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Sustainability in Packaging Asia: Tackling the Plastics Crisis

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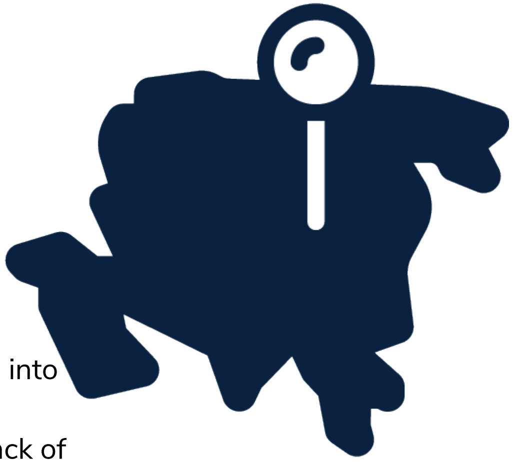
PACKAGING

MARKET OVERVIEW



Asia has the largest and fastest-growing economy in the world. With China having displaced the US as the largest global packaging market, Asia remains packaging's top growing market.

THE PLASTICS CRISIS

As the use of packaging in Asia continues to soar, so too does the ecological burden, with significant leakage of packaging materials into the environment. Asian countries are among the world's biggest sources of ocean plastic pollution – more than half of the ocean's plastic waste originates from this region. The prevalence of plastic as a cheap and durable material in Asian consumers' daily lives, lack of waste management infrastructure, along with a preference for convenience, means the region's plastic waste crisis is likely to worsen.

Asia is picking up the pace in tackling the plastic crisis. Laws and regulations on circular economy have been promulgated, the plastic strategies have also started being developed. Most countries have recognised the need to create an EPR scheme to demand greater responsibility from producers to improve packaging designs with less material and higher recyclability and to support waste collection and separation.



However, the actual status is different in each country. Japan and South Korea have always been in leading position in Asia, with the Chinese government and enterprises taking action. After China issued its plastic waste import ban in January 2018, global plastic waste shipments were quickly rerouted to Southeast Asia. Many Southeast Asian dumpsites are unprepared to deal with the burgeoning volumes of plastic waste.

In addition to government efforts, the brand owners are also committed to the development of sustainable packaging. In China, E-commerce companies like Alibaba and JD are engaged in cooperating with brands to establish waste collection and recycling systems. Many countries also started to become sustainable by redesigning plastic packaging for less volume, switching to more common recyclable materials.

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KEY REGULATIONS AND LEGISLATIONS IN ASIA

Circular economy

CHINA

China's environmental-based packaging legislation centres predominantly around banning plastic products and packaging, rather than the taxation favoured by the EU. China was also the first country to ban the importation of specified types of solid waste, as part of its National Sword programme.

The major law regarding the circular economy is the Circular Economy Promotion Law, which came into effect on January 1st, 2009. This law emphasizes on the recycling of packaging material and encourages manufacturers to use recyclable materials in their packaging. The law also outlines standards for the design of product packaging to prevent waste of resources and environmental pollution caused by excessive packaging.

China's top economic planner, The National Development and Reform Commission (NDRC), released the 14th Five-Year Plan (2021-2025) for Circular Economy Development on 7 July, outlining a blueprint for circular economy development in the country. By 2025, a new approach to recycling production will be fully implemented, green design and clean production will be widely promoted, a resource recycling industry system will be established and a resource recycling system covering the entire society will be completed.

JAPAN

Japan remains an outlier as the only country that predominantly relies on incineration to deal with its packaging waste. While it has one of the most advanced and consumer compliant package waste collection scheme, its preference for local thermal recycling combined with waste export is indicative of its lack of living space coupled with high social cohesion.

In 2000, the Basic Act on Establishing a Circular Society was passed in Japan. This was the reaction to several problems related to waste in the late 1990s.

In order to keep the above law relevant, the Plan of Establishing a Circular Society is reviewed and updated about every five years. This is done by the Central Environmental Council. In June 2018, the 4th plan was decided. In March 2021, the "Act on Promotion of Resource Circulation for Plastics" was passed by the Cabinet. The bill was then submitted to the 204th ordinary session of the Diet, which was held on January 2021. It was passed by the House of Representatives in May 2021 and by the House of Councillors in June 2021. Since the Act has not yet been promulgated as of June 8, 2021, the exact date of enforcement cannot be specified, but it is expected to come into effect by June or July 2022 at the latest.

