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EXPERTISE FRANCE

Rethinking Plastics
Circular Economy Solutions to Marine Litter

POLICY BRIEF

REDUCING SINGLE-USE PLASTICS IN FOOD CONSUMPTION, TAKEAWAY AND DELIVERY

The Way Forward to Better Plastics Circularity

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The Way Forward to Better Plastics Circularity

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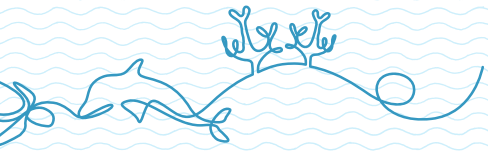
Prepared for:
Deutsche Gesellschaft fUr Internationale Zusammenarbeit (GIZ) GmbH



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EXECUTIVE SUMMARY

Single-use plastics (SUPs) such as takeaway containers, drinking bottles, drinking cups, plastic bags and cutleries have become the material of choice for many of the food products we consume today. Plastic packaging has also become necessary in the food supply chain to protect food and prevent spoilage. SUPs are used extensively in the fast-food industry, only to become waste a few minutes after use.

Around 4.8 to 12.7 million tons of global plastic wastes are leaked into the ocean every year, of which 40 to 50% are SUPs (Jambeck, 2015). In the Philippines, 35% of about 2.15 million tons of plastics for local consumption are uncollected or leaked to the environment. Only 9% of the country's plastic waste is recycled.

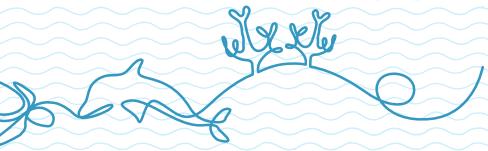
Plastics find their way in canals and river systems, clogging drainage and increasing susceptibility to flooding. Plastic can contain residues of toxic plastic additives when it degrades to smaller pieces called microplastics. It can pose health risks as they get ingested by marine life and possibly by humans as they move up the food chain.

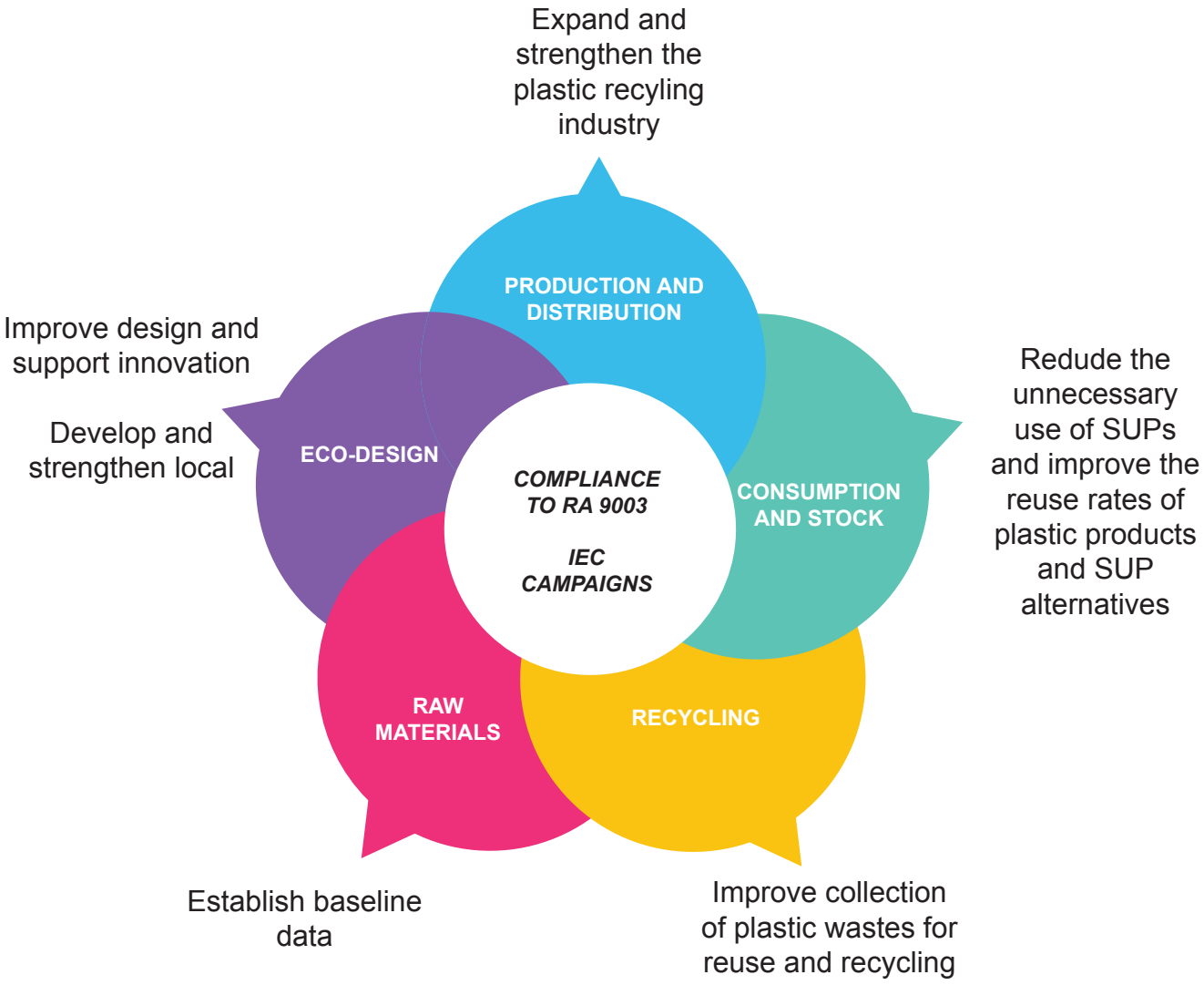
Plastic pollution has also an effect on society. For example, it can deter people from visiting beaches. It can also pose threat to livelihood like fishing and tourism activities. Hence, marine litter is not just an environmental issue but also poses health, social and economic challenges to our society.

