Voluntary agreement with the five largest drinking water producers to stop using cap seals for drinking water bottles from 1 April 2018
- Cooperation with the Food and Drug Administration (FDA) under the Ministry of Public Health to stop using primary micro-plastics
- Cooperation with the Thai Industrial Standards Institute (TISI) to stop the use of oxo-degradable plastics in products

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<sup>12</sup> Thai Ministry of Natural Resources and Environment (MONRE) / Pollution Control Department (PCD) (2019) Thailand's Roadmap on Plastic Waste Management 2018-2030. [http://www.pcd.go.th/Info\\_serv/File/Plastic%20Roadmap.pdf](http://www.pcd.go.th/Info_serv/File/Plastic%20Roadmap.pdf) ; Thai Government Public Relations Department (2019) Roadmap on Plastic Waste Management. Website in English, [https://thailand.prd.go.th/mobile\\_detail.php?cid=4&nid=7831](https://thailand.prd.go.th/mobile_detail.php?cid=4&nid=7831)

<sup>13</sup> See also Thai Ministry of Natural Resources and Environment (MONRE) / Pollution Control Department (2020) 'Conclusion for the 1/B.E. 2563 Meeting on Plastic and Electronic Waste Management Sub-Committee'- 30 January 2020. <http://www.pcd.go.th/file/Meeting%20Conclusion%20of%201-63%20Plastic%20Sub-Committee.pdf>

- Voluntary agreement and campaign with 43 supermarkets and department stores to stop using plastic bags<sup>14</sup>
- Attempt to ban the import of plastic scraps and plastic waste from other countries
- Measures to reduce and separate waste in the government sector and educational institutions

During the first months of the COVID-19 crisis, the Thai government introduced various lockdown and physical distancing measures, including for restaurants. **This led to an increase of food delivery by around 30% and an increase of plastic waste in cities by about 15%. 60% of the population used food delivery services**, according to an online survey conducted by PCD under MNRE. Among the most common plastic items in food delivery were plastic bags, seasoning packaging, plastic boxes and plastic utensils. The findings include, that most of the plastic packaging from food delivery is not segregated in households and goes to the general municipal solid waste. About 40% is reused and recycled.

To address the plastic issue in food delivery, meetings between the government, the private sector as well as citizens took place. **A guideline for plastic waste management in food delivery** was proposed, including the following elements:

- The **online platforms of food delivery service providers** should add opt-in functions to their applications to refuse plastic utensils and seasoning packets. They should offer the choice of eco-labelled environmentally friendly packaging and include information which stores and restaurants provide these.
- **Restaurants** should use environmentally friendly packaging and ask customers about reducing eating utensils and seasoning packaging.
- **Customers** should use information from the online food delivery platforms and restaurants in order to avoid plastic utensils and seasoning packaging. They should also practice segregation at source of recyclable packaging.



<sup>14</sup> See also Thai Ministry of Natural Resources and Environment (MONRE) / Pollution Control Department (2020) 'MONRE has approached the Northeast to summarize public opinions for finding measures on stopping the use of single-used plastic in fresh markets'. 16 March 2020. <http://www.pcd.go.th/file/stopping-singleused-plastic-markets.pdf>

### Potential incentives to manage plastic waste in food delivery include:

- Incentives for shops to use environmentally friendly packaging, e.g. tax measures to promote biodegradable plastic packaging
- Online platforms could procure environmentally friendly packaging and sell it to partner shops with a reasonable price
- Providing systems with reusable packaging in certain areas, e.g. setting up return points in offices with a deposit-refund system that provides incentives but without additional service fees
- Incentives in the form of discounted prices in food delivery if consumers refuse eating utensils and other plastics
- Establishing a monitoring system and evaluation of feedback from consumers in food delivery.



“The aim of Thailand’s Roadmap on Plastic Waste Management 2018-2030 is to serve as a framework and direction for preventing and managing plastic waste in the country.”