SOUTH KOREA

South Korea has one the most developed waste management system within the Asian region, combining elements of EU and Japanese systems.

South Korea is moving toward a sustainable resource-circulating society to fight climate change and resource scarcity. To achieve this goal, the Framework Act on Resource Circulation (FRC) was enacted in May 2016 and came into effect in January 2018. This act not only acknowledges the importance of resource efficiency and the transition to a resource-circulating society, but also plays a significant role in the progress of important and relevant industry developments.

ASEAN

The countries in the ASEAN region represent some of the world's worst polluters of packaging waste. Vietnam, Malaysia, the Philippines, Indonesia and Sri Lanka are historically in the top ten contributors to marine litter. Effective packaging and waste regulations are typically not present, inadequate, or not enforced and there are high levels of mismanaged waste. Public-private partnerships are emerging in these countries as the packaging supply chain and global corporations start to create an appropriate infrastructure to deal with their packaging waste.

ASEAN Secretariat conducted an online workshop on Circular Economy. The workshop gathered relevant sectoral bodies to discuss the draft Framework for Circular Economy for the ASEAN Economic Community (AEC) in June 2021. The development of the Framework is supported by the Economic Research Institute for ASEAN and East Asia (ERIA).

KEY PACKAGING LEGISLATION IN ASIA

COUNTRY	PLASTIC STRATEGY	EPR SITUATION	TAXATION	WASTE MANAGEMENT	PACKAGING DESIGN
China	Plastic bags will be banned in 2022. Ban the import of waste including plastic.	Issued a policy to implement the EPR system for 4 types of products including packaging, but the packaging does not contain plastic.	No EPR tax at present.	Set out waste sorting plans in 2017. Introduce waste separation in all prefecture-level cities by 2025.	Consider moving to recyclable packaging by 2025.
Japan	Reduction of 25% for single-use plastic waste & the reuse/recycling of 60% for plastic containers & packaging by 2030.	Introduced an EPR system for packaging in 1995 via Packaging Recycling Act.	Japan retailers to begin charging for plastic utensils and straws from April 2022.	Incineration is the most widely used waste disposal method.	Achieve design for plastic packaging and containers to be recyclable and reusable by 2025.
South Korea	Reduction of plastic waste production by 50% by 2030. Increase the recycling rate from 34% to 70% by 2030.	Introduced EPR system in 2003, applied to four packaging materials (paper packaging, glass bottles, metal cans and plastic packaging).	Expect high taxation for non-recyclable by 2025.	Highly organised waste management system.	Ban on PVC packaging and coloured PET bottles. Ensure all packaging is recyclable by 2025.
Thailand	Free from 3 types of plastic (microbeads, cap seals & oxo-degradable plastic) – and from 4 other types of single-use plastics by 2022.	Explicit EPR laws on packaging waste remain in the drafting stage.	Tax reduction for retailers using biodegradable plastics Planning levy or tax on single use plastic products and packages.	Huge waste and waste management problem.	Phasing out of single-use plastics by 2022.
Singapore	Achieve a 70% overall recycling rate by 2030.	Only electronic waste is subject to an EPR (to be implemented by 2021). EPR will be extended to packaging waste by 2025.	Carbon tax.	Incineration is the most widely used waste disposal method.	-
Indonesia	Reduction of marine plastic debris by 70% by 2025.	The legal framework for an EPR system is in place, but implementation has yet to happen.	Plan to impose the plastic bag excise tax.	Significant waste and waste management problem.	PS banned
Malaysia	Roadmap towards Zero Single-Use Plastics (2018-2030).	No legal basis for an EPR system for packaging or any other waste streams.	Pollution charge. Ban on non-biodegradable plastics. Levy on plastic bags.	Waste management problem.	Voluntary ban on straws by 2020 in restaurants. Carrier bags ban aimed for 2022
Vietnam	Reduction of marine plastic debris by 75% by 2030.	EPR has not been fully implemented yet.	Levy on non-biodegradable plastics.	Waste management problem.	SUP ban planned end 2025

Note: An overview of key environmental packaging legislation for a selection of countries in Asia

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COVID-19 IMPACT

The effect of the pandemic on recycled plastics for packaging applications

Increased plastics pollution due to COVID-19

The pandemic has sparked a rush for plastic packaging. There has been a heavy reliance on food-delivery services and online shopping amid the pandemic, with recycling declining significantly. In countries such as Malaysia, Thailand, the Philippines and Indonesia there has been a surge in plastic waste as environmental awareness takes a back seat to health concerns.