Four (4) major interlinked issues on plastic waste management were determined as follows: poor waste segregation, poor waste collection & low recycling rate, low incentive to produce products with recycled plastic content, and low incentive to reduce consumption of SUPs and shift towards non-SUP packaging materials. Determination of the root causes of these major issues indicates that the plastic waste problem in the Philippines stems from a combination of governance or policy-related issues, economic, social and infrastructural issues.

It is becoming more widely recognized that urgent actions are needed to abate the plastic waste problem locally and globally. A shift from a throw-away society to a circular economy is necessary. The national government must address the plastic waste problem through systems change, starting from the design and production of plastics, ensuring efficient collection of wastes for reuse and recycling, up to proper waste management at end-of-life.

The figure below presents the recommended policy measures for reducing SUPs in food consumption, takeaway and delivery, as can be applied throughout the plastic's life-cycle. Because different policy actors are responsible for different stages in the plastic's life cycle, concerted action across the value chain – from the government, manufacturers, retailers, food products and food service providers, waste management service providers, consumers and research and development institutions, is imperative.




Expand and strengthen the plastic recyling industry
PRODUCTION AND DISTRIBUTION
Improve design and support innovation
Develop and strengthen local
ECO-DESIGN
COMPLIANCE TO RA 9003
IEC CAMPAIGNS
CONSUMPTION AND STOCK
Redude the unnecessary use of SUPs and improve the reuse rates of plastic products and SUP alternatives
RAW MATERIALS
RECYCLING
Establish baseline data
Improve collection of plastic wastes for reuse and recycling

WHY PLASTIC POLLUTION IS AN URGENT PROBLEM?

Single-use plastics (SUPs) such as takeaway containers, drinking bottles, drinking cups, plastic bags and cutleries have become the material of choice for many of the food products we consume today. Plastics are lightweight, easily molded into desired shapes, cheap and are conveniently suitable for an on-the-go lifestyle. Plastic packaging has also become necessary in the food supply chain to protect food and prevent spoilage.

