

China's ban on single-use plastic: challenges and opportunities

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Early this year (19th January 2020) the Chinese National Development and Reform Commission and the Ministry of Ecology and Environment issued the "Opinions on Further Strengthening the Control of Plastic Pollution", which announced the ban and restrictions on 4 single-use plastics in China over the next five years.

The 4 single-use plastics are:

1. Non-degradable plastic bags will be banned in large supermarkets and shopping malls in major cities by end 2020 and in all cities and towns by 2022. The production and sale of plastic bags less than 0.025mm thick will be banned. Plastic films less than 0.01mm thick will be banned from agricultural use. Alternatives such as bio-based and biodegradable plastic bags will be used instead.
2. The restaurant industry will be banned from using single-use straws by 2020 and single-use cutlery will be banned by 2022. By 2025, towns and cities across China must reduce the consumption of single-use plastics for food delivery packaging by 30%.
3. Hotel single-use plastic items will not be provided by end 2025.
4. The express industry will be banned from using non-degradable plastic packaging, including plastic bags, woven bags and tapes, in some major cities and provinces by end 2022 and in the whole country by 2025.

The government also announced that more strict and detail regulations will be made to promote plastic recycling and plastic wastes management. The new policy revealed the determination that the government has made to reduce the use of plastics. This isn't China's first campaign against the use of plastics. In 2008, China banned retailers from giving out free plastic bags, and banned the production of ultra-thin plastic bags. In 2017, China announced that it would ban the import of foreign plastic waste. Before that, China was the world's largest importer of plastic waste and has imported a cumulative 45% of plastic waste since 1992. Nowadays, people in China generate less plastic waste per capita than Americans, however almost three-quarters of China's plastic waste ends up in poorly managed landfills or out in the environment. China's initial plastic ban had somehow limited success because enforcement was not strong

enough in local level. It is hard for a society used to the convenience of online retailers and couriers who deliver hot food and packages in plastic. According to an industry estimate [cited by Workers' Daily](#), Chinese courier services used nearly 25 billion plastic bags for deliveries in 2018.

China is the world's largest plastic production and consumption country with cumulative plastic products output of [60.4 million](#) tons by 2018. It is imperative to work out a systematic solution for plastic recycling and resource reuse. China has put a lot of efforts on plastic recycling. The country used about [30 million tons](#) of recycled plastics every year, accounting for more than 30% of plastic consumption nationwide. The government is building dozens of "comprehensive resource utilisation" bases to ensure more products are reused and to boost the recycle rate.

The new policy will also foster China's transition towards developing innovative new technologies to manufacture biodegradable packaging materials. Biodegradable plastics, for example PLA, PGA and PBAT, are emerging alternatives to non-degradable plastics. Driven by government policy, compostable and biodegradable plastics will gradually substitute traditional plastic wraps and bags in the packaging industry. This transformational change will provide a new era of opportunity and challenge for the bioplastic industry in China. In recent years, some of China's leading companies have significantly increased investment and expanded their production line. For example, [Hisun](#) is building a new 30,000 tons PLA line (on the top of its 15,000 tons PLA plant) and will be completed in 2020. [Pujing Chemical Industry Co., Ltd](#) has invested a 10,000 tons PGA plant - the first phase has been operating since July 2020 with an annual capacity of 1500 tons. In the downstream market, some major e-commerce actors, including [Alibaba, Jingdong and Suning](#) have started to use incentives (for example, price discounts and shopping coupons) to encourage consumers to choose green packaging in online orders, such as tape-free boxes and biodegradable packaging materials.

Although China's previous efforts to reduce plastics have faltered, this time, the government said, it will be more serious and systematic in tackling the problem. The new policy will be implemented throughout the plastic industry chain. Companies and consumers in China will find themselves getting used to life with much less single-use plastics.