The new wave of pandemic-related single-use plastics has partly reversed the hard work of both consumers and governments in Asia to mitigate the plastic crisis. Before COVID-19, avoiding single-use plastic was increasingly becoming the norm. Many governments started instituting regulations and phasing out certain disposable products. But when the pandemic started and scientists were still trying to determine how the virus transmitted, the industry was quick to capitalise and start spreading the message that disposable plastics can save lives.

As a consequence, in light of the COVID-19 crisis, many governments in Asia have postponed their measures around introducing plastic bans. For example, in the Philippines' most populous highly urbanised area, Quezon City, a ban on single-use plastics due to start in July 2020 was postponed to March 2021. In another example, in Thailand, the gains from the government's ban on plastic bags was negated by the huge amount of plastics resulting from lockdowns.

Increased plastics pollution due to COVID-19

The pandemic has intensified a price war between recycled and new plastic. The reason is that nearly every piece of plastic begins life as a fossil fuel. The economic slowdown has punctured demand for oil and in turn, that has cut the price of new plastic. Some of the recyclers and value chain stakeholders in Southeast Asia are in critical financial positions.

PACKAGING SUSTAINABILITY – CASE STUDIES

E-commerce companies and brand owners cooperate to establish waste collection & recycling systems

ALIBABA & UNILEVER

Alibaba is supporting Unilever to make it easier for Chinese consumers to embrace responsible consumption across multiple cross-platforms, including Alipay, Tmall, Ele.me and Tmall Supermarket by creating a closed-loop scenario for plastic recycling – purchase, usage, recycle and repurchase. The launch of Waste-Free World saw 20 recycling machines installed as part of a pilot programme in offices and community spaces in two of China's largest cities, Shanghai and Hangzhou. Each machine is equipped with state-of-the-art AI technology, which automatically identifies different kinds of plastic bottle. All that customers need to do is to use Alipay – Alibaba's e-wallet service – to scan the QR code displayed on the screen of the machine and then deposit the bottle into the recycling bin. Using AI technology, it automatically identifies the plastic the bottle is made of, sorts it and stores it, so that it can be collected and returned to recycling centres and fast-tracked for reuse rather than degrade.

COCA-COLA & JD.COM

The Coca-Cola Company has partnered with Chinese online retailer JD.com to encourage plastics recycling and help drive the circular economy in China. JD plans to use its nationwide logistics system to help collect used beverage bottles from households. The collected bottles will be sent to recycling facilities in partnership with Coca-Cola, where they will enter the circular value chain.

CAINIAO NETWORK & NESTLÉ

Cainiao Network, Alibaba Group's logistics arm, has teamed up with Nestlé to make the supply chains in China greener. The companies started collaborating on a recycling service on Cainiao's app and its mini-programs on Alipay and WeChat in May 2021. Chinese consumers who purchase products from Nestlé's premium coffee brand Sense Café, for example, can use the new mobile feature to book a time for Cainiao couriers to pick up the used packaging from their doorsteps free of charge. Other brands in Nestlé's portfolio – such as Nescafé and Starbucks at Home – have expanded the use of environmentally friendly packaging, including Cainiao's proprietary plastic-free boxes and biodegradable bags. Nestlé has also leveraged Cainiao's smart algorithms to forecast and assign appropriately sized packaging for products to reduce unnecessary waste.

ONLINE RETAILER CASE STUDY

Given the growing trend of e-commerce coupled with the ever-present need of environmental protection, there is a need to provide a packaging system, especially designed for e-commerce, that provide protection to consumer goods but also be environmental friendly. From 2017, **P&G China** innovated and launched the ecommerce Ship In Own Container (SIOC) package in China. The new package innovation, not only improved the consumer experience by reducing 70% leakage and damage, but also reduced 30% parcel box dimension, and reduced more than 8,000 tons of paper board usage per year.

PACKAGING SUSTAINABILITY – CASE STUDIES

Brand owners increasingly working in collaboration to design packaging that is sustainable

ASAHI

Major drinks company Asahi has vowed to boost sustainability in Japan by tackling plastic waste. This includes introducing label-free bottles for all their drinks that are packaged using plastic. The company has incorporated plant-based materials and changed the weight of the plastic caps to be more eco-friendly. To promote the release of the label-free bottles, Asahi ran a promotional campaign on Twitter that offered 150 randomly selected customers a chance to win a case of 24 bottles if they tweeted using the hashtag #ラベルレスはじめました (I've started going label-free). This demonstrates that ramping up engagement via social media channels and running free giveaways can be effective.