SUPs are used extensively in the fast-food industry, only to become waste a few minutes after use. The COVID-19 pandemic has aggravated the already existing environmental threats arising from plastic wastes. Consumer behavior shifted from eating out to availing takeaway food through online food delivery services. The growing reliance on food deliveries and the tendency to resist reusability in favor of disposables for fear of COVID-19 also meant increased consumption of SUPs.

Around 4.8 to 12.7 million tons of global plastic wastes are leaked into the ocean every year, of which 40 to 50% are SUPs (Jambeck, 2015). In the Philippines, 35% of about 2.15 million tons of plastics for local consumption are uncollected or leaked to the environment. Only 9% of the country's plastic waste is recycled.

Given that plastics are meant to last, they accumulate in the environment when not managed properly. These find their way in canals and river systems, clogging drainage and increasing susceptibility to flooding. In the marine environment, plastic litter can physically or chemically harm marine life and can negatively impact biodiversity and ecosystem functions. When plastics degrade to smaller pieces called microplastics, it can contain residues of toxic plastic additives. Moreover, it can adsorb other harmful chemicals such as pesticides, posing health risks as they get ingested by marine life and possibly by humans as they move up the food chain.

Another environmental drawback of plastics is that these are sourced from non-renewable fossil resources. Hence, more plastic production means more demand for fossil resources. If incinerated the burning of plastics generation of greenhouse gases contributing to climate change.

Plastic pollution has also an effect on society. For example, it can deter people from visiting beaches. It can also pose threat to livelihood like fishing and tourism activities. Hence, marine litter is not just an environmental issue but also poses health, social and economic challenges to our society.

GAPS IN TACKLING PLASTIC POLLUTION

Four (4) major interlinked issues on plastic waste management surfaced, based on the review of existing policies, legal and institutional framework surrounding SUPs and the current state of plastic waste management in the Philippines.

Poor wastes segregation

In spite being mandated by the law (RA 9003), source separation of waste is still not widely practiced. The weak implementation of waste segregation stems from the lack of enforcement of local ordinances to implement RA 9003 due to insufficient funding, systems and infrastructures, such as collection system equipped for separate collection, materials recovery facilities (MRFs), and organic waste treatment facilities (Akenji, 2019). Moreover, the diversion of the government's focus on coronavirus disease (COVID-19) measures has compounded the lack of prioritization of the growing plastic waste problem. Poor waste segregation is also driven by the generally low public awareness on the impacts of poor waste management.

Poor waste collection & low recycling rate

There is a lack of systematic collection scheme for reuse and recycling of plastics because of the lack of enabling policies that provide producer responsibility requirements and allow circular business models. Likewise, the archipelagic geography in the Philippines makes it expensive to collect and transport wastes (WWF Philippines, 2020). Furthermore, recycling facilities and disposal sites are lacking, especially in remote island communities.

Plastics recycling capacity in the Philippines is very low despite the mandate of RA 9003 on solid waste diversion targets. Being dominated by small and medium enterprises (SMEs), there is limited adoption of advanced and more efficient recycling technologies. Furthermore, the contamination of plastic recyclables collected locally makes the recycling process more capital intensive and less economically attractive for the recyclers.

Low incentive to produce products with recycled plastic content

There is little incentive to use recycled plastic resin since most plastic converters and brands prefer to use virgin plastic due to its cheaper price (World Bank Group, 2021). Furthermore, there are no existing policies that require industries to use recycled content. The local market for food-grade recycled plastics is also yet untapped. Food-grade recycled plastics offer the highest margins among all the major grades of recycled plastic products, yet the Philippines currently does not use recycled resins for food-grade applications.

Low incentive to reduce consumption of SUPs and shift towards non-SUP packaging materials

From a commercial standpoint, SUPs remain widely available in food products and services, with very little choice of alternatives. The cost of SUPs is mainly included in the overhead cost and are provided "free" to consumers, offering little incentive for plastic use reduction. Likewise, the "sachet economy" or "tingi culture" (the preference of Filipinos to use products contained in smaller packs, usually made of single-use multiple layered plastics/materials) remains prevalent because these products have low upfront costs and experienced as more convenient.