Ms Wassana Jangprajak, Environmentalist, Waste Minimisation Sub-Division, Pollution Control Department Thailand

## China’s policies on plastic waste of 2020

As outlined in the presentation “China’s Opinion on Further Strengthening the Control of Plastic Pollution as policy guideline for phasing out certain single-use plastic items” by Mr. Lu Dongsun, Director of Division of Circular Economy Development, Department of Resource Conservation and Environmental Protection, National Development and Reform Commission (NDRC), China

Measures in China to reduce plastic pollution started in 2007/08 by targeting plastic bags.<sup>15</sup> At that time, the production, sales and use of plastic shopping bags of less than 0.025 mm were prohibited and a pay-system for plastic bags was introduced. In light of the challenges posed by marine plastic waste, the National Development and Reform Commission (NDRC) and the Ministry of Ecology and Environment (MEE) issued the **“Opinions on Further Strengthening the Treatment of Plastic Pollution”**<sup>16</sup> in January 2020. They provide the overall framework for the reduction of plastic waste in China.

<sup>15</sup> See also Notice of the General Office of the State Council on Restricting the Use of Plastic Shopping Bags for Production and Sales (2007). [http://www.gov.cn/zwqk/2008-01/08/content\\_852879.htm](http://www.gov.cn/zwqk/2008-01/08/content_852879.htm)

<sup>16</sup> See original Chinese version at National Development and Reform Commission / Ministry of Ecology and Environment (2020) Opinions on Further Strengthening the Treatment of Plastic Pollution. [https://www.ndrc.gov.cn/xxgk/zcfb/tz/202001/t20200119\\_1219275\\_ext.html?from=groupmessage&isappinstalled=0](https://www.ndrc.gov.cn/xxgk/zcfb/tz/202001/t20200119_1219275_ext.html?from=groupmessage&isappinstalled=0)

In July 2020, nine departments of the Chinese government adopted a “Notice on Solidly Promoting Plastic Pollution Control”<sup>17</sup>, which serves to implement the “Opinions”.

#### **Specific targets of the “Opinions” include:**

- By 2020: Take the lead in prohibiting and restricting the production, sale and use of some plastic products in some regions and areas
- By 2022: The consumption of single-use plastic products has been significantly reduced, alternative products have been promoted, and the proportion of plastic waste recycling and energy utilization has increased significantly. In the areas of plastic pollution and emerging areas such as e-commerce, express delivery, and food delivery, replicable and extendable plastic reduction and green logistics models have been formed.
- By 2025: A management system for the production, circulation, consumption, recycling and disposal of plastic products is established. A pluralistic co-governance system is formed. The level of development and application of alternative products is further improved. The landfill volume of plastic waste in key cities has been reduced. Plastic pollution has been effectively controlled.

#### **The “Opinions” foresee the prohibition to produce and sell the following plastic products:**

- Ultra-thin plastic shopping bags with a thickness of less than 0.025 mm
- Polyethylene agricultural land film with a thickness of less than 0.01 mm
- Disposable foam plastic tableware by the end of 2020
- Disposable plastic cotton bud sticks by the end of 2020
- Products containing plastic microbeads by the end of 2022

#### **The “Opinions” also intend restrictions for using the following plastic products:**

- Non-degradable plastic bags in supermarkets, shopping malls, pharmacies, bookstores and other places in urban areas under the Central government, provincial capital cities and other planned cities as well as in food and beverage takeaway by the end of 2020
- Non-degradable disposable plastic straws nationwide by the end of 2020
- Non-degradable disposable plastic tableware in built county districts and scenic spots by the end of 2022
- Reduce the consumption of non-degradable disposable plastic tableware in urban takeaways by 30% by 2025
- Disposable plastic supplies in hotels and other places nationwide by the end of 2022
- Non-degradable plastic bags, disposable plastic woven bags, non-degradable plastic tape in postal courier outlets in Beijing, Shanghai, Jiangsu, Zhejiang, Fujian, Guangdong and other provinces and cities by the end of 2022

