

PROPOSED EPR MODEL

A proposed EPR model for the country was developed by taking into consideration the current solid waste management system in place, the recommendations from the 2020 EPR report, and the inputs of the various stakeholders that were interviewed through the consultations (Figure 1).

This proposed EPR scheme builds upon the already existing SWM infrastructure in place and sees to it that the principle of producer responsibility is applied to address the gaps in the current system rather than to propose measures that may cause major disruptions to already established value chains and end up being impractical to implement.

As recommended in the previous EPR study, the EPR scheme should be applied on all household packaging of any material and as much as possible, service packaging and specific single-use plastic items. For the purpose of the study focusing on plastic packaging, the obliged companies shall include the following entities:

- Manufacturers of service plastic packaging or plastic products, which may include sando bags, labo bags, cling wrap, utensils, and other plastic commodities;
- 2) Manufacturers of products in plastic packaging; and
- Importers of service plastic packaging, plastic products, and products in plastic packaging

It must be emphasized that fulfilment of EPR obligations does not equate to a producer's "license to pollute" but represents the producer's acknowledgement of the Fulfilment of EPR
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potential impacts that their products have to the environment and serve as a temporary corrective measure until more environmentally-sound materials, design, and practices are incorporated to their products and operations. Producers are also highly encouraged to set reduction targets and redesign packaging in parallel with fulfilling their EPR obligations.

An important feature of the proposed scheme is giving producers, through the PRO, operational involvement in the EPR scheme. This operational responsibility is manifested by providing assistance in the organization and operation of MRFs (Figure 2). In this scheme, funds from the EPR fees collected from the producers are allocated to assist city and municipal LGUs in the establishment and operations of MRF. This gives each MRF an opportunity to be professionalized and establish standardized set-up and operations, a feature which it currently lacks given the current solid waste management system.

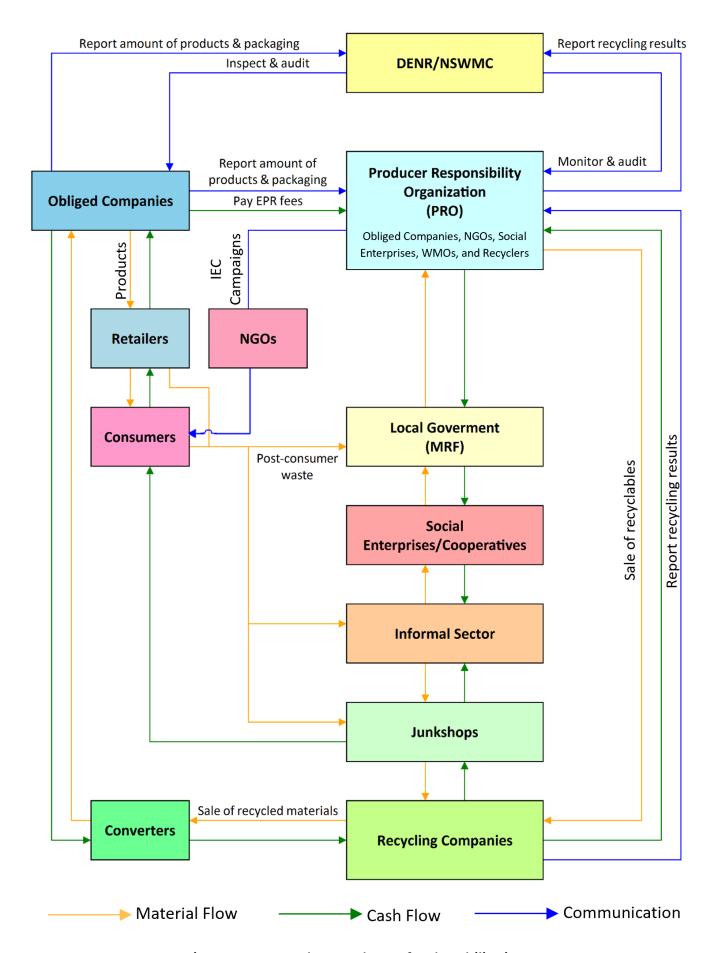


Figure 1. Proposed EPR Scheme for the Philippines

At the onset of the EPR scheme, the PRO may also opt to establish one MRF per province, which may then expand into one MRF per city or municipality as the implementation of the EPR progresses and depending on the needs of each city or municipality. Furthermore, the PRO may also separately set-up MRFs in rural areas or islands that do not have current solid waste collection in place. On the other hand, there may already be cities and municipal areas that have already existing MRFs and might just need technical extension or financial support to meet respective management targets. It must be emphasized

that the responsibility of waste collection is legally assigned to the LGU by virtue of RA 9003.