The restrictions and safety concerns induced by COVID-19 have further reduced reusable and recycled plastic demand. Furthermore, the consumer shift to online purchasing equated to the generation of more take away plastic packaging wastes.

CONCLUSION: MOVING FROM A THROW-AWAY SOCIETY TO A CIRCULAR ECONOMY

It is becoming more widely recognized that urgent actions are needed to abate the plastic waste problem locally and globally. The current economy follows the traditional linear model of take-make-consume-dispose approach and is clearly not sustainable. There is a need to shift to a circular economy, which basically follows the 3R approach: reduce, reuse, recycle.

By following this approach, we avoid the use of product in the first place, we change the way we design and manufacture products and we extend the value and lifetime of products for as long as possible. This approach minimizes the need for the input of new material and energy, thereby reducing the negative environmental impacts linked to the life cycle of the products from resource extraction, through production, use and end-of-life.

RECOMMENDATIONS: POLICY OPTIONS FOR REDUCING SUPS IN FOOD CONSUMPTION, TAKEAWAY AND DELIVERY THROUGHOUT THE PLASTIC LIFE CYCLE

The national government must address the plastic waste problem through systems change, starting from the design and production of plastics, ensuring efficient collection of wastes for reuse and recycling, up to proper waste management at end-of-life. The policy options presented here aims to improve plastic circularity throughout the plastic's life-cycle. Key objectives towards achieving this goal are as follows:

- Improve design and support innovation to make plastics and plastic products easier to recycle
- Improve reuse rates and collection of plastic wastes for recycling along the whole value chain (wholesale, food preparation, restaurant/takeaway point, delivery, consumption)
- Increase the share of recycled plastics in the plastics sector
- Increase use of non-SUP/multi-use alternatives

Figure 1 presents an overview of the recommended policy measures for reducing SUPs in food consumption, takeaway and delivery, as can be applied throughout the plastic's life-cycle. Because different policy actors are responsible for different stages in the plastic's life cycle, concerted action across the value chain – from the government, manufacturers, retailers, food products and food service providers, waste management service providers, consumers and research and development institutions, is imperative.

