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Project on Sustainable Plastic Waste Management

Draft Report on Plastic Waste Management Strategies

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Disclaimers

Executive Summary

This Report, commissioned by the United Nations Environment Programme – International Environmental Technology Centre (UNEP-IETC), is part of the Centre's work with developing countries to implement sustainable solutions to environmental challenges, with focus on holistic waste management. The Centre promotes and advocates sustainability of waste management and disposal, based on the circularity principles and through the life-cycle approach. The report on plastic waste management strategies will be composed of: 1) development of strategies for sustainable plastic waste management; and 2) promotion of networking to implement strategies.

Our Plastic Waste Crisis World

Over the past decade the global community has been hearing repeatedly – and in an increasingly alarming manner – that the world is facing a waste crisis, or more specifically a plastic waste crisis. The United Nations Environment Assembly (UNEA) identified pollution as one of the three great environmental crises of our time, along with climate change and biodiversity loss. Although the triple planetary crises negatively impact many aspects of human life and the natural world, it is perhaps pollution in its many forms which has directly impacted how people and society live and operate the most. Pollution has been recognized as one of the major drivers of biodiversity loss and ecosystems degradation, with marine plastic pollution, in particular, negatively impacting more than 200 species and endangering human food systems. One obvious reason for this increase in plastic waste is the rising levels of plastic production and consumption. As economies develop and people's consumption power increases, so does the use and disposal of products such as plastics. In many instances, and especially in countries where waste management systems are either absent, lacking, or unable to cope, plastic waste is mismanaged and leaks in to the environment.

Several areas or regions around the world are considered as plastic pollution hotspots, or places where plastic waste management is of increased concern. Some of these regions notably include Southeast Asia, Latin America and the Caribbean, and the South Pacific. Socio-economic aspects – or a country's level of development – appear to be one of the factors which affects levels of plastic pollution. Rich countries tend to produce the most plastic waste per person, whereas mismanaged waste tends to be much higher in low-to-middle-income countries, even if plastic waste produced person is lower compared to higher income countries.

Plastic waste mismanagement and pollution to the open environment is not the only significant impact of plastic pollution. A cursory analysis of these data shows that hotspot countries are also where more people are disproportionately impacted by marine plastic pollution, making this issue not only one of waste management policies and strategies, but also more importantly that of environmental justice. In many developing countries, those already vulnerable and marginalized – women and children, indigenous peoples, farmers and fisher communities, to name a few – are doubly impacted by plastic pollution and waste mismanagement. This results in their worsening condition and state, making it even more difficult to escape their vulnerable state.

Recent Developments to Address Plastic Pollution

Plastic pollution and waste management has gained considerable attention not only at the local/domestic level, but critically at the international stage. Recent international and regional developments which are helping shape global and local plastic policies and strategies give a

glimpse of how national and local plastics policies are shaping up as influenced and affected by global developments.

The on-going negotiations for the *Global Plastics Treaty* is one of the most significant developments on waste and plastic pollution at the international level in recent years. At the recently concluded INC-3 held in Nairobi, Kenya last November 2023, the zero-draft text of the treaty was discussed, and many expected a breakthrough, especially with the momentum and increasing global awareness and efforts surrounding the plastic pollution crisis. Another recent and significant development is the so-called *High Seas Treaty*, or the "Agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (also known as the BBNJ agreement)." Adopted by the international community last June 2023, it extends for the first time environmental protections to two-thirds of the ocean that lie beyond national jurisdictions and will allow for the creation of marine protected areas and the use of other so-called "area-based management tools" to more sustainably manage ocean resources – with benefits and implications for global plastic waste management.

The Basel Convention is important for any discussion about waste and plastic pollution since it is currently the only multilateral environmental agreement (MEA) directly dealing with waste – albeit the transboundary movement and shipment of waste among countries. In recent years, the convention has focused on plastics, particularly the ubiquitous transboundary movement of plastic wastes and microplastics which is becoming a major concern as their property of durability makes their particles remain for long periods of time. During the 14th Meeting of the Conference of the Parties to the convention in 2019, governments amended three annexes of the Basel Convention to include plastic waste in a legally-binding framework which will make global trade in plastic waste more transparent and better regulated, whilst also ensuring that its management is safer for human health and the environment.