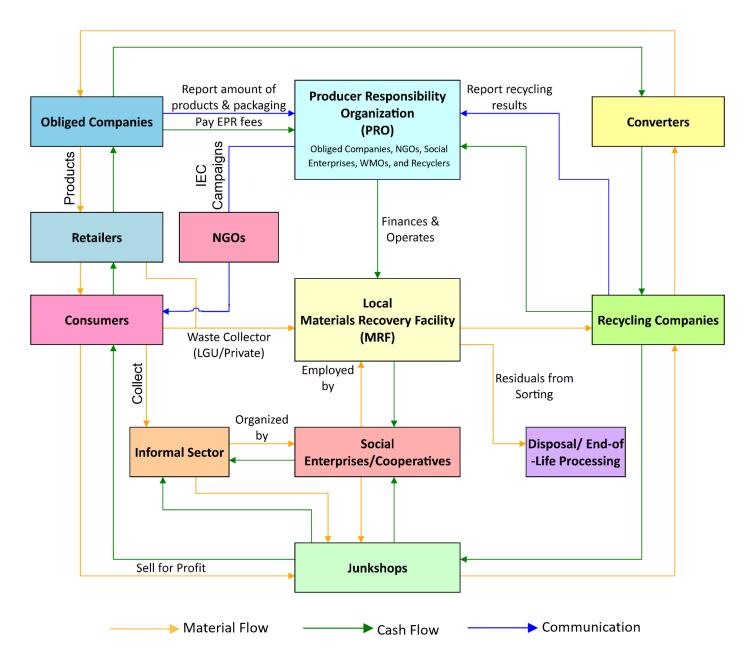


Figure 2. Implementation of the Proposed EPR Scheme for the Philippines in the Local Setting

PRO MODEL

The Producer Responsibility Organization (PRO) comprises all EPR stakeholders and holds the collective waste management responsibility. This responsibility is transferred by the obliged companies through paying a fee to the PRO. In doing so, the PRO becomes responsible to meet the take-back targets for the obliged company's packaging. On their behalf, the PRO organizes and finances all collection and treatment of the waste.

The PRO is responsible for the following tasks in the EPR scheme:

- Registration of all obliged companies (in cooperation with DENR)
- Determination and calculation of EPR fees to be paid by all obliged companies
- Collection and administration of the EPR fees while ensuring fair costs and therefore not harming the competitiveness of a participant
- Tendering and contracting recycling of packaging waste
- Documentation of collection, sorting and recycling of packaging waste
- Informing and educating all consumers about the importance of an environmentally sound waste management, alternative materials, waste segregation atsource

- Controlling and verifying all services that have been awarded to service providers, specifically services relating to the fulfilment of collection and recycling by waste management companies.
- Financing all tasks with funds provided by the obligated companies
- Documentation and verification to the supervisory authorities: The PRO must prove that it has completely fulfilled all its tasks and aims by using the paid fees of the obliged companies accordingly. This includes liability for failure to implement the EPR scheme according to the provisions of the legal EPR basis.
- Being open to audits initiated by the state or internally for financial, operational, and legal transparency
- Provision of reports to the general public especially on the volume of plastics produced by each of the obliged companies and efforts done to reduce and prevent waste beyond recycling for transparency and accountability
- Conduct of reviews with DENR to assess effectiveness of current EPR provisions and make necessary adjustments considering market conditions.

The Producer Responsibility Organization is the central and most important element for establishing and operating the EPR system.

ROLES OF STAKEHOLDERS

The involvement of several key stakeholders is crucial to the success of any EPR scheme. Furthermore, roles of each stakeholder must be properly defined to enable collective effort towards the implementation of an appropriate and effective EPR system in the country.

NATIONAL GOVERNMENT

• Craft the legal EPR framework and ensure that all roles and obligations of involved stakeholders are well-defined and continuously achieved.