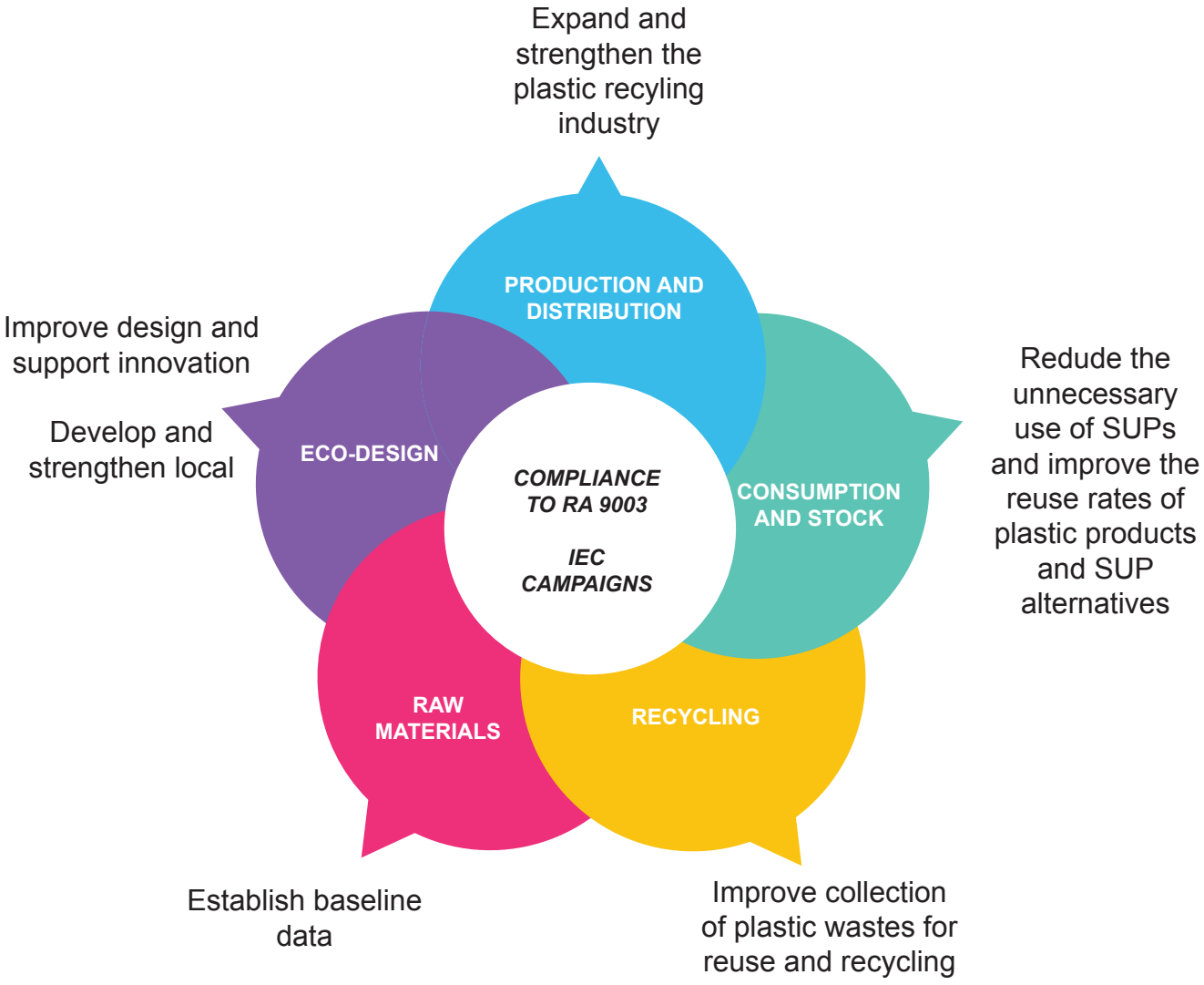


Figure 1. Overview of policy options for reducing single-use plastics in food consumption, takeaway and delivery throughout the plastic life-cycle

Establishing baseline data

There is generally a lack of sufficient data on SUP consumption, specifically packaging and packaging products, post-use collection, and treatment. The collection of these data is not mandated by the government. Data collection is an essential component in effective policy development, monitoring and evaluation of sustainable plastic waste management, and for encouraging investments in waste management.

It is recommended to ***mandate producers, importers and retailers of packaging and packaged products to collect data on the types and amounts of packaging*** they place in the market each year by end-use sector and report the packaging data to either a relevant industry-led producer responsibility organization (PRO) or to the government. This is in-line with the National Plan of Action on the Reduction, Prevention and Management of Marine Litter (NPOA-ML) to establish a science-and evidence-based baseline information on marine litter. A technical working group may be created leaded by Department of Environment and Natural Resources (DENR) together with other government agencies, such as the Bureau of Customs (BoC), Department of Trade and Industry (DTI), and with representation from the plastic industry, i.e., producers, importers, distributors, and retailers of plastic products and packaging.

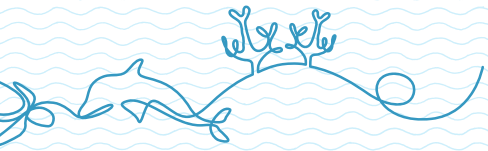
Elevating Information, Education and Communication (IEC) campaigns

Another crucial factor in the success of any policy measures to reduce SUPs is ***effective information, education and communication programs (IEC)***. IEC shall be involved in all stages of the planning and implementation towards addressing the plastic waste situation through a circular economy approach. It is important to ensure that the general public are provided with clear and correct information regarding SUPs and its alternatives.

There have been great efforts by the government led by (DENR), Climate Change Commission (CCC) and various local government units (LGUs) on IEC campaigns. As suggested by a representative from Philippine Reef and Rainforest Conservation Foundation, Inc. during the stakeholders' consultation, repetitive advertising has to be done so that the information will be retained by the people. Measures to raise public awareness on plastic issues, benefits, and its environmental and social impacts needs to be continued and intensified by taking advantage of social media, television and radio, education and outreach programs in schools and communities.