There are also various regional initiatives and developments with positive implications for plastic waste management strategies. The *Association of Southeast Asian Nations (ASEAN)* Member States adopted two documents to guide regional and national action on marine litter: i) the ASEAN Bangkok Declaration on Combating Marine Debris in the ASEAN Region; and ii) the Regional Action Plan for Combating Marine Debris 2021-2025. The *European Union (EU)* has its plastics strategy – part of its circular economy action plan – which aims to transform the way plastic products are designed, produced, used and recycled in the EU. *Latin America and the Caribbean Region* have also developed a Regional Action Plan for Marine Litter, supported by the Regional Marine Litter Management Strategy that was developed in 2021. The *Pacific Islands* have also developed a Regional Action Plan on Marine Litter Management, whilst also supporting calls for a new internationally binding instrument on plastics through the Pacific Regional Declaration on the Prevention of Marine Litter and Plastic Pollution and its Impacts.

These developments point to the importance of effective strategies and policies, at the international, regional, and national level, to deal with plastic pollution. More importantly, it emphasizes the increasing urgency of taking action and coming up with the right and appropriate policy solutions to deal with this crisis.

Survey of Plastics Policies and Strategies

Plastic policies and strategies vary among countries and jurisdictions. The analysis of these strategies should factor in the time needed for implementation and execution – from short-term to long-term programs and actions –, as well as regulatory environments and economic and

social conditions, along with technological innovation (such as using smart technology). Appropriate technologies and methods are also considered across different jurisdictions, reflecting the varying conditions and considerations in different countries.

An analysis of plastic policies and strategies should also take into consideration barriers and challenges. Studies have identified the following as the most common issues faced when dealing with plastic waste management: i) legal and policy; ii) institutional; iii) capacity, funding, and resource; iv) implementation and enforcement; and v) political, societal, and cultural.

This Report conducted desk research on existing plastics policies and strategies in 26 countries from the following regions: East, Southeast, and South Asia; Central Asia; West Asia; South Pacific; Africa; Latin America and the Caribbean; and Europe. The countries were chosen to entail a balanced representation of developed and developing economies, and also to highlight challenges across different states with varied local conditions and contexts. The selection was also based on public information available concerning the topic.

In this Report, laws, policies, strategies, and regulations are generally understood to be issuances, decrees, and enactments by either the Executive branch of government (i.e., policies, regulations, and strategies) or the Legislative branch (i.e., laws and statutes). Judicial issuances, or orders, directives, and rules of the courts have been excluded unless stated otherwise due to relevance or importance. A chart summarizing the different laws, policies, and strategies in the select countries is attached as **Annex A** of the Report**.**

Based on the research and the above chart, the most common plastics-related policies and strategies identified were: i) national strategy or roadmap; ii) plastics regulation; iii) single-use plastic (SUP) bans; iv) extended producer responsibility (EPR) schemes and programs; and, v) eco-design, clean production and biodegradable packaging.

The majority of surveyed countries have a *national strategy or roadmap* related to or with relevance to plastics. Common among these plans is the focus on marine pollution in the form of action plans or strategies, whereas *plastics regulation* – generally dealing with the production, use, and disposal of plastics – is by far the most popular topic: 23 out of the 26 countries have a specific law or policy on plastics, albeit with varying focus and specific targets. *SUPs* have been identified as one of the most problematic types of plastic waste, so that several countries have taken their plastics regulation a step further and have banned the use of particular types of SUPs at national level.

EPR schemes, in turn, have been increasing in popularity among policymakers and other stakeholders. Aside from the recognition and acknowledgement that producers and manufacturers should have greater responsibility for the end-of-life of the products that they make and market, these schemes can also render greater opportunities for cooperation and collaboration between private sector, government and consumers. *Upstream measures* – those that concern production and manufacturing of polymers, and aspects of the product life cycle before it is put out on the market – is a critical component of plastic waste management, and several countries surveyed have initiated related strategies.

Several observations against the different plastic policies and strategies surveyed by this report have been discussed.

1. *Most countries have in place some national strategy or policy in relation to plastics policies – but few have specific or stand-alone policies on plastics only* – It is worth noting that

majority of countries have enacted at least one national policy or strategy touching upon aspects of plastic waste management and strategies. These plans deal with marine pollution, sustainable consumption and production, waste trade, and even on carbon emissions and climate targets. However, only a few countries have specific policies which implement or institute plastic waste management strategies or deal with plastic pollution per se (and not just as part of overall waste management).