**The “Opinions” envisage the promotion of alternative products, e.g. for shopping bags and plastic items used in food delivery and takeaway.** Biodegradable alternatives are particularly encouraged in this regard. The “Opinions” also call for the optimization of business models. Amongst others, they call for implementation plans to reduce disposable plastic products in e-commerce and takeaway and to promote recyclable and foldable packaging products in logistics. Furthermore, the “Opinions” seek to increase the supply of green products, considering

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<sup>17</sup> See summary at China Association of Circular Economy (CACE) (2020) ‘Nine departments jointly issued the Notice on Solidly Promoting Plastic Pollution Control’. <http://en.chinacace.org/events/view?id=6096> See Chinese original at National Development and Reform Commission (NDRC) (2020), [https://www.ndrc.gov.cn/xxgk/zcfb/tz/202007/t20200717\\_1233956.html](https://www.ndrc.gov.cn/xxgk/zcfb/tz/202007/t20200717_1233956.html)

health and safety standards, the avoidance of chemical additives harmful to human health and the use of recycled materials. In terms of the recycling and disposal of plastic waste, the “Opinions” envisage e.g. to increase waste segregation at source, the collection capacities and frequency and the creation of recycling facilities in key areas. They also intend to increase the recycling of agricultural plastic film and fishing gear.

**For preparing the “Opinions”, NDRC had conducted an analysis of the marine plastic waste and prepared a baseline analysis on the consumption and production of plastics and its recycling.** It shows that China is a large producer and consumer of plastics. At the same time, the 3R (reduce, reuse, recycle) principle is at the core of the Chinese policy, which looks at reducing plastic waste from the source as well as its recycling and recovery. An approach consists in standardising plastic materials to increase the recyclability and to work with selected companies and local governments in pilot measures. A current challenge is the downfall of the oil price, which limits the viability of plastic recycling.

“In the future, we will strengthen our efforts to increase the reusability of products on the market and to find substitutes in terms of products, machinery and business models. From these three perspectives, we hope to completely transform the existing industry of plastic packaging and products so that we can truly tackle the plastic waste issue from the source. China is willing to work alongside with the European Union and other stakeholders in the international community to tackle the plastic waste issue.”

Mr. Lu Dongsen, Director of Division of Circular Economy Development, Department of Resource Conservation and Environmental Protection, National Development and Reform Commission (NDRC)



## PRACTICAL EXPERIENCES

### Examples for avoiding plastic pollution from food delivery & takeaway

**The private sector is another key stakeholder when it comes to food delivery and takeaway initiatives.** Experiences to reduce or avoid plastics are already there and include individual restaurants, chains, and networks as well as big national or multi-national companies.

The webinar showcased four concrete examples in four countries:

- a restaurant in Bangkok that has introduced food delivery through reusable pintos
- a start-up business in Europe that created a network of restaurants applying reusable boxes and cups with a deposit-refund system
- an online food delivery platform in China
- an international NGO that created a voluntary agreement with different food delivery platforms in Singapore.

### How to promote reusable packaging as an individual – the example of RISE Café in Bangkok

As outlined in the presentation “How a restaurant in Bangkok promotes reusable Thai pintos and lotus leaves for home delivery” by Mr Thonthep TUANWACHAT, RISE Café, Bangkok, Thailand

#### **How did the RISE Café in Bangkok achieve natural and circular packaging in food delivery?**

It emerged out of a necessity during the COVID-19 pandemic. For about six years, RISE Café has been part of a group of five different hospitality businesses, including three restaurants and

two hostels. When the COVID-19 crisis hit, all had to adapt quickly to the new situation of lockdowns and restrictions. The group's two hostels were merged into a home for long-term stays and the restaurants had to be shut down.