Improving design and supporting innovation to make plastics and plastic products easier to recycle

From a commercial standpoint, the choice of design for packaging materials today is driven by market branding and functionality. Multiple layers, dyes, light-weighting, single-serving products, polyvinyl chloride labels as contaminants to recycling and other design choices reduce the feasibility of both collection and recycling. There is need for consideration of **eco-design** to allow for recycling, efficient use of resources in the product and materials that are better for the environment etc.



Design for recycling standards for food packaging and other plastic items can help with this barrier, to enable better recyclability of the plastics. Likewise, ***guidelines for the design and selection of more sustainable packaging design*** will help product developers from the industry and research and development institutions in considering the environmental, technical, economic and social aspects of the plastic product value chain. This can be developed and implemented by the DTI Industry through the Bureau of Product Standards (DTI-BPS) together with the Department of Science and Technology (DOST), and in consultation with the plastic industry sector. The guidelines can be useful for product developers to review the existing and new packaging and other plastic products to identify opportunities for improving environmental performance of plastic products.

In Australia, a Sustainable Packaging Guidelines (SPGs) was established by the National Environment Protection (Used Packaging Materials) Measure 2011 and the Australian Packaging Covenant (APCO) to support Australian organizations to integrate the sustainable packaging principles into their operations. The SPGs is a comprehensive, publicly available resource to assist the design and manufacture of packaging that balances the demands of the market, consumer protection and the environment (Australian Packaging Covenant Organisation, 2020).

Beyond design for recycling, a ***design for the environment*** approach should also be considered to tackle not only design for recycling but also reduction of environmental impacts of the plastic over its entire life cycle. This includes design for material efficiency, use of renewable materials, and design to minimize littering, among others.

Partnership programs can be created with local and multinational companies in the Philippines to re-evaluate packaging design and the use of target SUPs listed in House Bill 9147 and those declared non-environmentally acceptable products and packaging materials (NEAP) by the National Solid Waste Management Commission (NSWMC). This program can be initiated by the government, through the leadership of DENR, supported by DOST, DTI, academic institutions, and in cooperation with plastic industry and the fast-moving consumer goods (FMCGs) industry. Similar program was done In Thailand, where an agreement was established with the five largest drinking water producers to stop using cap seals for drinking water bottles from 1 April 2018 *(*Thai PBS, 2018*)*.

The government could launch ***rewards scheme for innovative packaging systems and alternative materials to SUPs***, and facilitate wide-scale adoption of winning solutions.

Reducing the unnecessary use of SUPs and improving reuse rates of plastic products

Refusing or none-use of SUPs should still be the most important alternative towards reducing the unnecessary use of SUPs. This practice can be embedded to the public through the use of massive information, education and communication campaign.

The House Bill 9147 proposes the imposition of ban on certain “unnecessary” SUPs used in the food packaging, food delivery and takeaway such as drinking straws, stirrers, packaging bags that do not meet standard thickness, oxo-degradable plastics, cutlery and film wrap.

Before banning any SUP, policymakers should determine whether alternatives are environmentally acceptable, readily available and affordable, through a life cycle assessment, for example, as specified in the NSWMC Resolution No. 19 of 2009 - Adopting the Guidelines on the Phasing-out of NEAP. More ***locally adapted Life Cycle Assessment (LCA) of proposed alternatives*** to plastic products should be conducted to ensure that burden shifting and trade-offs are recognized and avoided. ***Local capacity on LCA and how to correctly interpret such studies should be strengthened***. DOST in partnership with academic institutions can spearhead the capacity building since available LCA studies on NEAP in the Philippines are commissioned and conducted by DOST.