AMOREPACIFIC

Korean cosmetics conglomerate Amorepacific unveiled eco-friendly paper packaging which it said reduces the use of plastic by some 70 percent and can last up to 36 months. The paper tube container, which uses "nano thin film blocking" technology and will be adopted for its clean beauty brand Primera sometime in the first half of this year, comes as part of the company's sustainability efforts. Amorepacific is currently developing a paper container that can ensure its shelf life and can be composted 100%, with plans to continue to roll out eco-friendly packaging materials. In 2020, Amorepacific launched a refill station in Korea where the content of shampoo and body wash products are sold in the form of refills.

KAO CORPORATION

In April 2021, Kao Corporation started to use 100% recycled polyethylene terephthalate (PET) plastic for its packaging first time in Japan. It is used for its new range of Attack ZERO laundry detergent products and it's CuCute Dishwashing Foam Spray bottles. Kao intends to switch over to using 100% recycled PET for household and personal care packaging using PET bottles by 2025. Kao already uses 100% recycled plastic for its shampoo, conditioner and body wash packaging in Taiwan, and 50% for Jergens body wash in the Americas and Guhl shampoo in Europe.

SONY

SONY reveals a sustainable and eco-friendly packaging material made from bamboo, sugar cane fiber and post-consumer recycled paper. Cases, outer box, inner box and protection pads can entirely be made of 'original blended material', a recyclable, durable and long-lasting paper material produced without plastic and colouring. By changing the blending analogy, the packaging can be transformed into multiple shapes guaranteeing a broad variety of uses, while incorporating characters into the design that can be embossed, avoiding the use of ink. SONY has developed this material for the packaging of WF-1000XM4 headphones and the company aims to use it in the future for a wider range of products.

LIBY

In October 2020, Liby (a leading laundry brand in China) announced a collaboration with Dow (a US-based chemicals company) and Fujian Kaida (a Chinese packaging manufacturer) to produce recyclable laundry packaging for laundry pods. Dow's INNATE TF-BOPE was selected as key material due to its all-polyethylene (PE) structure that allows the end-product to be recycled in existing recycle streams.

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KEY CONCLUSIONS AND QUESTIONS TO CONSIDER

Legislation and regulations are emerging globally to tackle the problems of waste and pollution. With increasing pressure, leading brands set ambitious goals and make bold statements of intent. What impact will the legislation and regulations have on your business?

Globally consistent waste collection and recycling data is challenging to collate due to different definitions and availability. How are you planning to measure your performance?

COVID-19 is causing global economic uncertainty. Does your company have sufficient supply chain resilience? How is your company capitalising on supply chain challenges?

Recyclability is emerging as the most likely option for making packaging more sustainable. Brand owners have a high degree of confidence that they can achieve long term goals around recyclability, but current progress is fraught with challenges. What do you think are the opportunities arising from more recyclable and more sustainable packaging across the value chain?

Partnerships are emerging in countries across Asia as the packaging supply chain and global corporations start to create an appropriate infrastructure to deal with their packaging waste. How are you preparing for this opportunity and, have you revised how this impacts your business model?

New technology advances, innovative products and packaging are on everyone's agenda. Where are the biggest growth opportunities for your business over the next 3-5 years?

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Smithers have produced a number of cutting-edge market reports that focus on various sectors and topics, including sustainability, within the packaging industry. The reports provide exclusive content, including market forecasts, major drivers and trends, critical analysis of technological developments, and more.

Just some of our industry-leading reports include; **The Future of Single-Use Plastic Packaging in a Sustainable World, The Impact of Climate Regulations on Packaging to 2030,** and more.

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Our expert teams are based in Europe, the USA and China.

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HAVE A QUESTION? GET IN TOUCH

Europe
Bill Allen | ballen@smithers.com
+44 (0) 1372 802086

Americas
Sean Walsh | swalsh@smithers.com
+1 330 762 7441 ext. 1134

Asia
Ciaran Little | clittle@smithers.com
+44 (0) 1372 802079

Website
www.smithers.com

Twitter
www.twitter.com/WeAreSmithers

LinkedIn
www.linkedin.com/company/smithers

Smithers are the worldwide authority on the packaging, paper and print industries.

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SMITHERS' PACKAGING EVENTS

Sustainability in Packaging

Held in Asia, Europe, North America and Latin America, these industry-leading events offer a 360 perspective on the key challenges and solutions the worldwide supply chain is facing in the move towards a circular economy. With 500+ attendees each year, these events are a must-attend.