**The RISE Café was transformed into a food delivery hub.** However, the entrepreneurs did not want to contribute to increasing plastic pollution. So, they came up with alternative packaging to reduce plastic waste, trying out different options. A first attempt consisted in using full fruits such as pineapples and watermelons as packaging, which were cut into half, scooped out and then filled again and sent to customers. However, the non-standardised size and weight of the natural packaging made delivery to customers difficult. Another substitution consisted in using lotus leaves, which can get sanitized and increased in size through heating. Even though RISE Café is using lotus leaves as a natural packaging, the entrepreneurs still see it as waste and therefore wanted to come up with another option. And they found: the pintos for food delivery. Pintos are reusable metal boxes, which are traditionally used in Thailand.

**As a business model, RISE Café started to offer a food subscription plan for five days from Monday to Friday, lunch and dinner, from April 2020 on.** Based on the subscriptions, drivers are hired to deliver the filled pintos to the customers. The first pinto is sent out for lunch time and when dinner is delivered, the drivers take back the empty pintos from lunch. The COVID-19 situation in Thailand improved and in July 2020, restaurants were allowed to open again. Consequently, the demand for food delivery has decreased and RISE Café came up with yet another business idea to use pintos to continue minimizing plastic waste. It now provides food in pintos when catering for offices, workshops and private events. At the end of the day, drivers come to collect the empty pintos.<sup>18</sup>



“Once COVID-19 hit us, we were not allowed to let people dine in at the restaurant. So, we had to come up with a strategy and the only way was food delivery. But we saw that there would be a lot of plastic waste and single-use plastic during this time and we did not want to be part of it. We had to come up with a substitute product or packaging to minimize plastic waste.”

Mr. Thonthep TUANWACHAT, Head Chef of RISE Café, Bangkok

<sup>18</sup> More information on the RISE Café: <https://www.facebook.com/risecafebkk/>

## How to create a network for reusable boxes in food and beverage shops – the example of reCircle in Europe

As outlined in the presentation “How a start-up has introduced a voluntary deposit-return scheme for reusable boxes, cups and cutlery in over 1,000 restaurants and takeaways in Europe” by Ms Jeanette MORATH, Founder of reCircle, a start-up in Switzerland

**Since 2016, reCircle has created a network of restaurants in Switzerland that apply reusable bowls. In total, this has led to a reduction of about 50,000 single-use containers per day.** This is how it works: Customers go to a restaurant and order their food in a reCircle box. They pay 10 Swiss francs deposit and eat their food wherever they want. Afterwards they either wash the box and keep it for personal use or they bring it back to the restaurant and get back their 10 Swiss francs. The takeaway restaurant washes the reusable bowl like usual plates and hands it to the next customer. Even though the deposit of 10 Swiss francs might seem relatively high, customers do not mind paying it because they get a good quality bowl and their money back upon return.

**reCircle’s core activity consists in setting up the network and communicating about the advantages of reusing.** The company has designed its reusable boxes to be stackable, which saves valuable space. They are produced in Switzerland out of tight, clean and recyclable materials and were tested in a laboratory for reusability (e.g. concerning the cleanliness and abrasion of the material throughout its reuse circles). The design foresees washing in a hygienic manner and can be heated to 100°C so that no viruses survive. Today, reCircle’s reusable products cover 80% of possible meals, for example a plate for typical European meat and vegetable menus as well as a box with two compartments, e.g. for Asian meals including rice and sauce. There is also one type of bowl for salad, a small bowl as well as reusable cups and cutlery.



**ReCircle sells these products to restaurants and guarantees a buy-back from restaurants, e.g. if a restaurant accumulates many boxes.** If boxes are broken or strained, reCircle recycles the boxes. One reCircle box can be used 100 to 200 times and a life-cycle assessment shows that in terms of greenhouse gas emissions reCircle’s reusable boxes are better than single-use options made of coated cardboard, polyactic acid (PLA), expanded polysterene (EPS) or sugar cane if reused between 15-25 times and better than single-use PET boxes if reused for about 35

times. A high quality of reusable products is essential because a cheap version that is reused only a few times is not environmentally beneficial compared to single-use options.