In anticipation of the passing of the bill, the following policy measures, in combination with the ban on unnecessary SUPs, can help reinforce this regulation to curb SUPs:

- Consider longer phase-out period for micro and small business enterprises to comply with the SUP ban

- ***Adopt a circular business model for alternative food packaging and delivery systems*** such as the purchase of products in refillable containers or reusable packs and take back mechanisms for reusable food packaging/ containers. The LGUs may create ordinances to incentivise new and existing businesses that are adopting circular business models. It could be through business tax discount or exemptions, ease in securing business permits, or provision of a start-up capital funding institution. This can encourage businesses to adopt a circular business model and to increase awareness of the consumers that there are other ways in avoiding SUPs. Some examples of businesses adopting a circular business model in the Philippines, such as “Wala Usik” project of PRRCFI in Negros Island and retail stores like Back-to-Basics Ecostore and Maginhawa Eco Store both in Quezon City (Delta Tierra Consultants, Inc., 2022), can be used as case model by the LGUs to prepare the incentive ordinance.

- Establish an ***online platform for an inventory of businesses offering commercially available non-SUPs and multi-use SUP alternatives, or services adopting circular business models.*** Senate Bill (SB) 2425, amending Republic Act (RA) 9003, has a provision to establish a National Ecology Center (NEC), which shall provide consulting, information, training, and networking service for the implementation of Extended Producer Responsibility on plastic packaging waste. The NEC can host the online platform for credible information on local suppliers and manufacturers of alternatives to SUPs. Related information, such as the ecolabel database and other private sector market initiatives by various organizations, may also have linked access through this online platform. This platform can be operated by a private sector through a partnership with the NSWMC, which has direct supervision of the NEC.

- Provide ***discounted price for customers who bring their own reusable cups/ food containers*** for takeaway orders, instead of using SUPs; Require food service providers offering ***dine-in services to only use reusable food ware***; Mandatory or voluntary agreements for restaurants and takeaway vendors to ***provide reusable containers, cups and cutlery*** as an option besides SUPs, and for online food delivery platforms to include in their ordering program the option for customers ***to opt out of disposable cutleries”, or pay additional fee for opting to use SUPs.***

- These options are already being voluntarily practiced by limited establishments and consumers in Metro Manila, but it has not been fully incentivised/ disincentivised. Thus, the discount as an incentive or paying for additional fee for using SUPs, may encourage consumers for using SUP alternatives or discourage using SUPs, respectively. Local government ordinances can drive the implementation of this option.

Strengthen implementation of Green Public Procurement by government offices through reward mechanisms for government offices with improved or excellent environmental performance, where GPP is included in the performance assessment

- Provide ***tax incentives for the import and local production of SUP alternatives*** to food packaging and other plastic products with proven environmental advantage over conventional SUPs, as supported by available scientific, environmental, technical and economic information and scientific studies

- Internalize the environmental costs of SUPs by ***placing a tax on single-use plastic packaging or plastic products at the import or manufacturing stage***.

  An example of this is a Plastic Packaging Tax, which the United Kingdom (UK) is implementing effective April 2022. This tax will apply to plastic packaging manufactured in, or imported into the UK, that does not contain at least 30% recycled plastic. The objective of the tax is to provide a clear economic incentive for businesses to use recycled plastic material in plastic packaging, which will create greater demand for this material and in turn stimulate increased levels of recycling and collection of plastic waste, diverting it away from landfill or incineration (*Introduction of Plastic Packaging Tax from April 2022*, 2021).

  A new legislation for this new tax system or charges to tackle single-use plastic waste needs to be drafted in coordination with the Department of Finance (DoF) and in consultation with manufacturer and importers of plastic packaging, business customers of manufacturers and importers of plastic packaging, and the consumers.

Improving collection of plastic wastes for reuse and recycling

Actions to support the recycling and reuse of SUPs start with source separation and segregated collection. Separate collection prevents waste contamination and increases cost efficiency in recycling.