- Establish specific goals and targets along with mechanisms to monitor the compliance of obliged companies.
- Provide support for other involved stakeholders in the implementation of an EPR scheme. For instance, it should provide financial support and capacity building to the local government units (LGUs) and must assist them in providing adequate provisions for MRFs, and conducting training programs for SWM planning and operation, waste minimization and utilization, and plastic field surveys.

This also includes funding/investing in necessary infrastructure such as recycling facilities. Most recovered PET plastics are converted to pellets then exported to countries that have the appropriate recycling facilities. Investing in the necessary infrastructure would lessen, if not eliminate, the need to export plastics.

• Fund research and development for plastic waste utilization and encourage the expansion of the secondary materials market to supporting businesses

LOCAL GOVERNMENT UNITS

 LGUs shall oversee the implementation of the EPR system and compliance to wastes segregation, collection, recovery, transport, recycling, and disposal for plastic wastes, within their jurisdiction.



- All LGU and barangay officials should be responsible for continuously improving plastic
 waste management in their area through launching initiatives and projects, addressing
 gaps in the current infrastructure, and partnering up with other sectors such as the
 business sector and civil societies with similar goals.
- Encourage public participation and influence communities to act collectively for the successful implementation of an EPR.

GOVERNMENT AGENCIES

 The DENR shall primarily serve as the arm of the National Government to supervise and oversee the effective implementation of the EPR scheme with the support of other government agencies.



- The DENR, NSWMC, the Provincial Government Municipal Environmental and Natural Resources Offices (PGENRO), and local Municipal Environmental and Natural Resources Offices (MENROs) serve as the extension of the national government in dealing with environmental concerns including plastic waste management.
- The NSWMC, being directly under the Office of the President and chaired by the DENR Secretary, and the DENR itself are expected to be the national authority in waste management, tasked to properly implement R.A. 9003 and all environmental laws. They are expected to assist in the creation of policies for an EPR scheme that are aligned with the current environmental regulations.
- The DENR shall be responsible for auditing and receiving required data from both obliged companies and recycling companies in the proposed EPR set-up.
- The NSWMC may formulate and update the list of non-environmentally acceptable products and packaging materials (NEAP) subject for banning and phase-out and assess more products to be considered in the phased implementation of the EPR scheme.
- The PGENRO per province and MENRO assigned per city or municipality have authority in waste management for their respective localities. A national law, however, has yet to be passed for the establishment of the office per LGU. Currently, there is no mandated MENRO designation and the tasks of the MENRO are usually assigned to the LGU's Disaster Risk Reduction and Management Office.

Other government agencies that are not directly involved in solid waste management may still also be involved for the holistic implementation of the EPR scheme.

- The Department of Interior and Local Government (DILG) for their part shall serve as advisory bodies to the LGUs for a proper integration to an EPR scheme.
- The Department of Trade and Industry (DTI) may promulgate standards on the proper labelling of products to assist consumers in determining the proper disposal of items. DTI is also expected to provide protection to consumers by stabilizing the prices of necessities and prime commodities and by prescribing measures against undue price increases that may result from the implementation of the EPR law.
- The Department of Education (DepEd), Commission on Higher Education (CHED), and the Philippine Information Agency (PIA) may also assist in IEC campaigns to further inform consumers, especially the youth, on how to actively participate in the EPR scheme.
- The Bureau of Customs can manage and address smuggled plastics.

OBLIGED COMPANIES

 Pay a contribution fee to the PRO or through individual recycling to manage their waste.



- Meet targets in accordance with the regulations and report quantities of products and packages they release to the market, to government authorities.
- Manufacturers or producers are urged to adopt strategies and invest in technologies that can reduce and eliminate harmful impacts of their products to the environment even as early as the design stage.
- Find means to improve the reuse and recyclability of their products to avoid placing burden on consumers and recyclers at product's end of life.