2. *Most policies seek to regulate or ban plastic use, particularly SUPs* – The most popular type of policy or strategy among the surveyed countries is the regulation and/or ban of plastics, in particular of SUPs. The regulations vary between countries – from listing down when and where plastics can be used, to specifications on the composition of plastic bags, or on its thickness or if biodegradable materials are required. This reflects the growing awareness and concern of countries around the world on the impacts of plastic use and waste management. However, in some cases the bans are usually not absolute and certain types and uses of SUPs are generally allowed.

3. *EPR is gaining popularity among countries, but implementation levels and specifics vary* – Another policy intervention or strategy that is gaining popularity is EPR. Most of the surveyed countries have very nascent EPR laws and are in the early stages of implementation. As noted above, this reflects the demand from both governments and stakeholders for greater action and accountability from the private sector and businesses – those who produce, manufacture, and sell plastic products.

4. *Majority of strategies are new and/or in the early stages of implementation* – As with EPR, one important observation is that majority of laws, strategies and policies are either new or at nascent stages of implementation. Several countries have enacted or instituted plastic specific laws and rules only in the past decade, with very few regulations before 2010. Majority have been enacted in the last 5 years, especially in the developing countries surveyed in the report. Moreover, laws which relate to upstream measures (e.g., clean production, eco-design, and use of biodegradable materials), are even newer or in early stages of development.

5. *There are few countries with policies on upstream measures – which may make the other policies ineffective* – A further critical observation is that there are very few policies among the countries surveyed with measures targeting upstream stages of the plastic chain. Most of the policies, including those already enforced or under implementation, focus on the downstream aspect, or when the plastic is already used and discarded, and considered as waste. In particular, the following upstream policies and strategies have scarcely appeared in the surveyed countries: i) use of recycled content; ii) recycling mandates and targets; iii) taxes on plastic production/use; iv) incentives; and v) labelling requirements.

Best Practices in Plastic Waste Management

The Report will present and discuss some best practices in plastic waste management from around the world. These interventions were identified based on research conducted for this report, and do not necessarily result or are derived from the laws and policies discussed in the previous section. However, in some cases and in specific countries which were part of the Report, the laws may have contributed to the success of the identified cases.

In summary, the best practices identified by this report are:

Best Practice	Key Considerations/Elements
Developing appropriate laws and policies	• Overall legal and institutional framework, policy or strategy • Specific enabling legislation • Guidance for actors and different stakeholders
Community involvement	• Mechanisms to allow for community participation and involvement • Engagement at the community and grassroots level, including with local/sub-national government units • Considerations for environmental justice and issues of vulnerable and marginalized members of society
Broad stakeholder participation	• Presence of an effective mechanism or fora to allow for participation and involvement of all concerned stakeholders • Sufficient identification of all stakeholders concerned • Adequate and effective means of communication, cooperation, and collaboration
Data-driven approaches	• Clear data collection and collation methodologies • Transparent, accessible, and understandable data widely available to the public • Data which support and is used in decision and policy making processes
Financing options	• Identified sources of financing to implement policy interventions, including appropriate enabling policies • Clear processes and procedures for investment and financing options

Critical question: Do policies reflect/support best practices?

After looking at both policies and best practices when it comes to plastic waste management, one critical question to ask is this: Do the policies reflect, support, or enable the implementation and execution of best practices? Is there an alignment between the policies which countries have enacted or are in the pipeline with what has been proven to be effective and successful?

It will be good to point out why these best practices are important to support plastic waste management strategies. The identified best practice work together in synergy, complimenting each approach for the success of the others, in order to achieve the goal of effective plastic waste management. First, ***data driven approaches*** will provide the needed information to make informed policy decisions. Second, to ensure that crafting the laws and policies will have everyone on board, ***broad stakeholder approaches*** help identify how the different actors can be engaged and involved, not just in the development and crafting of the policy, but more importantly in the implementation and execution of the same. With data available and stakeholders on board, policy makers can now move into ***developing the appropriate laws and policies***. These will not only provide legal mandates and institutional responsibilities, but also overall guidance and direction to implement a wide range of strategies and interventions. Next, implementation and successful execution will need ***community involvement*** – perhaps the most crucial piece of the plastic waste management strategy puzzle. Lastly, but equally important, all these approaches will cost money, thus policymakers need to identify ***financing options*** to help fund these initiatives and interventions.