The local government units, being the main responsible for the implementation and enforcement of RA 9003 in their respective jurisdictions, have to step up its plans to completely and continuously implement its solid waste management plan (SWMP). Segregation and collection of solid waste shall still be prioritized. A recycling component is one of the programs of the SWMP that the LGU has to create. Hence, ***setting targets for plastic waste collection and plastic recycling*** is suggested. Having a concrete plastic collection and recycling targets will lead to identifying specific measures to be undertaken to meet the diversion target for plastics and towards Philippines' general goal of 80% total solid waste diversion from landfill by 2022.
An ***Extended Producer Responsibility (EPR) scheme***, which has recently been institutionalized through SB 2425, will help increase plastic waste collection. The bill mandates producers, in coordination with distributors and retailers to take part in an EPR Program, where obliged companies have the responsibility for the proper and effective recovery, treatment, recycling or disposal of plastic packaging and plastic product wastes after they have been sold and used by consumers. A more encompassing ***Extended Stakeholders Responsibility (ESR)*** may also be considered as it involves every stakeholder such as the local and national government, private sector and the general public in handling plastic waste.

Take back system with deposit-refund scheme, which has been successfully adopted in many countries, is an incentive for consumers to take part in the EPR system by returning empty packaging or used plastic items.

The informal waste sector which includes waste pickers, junkshops, waste consolidators and recyclers, is responsible for about 90% of the country's recyclables collection. Hence, there is opportunity to ***tap into the informal sector's manpower resource and integrate them into the EPR system***. This sector can be formalized through non-governmental organization (NGO)-

supported microenterprises, cooperatives, private waste management service providers or local public agencies. This will provide them opportunities for training, receiving health insurance and getting fair incomes, while playing a critical role in the recovery of single-use plastic items.

Increase the share of recycled plastics in the plastics sector

The Philippines is strongly dependent on imports of virgin plastic resin for manufacturing of plastic items to meet the domestic demand. There is little incentive to use recycled plastic resin since most plastic converters and brands prefer to use virgin plastic due to its cheaper price. Furthermore, there are no existing policies that require plastic industry to use certain percentage of recycled plastic as raw material.

Moreover, the local market for food-grade recycled plastics is yet untapped. Food-grade recycled plastics offer the highest margins among all the major grades of recycled plastic products, yet the Philippines currently does not use recycled resins for food-grade applications. Furthermore, major multinational companies have set targets to use up to 50% recycled resin in their packaging by 2025 and beyond, providing market opportunity for food-grade resins in the Philippines.

Setting standards that allow recycled plastics in food-contact applications, such as food utensils, containers and packaging will enable more private sector investments in this activity. Once standards are existing***, setting recycled plastic content targets and standards for reusable packaging*** for food and beverages, as well as other plastic products used in food consumption can be implemented. Policies and standards will help guarantee a domestic demand and encourage investments in plastics recycling.

To further strengthen the demand for plastic products with recycled content, market-based instruments such as ***tax for plastic packaging applications without minimum recycled content***, and/ or ***tax benefits for plastic packaging applications meeting the recycled content standards***, can be imposed***.***

As a large consumer base, ***government offices can set recycled content specifications for plastic products in the existing GPP policy***. Setting recycled content targets in government procurement can help the plastic recycling industry achieve economies of scale, resulting in more cost-efficient operations.

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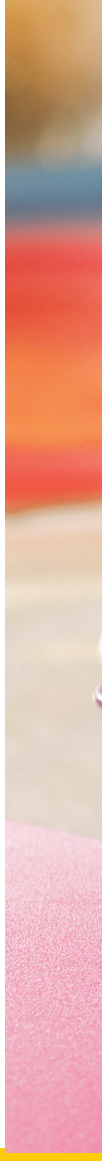

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This publication was produced with support of the ‘Rethinking Plastics – Circular Economy Solutions to Marine Litter’ project. ‘Rethinking Plastics’ is funded by the European Union and the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by GIZ and Expertise France. The contents of this publication are the sole responsibility of the author and do not necessarily reflect the views of the European Union, the BMZ, GIZ or Expertise France

Project:
Rethinking Plastics – Circular Economy Solutions to Marine Litter
https://beatplasticpollution.eu/rethinking-plastics/

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Design/ layout: Flor Ian Louie Bantawig

Photo credits/sources: LuiChan Creatives

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As of October 2022