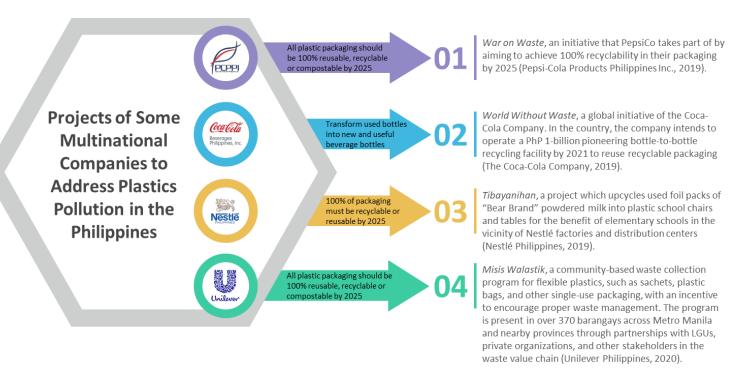


Figure 3. Projects of Some Multinational Companies in the Philippines to Address Plastic Problem (WWF Philippines, Inc., cyclos GmbH, & AMH Philippines, Inc., 2020)

RECYCLERS AND CONSOLIDATORS

 Recyclers and consolidators are responsible for collecting recyclables and recovered materials to be transformed into new products and raw materials helping in the diversion of waste from disposal sites or open environment.



• Partner with the PRO for providing aforementioned services, which should conform to the standards and guidelines set by government agencies and the PRO in order to ensure high quality recycling.

WASTE COLLECTORS

• Waste collectors, whether formal or informal, play a vital role in the success of an EPR scheme. They serve as the link between waste generators to waste disposal sites, recyclers and consolidators.



- Some cities and municipalities directly handle the collection of waste within their area of jurisdiction while others engage the services of a private third-party waste collector.
- Ensure that each component of the waste stream reaches its intended recipient and does not leak into the environment and cause pollution. This can be achieved by proper waste segregation. With the help and participation of waste generators, segregation of waste can be easier for the waste collectors.

There are instances where some collection crew fails to check if waste segregation is followed and may unintentionally mix them together at the collection site. Moreover, segregating the collected wastes is not part of their job description, hence some collectors may find the additional task burdensome. Segregation-at-source then is an important feature for EPR to work.

SCHOOLS AND UNIVERSITIES

• Educational institutions play a major role in the promotion of the EPR scheme as a means to achieve sustainability in our society. Schools and universities are some of the best outlets for promoting solid waste management education, raising awareness and educating the public about the impact of use and improper disposal of waste on the environment.



- By developing programs, workshops, seminars and other awareness-raising campaigns, children and youth can be educated and become future productive members of the society with the desired consumer values and good waste management practices.
- Universities and researchers specifically also play a key role in the continuous development of various scientific, social, and economic approaches to address plastic waste pollution through their research. Research geared toward these aspects should be given much attention, encouragement, and support from both the public and private sector.

CIVIL SOCIETY

 Many non-Governmental Organizations (NGOs) and social enterprises in the Philippines are quite active in the field of plastic waste management. They play an important role in supplementing the efforts of the national and local governments and providing perspectives to the PRO to address waste management concerns.



- Provide a wide variety of programs to support physical collection and recycling services especially in remote areas and advocate and create awareness to consumers.
- By conducting programs such as the "Aling Tindera" by PCX, "Basura Bangka" by Pure Oceans, "Waste Watchers" project of Save Philippine Seas, and "Bin Exchange" by Clean Our Oceans, people can be encouraged to proactively recycle and be responsible for the waste they generate and even be financially incentivized for their efforts. Such NGOs involved in environmental protection and mobilization of the informal sector shall be part of the PRO.
- The integration of informal sectors shall also be assigned to the civil society in the implementation of the EPR system.

CONSUMERS

 Consumers form the market's core and are therefore perceived as direct contributors to plastic waste leakage in the environment. However, proper implementation of policies, capacity building, and availability of waste management facilities play a bigger role in the participation and compliance of consumers to waste management laws such as R.A. 9003 (Ecological Solid Waste Management Act of 2000).



- Consumers are expected to actively participate in the EPR scheme and in established solid waste management systems and programs. Through this, individuals can be educated about strategies, correct practices and benefits of proper waste management, segregating, handling, collection and disposal of waste.
- They shall also be encouraged and motivated to practice waste minimization by opting for recyclable or unpackaged goods and products, as well as reusing and recycling packaging and products as often as possible in their homes and areas.
- Waste separation is critical because high-quality recycling of packaging materials requires that packaging waste be collected separately from residual waste; the better the fractional collection, the easier and less expensive the subsequent sorting. Hence, separation at source by consumers is highly important in transitioning to sustainable management of packaging waste.