**ReCircle currently has a network of about 1,300 restaurants in Switzerland and is expanding to other European countries.** A functioning system already exists in Germany. Tests have also been carried out in France, Belgium and Czech Republic. ReCircle also envisages a trans-European reusable system, e.g. if people travel for holidays to Germany and want to give back the box in France. By applying reusable boxes, restaurants can save expenditures for the purchase of single-use plastic packaging. Instead they pay subscription fees to reCircle, which finance the exchange of boxes, the communication and development work of reCircle.

**During the COVID-19 pandemic, it was very helpful that reCircle already had a hygienic concept in place that all participating restaurants need to follow.** Amongst others, it includes handling of the boxes and how hot to wash the bowls. The only change consisted in informing restaurants that they should not touch the bowl but put it on a plate, so that they do not get in touch with a bowl from a customer who wants to refill.



“Our idea is to give packaging a value because people don’t want to produce waste or to buy a bowl. People just want to eat and drink. So, we have to take care of the packaging problem.”

Ms Jeannette MORATH, Founder of reCircle

## How to reduce and recycle plastic waste as an online food delivery platform – the experience of Meituan Waimai in China

As outlined in the presentation “How a food delivery platform in China is reducing plastic waste” by Ms GUAN Li, Senior Program Manager, Meituan Waimai CS, China

**Meituan Waimai is a subsidiary to Meituan, one of China’s leading e-commerce platforms for services with around 3.6 million online merchants.** The company got more and more aware of the impacts of its food delivery business on the society and environment and therefore launched the Blue Mountain Project in August 2017. Amongst others, the project explores solutions on plastic packaging and waste reduction. It promotes environmental awareness, conducts research, implements pilot activities and includes environmental charity.

**Looking at the entire plastic cycle, Meituan Waimai addresses packaging design through identifying alternative materials and reducing over-sized packaging.** After packaging has been consumed, Meituan Waimai also looks at how to recycle plastic waste before it goes to landfills. Research has been necessary as there have not been many sustainable packaging

solutions on the market. There was a need to find alternative packaging tailored to Chinese cuisine in terms of temperature of the meals and other criteria. Meituan Waimai worked with other stakeholders on standards for paper/cardboard packaging, a booklet on eco-friendly packaging and a green packaging list, which was issued with the China Packaging Federation. They thereby provided their online merchants with a bigger choice of alternative packaging with less environmental impact.

**Potential solutions have been tried out through pilot activities.** Most of them were based on applications to drive more sustainable customer behaviour. In August 2017, Meituan Waimai launched a no cutlery option, which allows customers to choose to opt-out from chopsticks. In 2019, the company added an incentive to users by giving them 10 virtual points for each order with the “no cutlery” option. Due to this incentive, the opt-out from cutlery has doubled. Another application encouraged customers to increase recycling. Customers in Shanghai, for instance, can book recycling services for their plastic food containers. Plastic recycling pilots included office buildings, university campuses and communities, focusing on how to design an economic feasible model and apply it elsewhere in China.



“When we look at the plastic life cycle, we identified two major routes how to reduce waste. The first is to reduce plastics per piece – that means alternative materials that replace plastics, packaging design upgrades and less overpackaging. The second route is more on the back end: after a meal is consumed, how to recycle the plastic waste before it goes to landfill or marine litter.”