Based on an analysis of the research data and findings above, it would appear that the answer to the above questions is no: policies do not necessarily support or enable the best practices, and there is no clear alignment between the successful best practices and existing policies. The different examples and case studies appear to have been successful not because of an policy only, but because of a group of factors. Therefore, it is of course possible for the existing policies to indirectly support these best practices or provide an overall enabling legal framework that allows for these activities to flourish and bear fruit.

The Report also shows that only a handful of the surveyed countries have clear policies which directly support or enable the best practices identified by this report. Save for developing appropriate laws and policies and community involvement, the other best practices do not appear to be part of existing legal frameworks. At best, broad principles or plans are mentioned but no specific provisions are available or provided. This might reveal some critical gaps and barriers to effective plastic waste management strategies, which must be addressed when developing the appropriate policies.

Key Considerations for Choosing the Appropriate Policy

With the discussions above as background – in particular the point that most policies do not reflect or enable the identified best practices – the next critical step is to know how to choose and identify the appropriate types of plastic waste policies and interventions that are needed.

Below is a proposition of key considerations which policymakers and concerned stakeholders should ideally take into consideration when choosing and crafting the appropriate policies:

- *Recognize that no one-size-fits-all* – It is critical to recognize as a starting point that each country or jurisdiction is unique – be it in its political and economic system, to socio-cultural norms and values. This uniqueness requires an equally unique approach to developing the appropriate policies and interventions, not just with plastic waste management but also as to any other law or policy in the pipeline.

- *Tailor-fit interventions to local context* – Internal introspection is needed to be able to tailor-fit solutions to the local context. Policymakers and the different stakeholders must consider factors unique to each country.

- *Ensure comprehensive and whole-of-government and society approach* – There is a need not just for government to make plastic waste management and addressing the plastic pollution crisis as a priority, but to be a whole-of-society endeavor. Plastics cannot be dealt with in “isolation” from other concerns and issues in society, as each issue directly or indirectly impacts the others.

- *Promote a human-rights based approach* – Environmental and climate justice considerations which promote a human rights-based approach to plastic waste strategies, are particularly critical for developing countries seeking to identify policies and interventions to address the plastic crisis. The social and economic prosperity of all people relies on a healthy and functioning biosphere.

Proposed Steps in Determining Appropriate Policies and Approach

Once the key considerations have been analyzed, the next step is to determine the specific policies and approaches on plastic waste management. These steps are:

STEP-BY-STEP GUIDE TO PLASTIC WASTE MANAGEMENT POLICY AND STRATEGY DEVELOPMENT		
Steps	**Specific activities, actions, and interventions**	**Best practices supported or aligned with**

Step 1 – *Conduct National Assessment and Scoping*	• Gap analysis and assessment of laws and policies
	• Conduct National Source Inventory
	• Alignment with regional plans and international obligations/global developments
	• National and local level consultations
	• Consider establishing a national-level Stakeholder Hub
	  ◦ Stakeholder mapping
	  ◦ Focal points and Secretariat
	  ◦ Use the Stakeholder Wheel concept
		• Developing appropriate laws and policies
		• Data-driven approaches
		• Broad stakeholder participation
		• Financing options

Step 2 – *Develop National Roadmap (or Action Plan) with Menu of Options*	• Identify existing laws which need to be implemented properly • Work on gaps and barriers in the law, including data gaps, identified in the assessments • Identify roles and responsibilities of each stakeholder • Definite and concrete timelines and targets	• Developing appropriate laws and policies • Broad stakeholder participation • Financing options
Step 3 – *Public Consultations and Pilot Testing*	• Broad stakeholder consultations • Revise roadmap and plans as needed • Pilot test particular activities or interventions at the local/sub-government or community level	• Community involvement • Broad stakeholder participation
Step 4 – *Implementation*	• Use SH Hub model for implementation and execution • Ensure accountability for commitments • Have political will to continue with implementation and execution	• Developing appropriate laws and policies • Financing options
Step 5 – *Monitoring and Evaluation*	• Identify potential revisions and amendments needed • Address emerging challenges, including new obligations based on international development	• Developing appropriate laws and policies • Broad stakeholder participation • Data-driven approaches

Epilogue: Meeting the Challenge of Effective Plastic Waste Management Strategies

This Report began with a bleak and alarming picture of the global plastic waste crisis, and its detrimental and harmful impacts on the health of people and planet. The reader saw why pollution – in its many forms, but particularly that coming from plastic – is one of the triple planetary crises facing humanity. These challenges and issues facing the global community has put immense pressure on everyone in the midst of other socio-economic and political problems.