- Consumers shall also be encouraged to participate in programs such as take-back programs, deposit-refund schemes, plastics in exchange for currency or commodity and biodegradable waste converted to either biomass energy or compost.
- Some short-term resistance is expected from the side of consumers due to changes in
 established consumer habits. Thus, IECs provided by the government and the PRO, as
 well as consumer groups such as the Nationwide Association of Consumers, Inc. (NACI),
 may further convince everyone to play a role in addressing plastic pollution and waste in
 general by participating in the EPR scheme

Proper implementation of policies, capacity building, and availability of waste management facilities play a bigger role in the participation and compliance of consumers to waste management laws

ROADMAP TOWARDS A FUNCTIONAL EPR SCHEME IN THE PHILIPPINES





Determine unnecessary plastics in packaging & improve packaging design



- All measures below have to be pushed parallel, and simply and easily communicated to attract attention of the communities
 - Create awareness, root behaviour changes in daily routines
 - Actors: LGUs, community leaders, waste management operators



- Identify unnecessary plastics –
 those that are not necessary for product integrity –
 and evaluate its elimination from the packaging.
- Design out problematic packaging by switching to easy-to-recycle packaging.
- Generate data of unnecessary plastics in product packaging and ways to design this out.

Capacity building on EPR in order to close knowledge gap and create collective, aligned understanding

- Present and discuss reports with relevant private sector stakeholders (e.g. local and international producer and importer, packaging user), government authorities of all levels (e.g. barangay, LGU, NGAs), waste management operators, and other civil society organizations
- Align understanding of an EPR scheme, PRO, especially its responsibilities, mechanisms and entities across all relevant parties involved
- Actors: Civil Society Organizations in collaboration with other partners

Implement data collection on waste management

- Develop, roll out and enforce holistic, comprehensive data collection system, especially in waste management sector, building on existing data management schemes and sources
- Acquire data for production, waste generation, collection, sorting, recycling, and final disposal
- Present situation needs to be clear, to identify weak points and develop an adequate EPR system upon given structures
- Actors: DENR in coordination with all stakeholders, especially LGUs and waste management operators

Build EPR working group Form working- and discussion groups incorporating all stakeholder groups

Implement holistic waste management

- Set up nationwide sorting facilities with proper equipment, appropriate for the local context and according to developed standards
- Meet sorting obligations, either through manual labor or simple technically supported labor, which is recommended for metropolitan areas with a high quantity of waste generation
- Actors: LGU, waste management operators, technically and financially supported by the government
- Elaborate and develop individual concepts for treatment, consider also alternative recovery technology on a very small scale, where recycling is yet to be introduced
- Incentivize increase in recycling capacity for all resins (e.g. PP, PE, PET) to encourage investment in recycling facilities
- Figure out best possible recycling, treatment according to barangay characteristics
- Actors: Local waste management operators, LGUs



Actors: DENR with representatives from all stakeholder

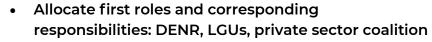
groups (e.g. LGUs, NSWMC, companies)

Jointly draft and elaborate

plans, strategies and next steps



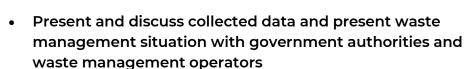
Prepare voluntary EPR set up





- Clear roles and responsibilities within a voluntary EPR
- Actors: DENR in coordination with initiating private sector

Develop and impose nationwide minimum standards for plastic packaging waste management



- Identify gaps and develop measures and standards
- Actors: DTI and DENR in coordination with all stakeholders, especially waste management operators
- Training to facilitate implementation of standards
- Build capacity and align waste management outcome e.g. basic separation targets for all materials
- Actors: LGU, waste management operators, technically and financially supported by the government



Start mandatory PRO

- Register obliged companies to PRO
- Create a proper, well-prepared PRO to achieve aims of the EPR framework
- Actors: DENR in coordination with other stakeholders

Prepare legal framework for mandatory EPR (can start right after legislation)

- Develop the legal framework (as an amendment to existing laws or under new legislation) to implement EPR as a mechanism
- Finance and organize packaging waste collection, recovery and disposal
- Solve the first step for a specific EPR packaging waste framework based on the legal framework
- Determine the EPR fee structure
- Actors: Competent authority in discussion with private sector