Ms GUAN Li, Senior Program Manager, Meituan Waimai CSR

## How to establish sectoral collaboration for reducing plastic pollution in food delivery and takeaway – the example of WWF’s PACT in Singapore

As outlined in the presentation “How to engage food delivery companies in a voluntary agreement” by Ms Stefanie BEITIEN, Head of Market Transformation, WWF Singapore

While Singapore is a relatively clean city, marine plastic litter is still visible on its beaches. **To avoid plastic pollution, WWF Singapore has launched the “Plastic ACTION (PACT)” business engagement initiative.**<sup>19</sup> Individual companies commit to reduce the consumption of plastics and to contribute to a circular economy. WWF supports them with guidance, resources, and tools to help them along the way. PACT aims to eliminate unnecessary plastics and materials in general as e.g. also paper has an environmental footprint. Participating companies rethink their

<sup>19</sup> See WWF (2020) No Plastics in Nature by 2030 – Plastic ACTION. <https://plastic-action.asia/>

business models to reduce materials and increase recyclability, aim for better collection and recycling and reduce plastic leakage into nature.

**Several businesses in Singapore have already signed the PACT commitment.** They include companies in the hospitality sector, food and beverage industry, property management as well as manufacturing and e-commerce. WWF works closely with each company to set specific goals and timelines, providing support for their challenges and measuring progress.

**The sectoral collaboration approach of PACT focuses on an entire industry sector in order to avoid a public backlash to a good initiative by an individual company.** With this model, WWF has engaged around 200 companies in several closed-door meetings in Singapore as well as in Thailand and the Philippines. They served to prepare sectoral pledges, which then also attract media and public attention. Together with industry experts, WWF identified approaches such as “no straw pledges”, charging for plastic bags and the food delivery pledge.

**In 2019, the three major food delivery platforms in Singapore – Deliveroo, Foodpanda and Grab – signed the PACT food delivery pledge.** They publicly agreed to several initiatives to increase the sustainability in the food delivery sector. One initiative is an automatic opt-out of cutlery. It means that customers actively have to opt-in if they want cutlery and do not get it automatically. This change has led to a saving of around 1 million pieces of cutlery per week in Singapore. The challenge to implement it consisted in coordinating with all food and beverage partners of the food delivery platforms, so that their staff adapted to this new protocol. **Moving further, the participating food delivery platforms committed to help their food and beverage partners to reduce plastic consumption** by providing guidelines and explore alternatives for takeaway packaging. For WWF, it is a way to engage the food and beverage sector with stricter guidelines. There are also first pilot tests running with reusable packaging, for instance by Foodpanda and the start-up barePack.<sup>20</sup>

**Furthermore, WWF will shortly launch its “Alternative Materials Tool”.** It is a science-based online platform that helps to select the materials with the least environmental impacts for certain use cases. It is mainly designed for the hospitality and food and beverage sectors and will be context-specific for Singapore, Malaysia, Thailand and the Philippines (countries where WWF is also active with its PACT initiative).



“Some people might currently be hesitant due to COVID-19 and health should always be the first priority, but reusable models and Bring-Your-Own simply comes down to proper cleaning. I recently read a very good statement saying that if you are seeing a dentist, you also don’t expect him to use single-use tools, but you rather trust his cleaning.”

Stefanie BEITIEN, Head of Market Transformation, WWF Singapore

<sup>20</sup> See <https://www.barepack.co/>



## OUTLOOK

Multiple initiatives and policy reforms are currently on-going. Further developments will show which alternatives will gradually replace single-use plastics in the food delivery and takeaway sector. There is a joint need to **better understand available options to reuse plastics or alternative materials** as well as their respective environmental, social and economic advantages and disadvantages. **Multi-stakeholder platforms and agreements** between public, private, academic and civil society organisations can be useful to accompany and facilitate this transformation towards more sustainable consumption and production patterns. **Policy impact assessments** of existing bans or incentives might contribute to further improve the framework conditions. The COVID-19 pandemic has raised the additional **need for reliable health and hygiene guidelines** for food and beverage businesses, e.g. in terms of proper handling and washing of reusable plates, boxes, cups and cutlery. Together with its partners, the “Rethinking Plastics” project continues to contribute to this joint learning and transformation in Asia and Europe.

# IMPRINT

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