However, the succeeding pages and sections of the Report have also revealed that there is much to be hopeful for. Global developments like the Global Treaty on Plastics have put a

spotlight on the issue of plastic pollution. The survey of laws and policies from different countries around the world – an interesting and diverse mix of countries – has also shown how all countries are moving forward on the law and policy front to meet the waste management and plastic pollution issue. More importantly, the Report has pointed to best practices which have relatively been successful, and can thus perhaps be scaled up and emulated by different countries around the world.

It can thus be safely argued that with the right approach and guidance, through this Report and countless other resources and references, countries can achieve having the right and appropriate mix of policies and strategies on plastic waste management. But challenges remain as the findings and takeaways from the research of this report will show that more work needs to be done.

There are a few concluding points worth mentioning at the end of the Report, both to emphasize some key findings, but also to point to future and further areas of research, study, and intervention.

Perhaps one of the most critical findings of this Report is that **policies and strategies are still aimed at downstream measures**. Most goals still focus on plastic products ending up as waste – whether in landfills, to be re-used, or to be recycled. There needs to be greater efforts at developing and implementing upstream policies – or those which seek to reduce plastic production or use, or those that promote natural and cleaner alternatives as opposed to plastics.

Another important point, and one connected with the above concern on downstream measures is that despite the presence of laws and policies tackling plastic waste management, **there are very few specific plans and strategies which directly deal with plastic as a primary issue or product.** As stated in the previous section, it is ideal to have a specific plan or strategy on plastics, or to at least have a specific action points if it is to be included in a separate plan or document. One of the things that stood out was the fact that these countries have no clear plans or laws that require investing in research and technology that will provide the data required to properly show the solutions that best works for their country. Many of these countries have similar targets, bans, and regulations – but its bases are not clear.

Lastly, of special note is the **increasing interest of countries in adopting EPR as a solution to plastic waste**. As the survey of countries has shown, many countries have recently put in place EPR legislation. However, it should be emphasized that successful models of EPR did not happen overnight – many factors have come together, sometimes over a long period of time, before EPR has become the effective system it is today.

In conclusion, laws and policies can be the game changers for plastic waste management. Not only do they establish legal rights and obligations, but they also point to and identify what are mandatory and binding measures which all stakeholders must meet for proper and effective plastic waste management. The right laws and policies, aligned with strategies and best practices adapted to the local conditions and context, can help address the plastic waste crises and protect the rights of the most vulnerable and marginalized members in society. The threat of the triple planetary crises demands no less.

1. INTRODUCTION

This Report, commissioned by the United Nations Environment Programme – International Environmental Technology Centre (UNEP-IETC), is part of the Centre's work with developing countries to implement sustainable solutions to environmental challenges, with focus on holistic waste management. The Centre promotes and advocates sustainability of waste management and disposal, based on the circularity principles and through the life-cycle approach. This report on plastic waste management strategies will be composed of 1) development of strategies for sustainable plastic waste management; and 2) promotion of networking to implement strategies.

1.1 Our Plastic Waste Crisis World

Over the past decade the global community has been hearing repeatedly – and in an increasingly alarming manner – that the world is facing a waste crisis, or more specifically a plastic waste crisis. The United Nations Environment Assembly (UNEA) identified pollution as one of the three great environmental crises of our time, along with climate change and biodiversity loss.[1] These three crises have put an unprecedented strain on the natural environment, which includes human health and well-being. It has also increasingly challenged efforts to meet global development objectives such as the Sustainable Development Goals (SDGs).