FIND OUT MORE

E-PACK

Held in Asia, Europe and North America, these unique cross-industry events cover the full landscape of the fast-growing e-commerce packaging market. Just some of the topics covered includes functional design & protection, regulations, cost-effective packaging solutions, case studies from brands & more.

FIND OUT MORE

Digital Print for Packaging

Representing the industry as a whole, from designers and brand owners, through to equipment providers and converters, this event – held in Europe, Asia and North America – is the place to be for anyone working in the digital print for packaging industry.

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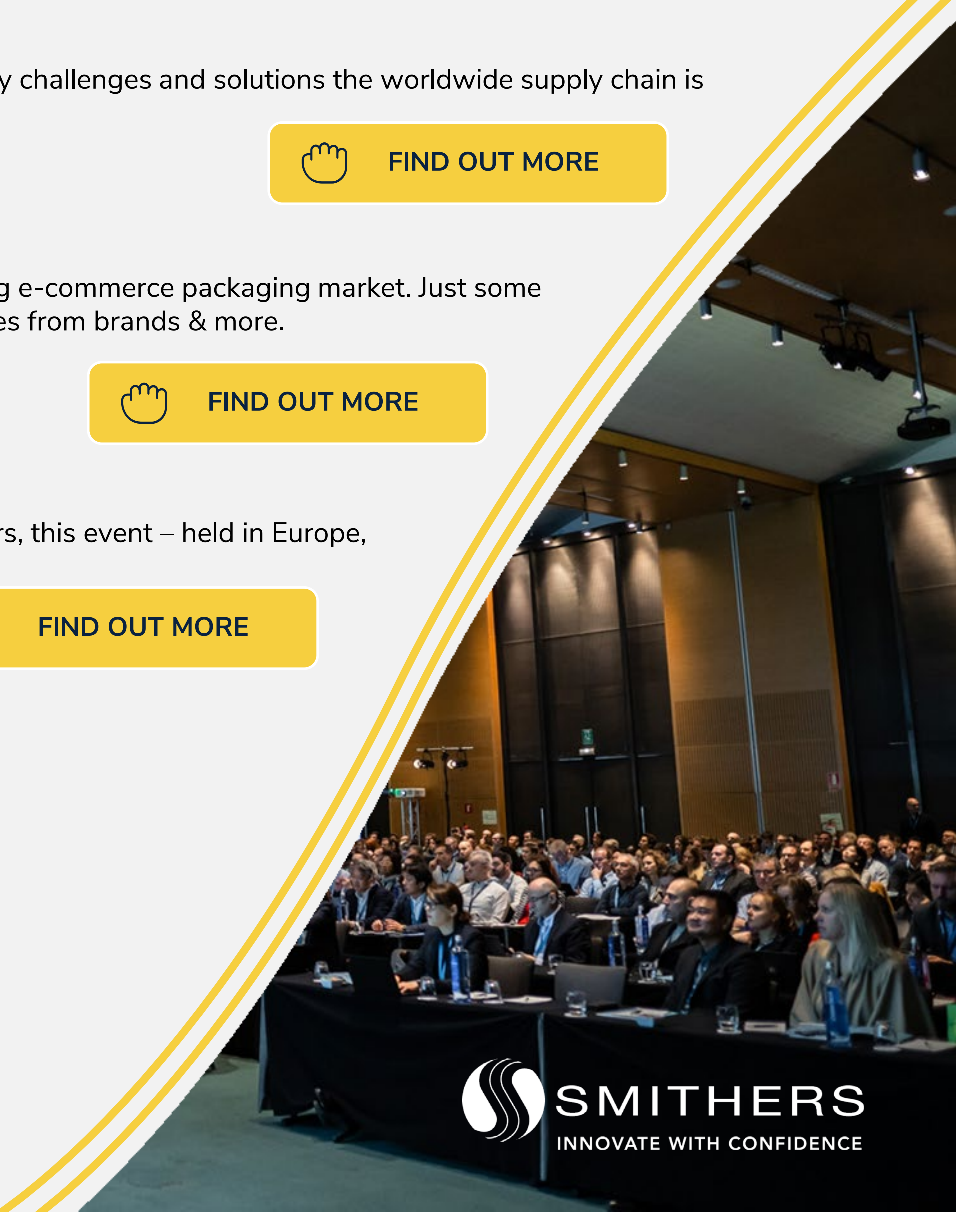

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