Although the triple planetary crises negatively impact many aspects of human life and the natural world, it is perhaps pollution in its many forms which has directly impacted the most how people and societies live and operate. Pollution has been recognized as one of the major drivers of biodiversity loss and ecosystems degradation,[2] with marine plastic pollution, in particular, negatively impacting more than 200 species and endangering human food systems.[3] Both land and sea-based source are to blame for marine pollution, and in recent years plastic pollution has been put on the spotlight due to its substantial and significant impact on both human and planetary health.[4]

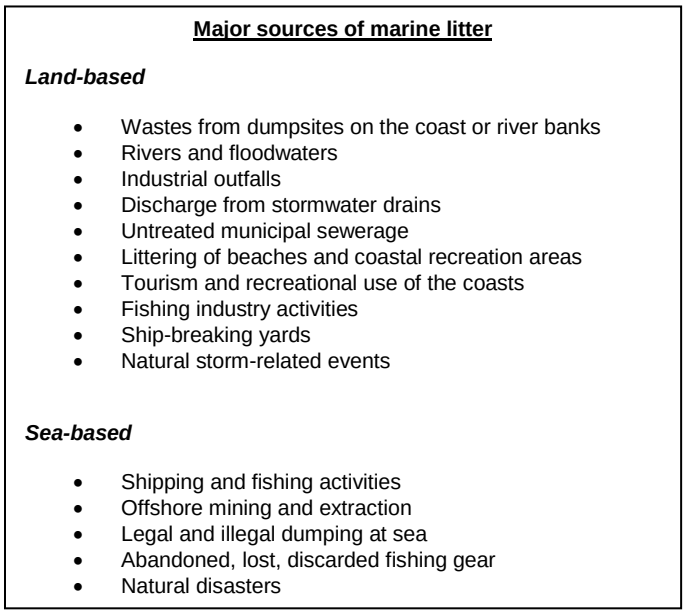
[1] *See* United Nations Environment Programme (UNEP), *Making peace with nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies - Key Messages and Executive Summary* (2021), available at https://wedocs.unep.org/xmlui/bitstream/handle/20.500.11822/34949/MPN_ESEN.pdf.

[2] Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), *The Global Assessment Report on Biodiversity and Ecosystem Services - Summary for Policymakers*, (Bonn, Germany: IPBES Secretariat, 2019), p. 12.

[3] Ibid. p. 13.

[4] *See* Earth.org, *8 Shocking Plastic Pollution Statistics To Know About*, available at https://earth.org/plastic-pollution-statistics/.

Figure 1: Major Sources of Marine Litter



Source: Krushelnytska, Olha. 2018, Solving Marine Pollution: Successful models to reduce wastewater, agricultural runoff, and marine litter (Washington Dc: World Bank 2018).

One obvious reason for this increase in plastic waste is the rising levels of plastic production and consumption. As economies develop and people's consumption power increases, so does the use and disposal of products such as plastics. In many instances, and especially in countries where waste management systems are either absent, lacking, or unable to cope, plastic waste is mismanaged and leaks in to the environment. According to the World Bank, plastic production has sharply increased over the last 70 years. In 1950, the world produced just two million tonnes of plastic – today it now produces over 450 million tonnes annually,[5] with sharp rises predicted in the coming years if no significant and drastic changes – both in policies and in production and consumption behavior – are made.[6] However, despite the many positive impacts which plastic has given to human life and society, much of it ends up as mismanaged waste. When plastic waste is mismanaged – either not recycled or adequately incinerated or landfilled under sound environmental practices – it becomes an environmental pollutant.[7]

To emphasize the negative impacts of plastic pollution, according to the United Nations:[8]

Plastics are the largest, most harmful and most persistent fraction of marine litter, accounting for at least 85 per cent of total marine waste Plastic packaging is the reason for the majority (36%) of plastic production. 46 per cent of plastic waste is landfilled, 22 per cent becomes litter, 17 per cent is incinerated and 15 per cent is collected for recycling, with less than 9 per cent actually recycled after losses.

[5] Hanna Ritchie et.al., *Plastic Pollution*, available at https://ourworldindata.org/plastic-pollution

[6] *See* Organisation of Economic Cooperation and Development (OECD), *Global plastic waste set to almost triple by 2060*, available at https://www.oecd.org/newsroom/global-plastic-waste-set-to-almost-triple-by-2060.htm.

[7] Hanna Ritchie et.al., *Plastic Pollution*.

[8] United Nations (UN), *Fast Facts – What is Plastic Pollution?*, available at https://www.un.org/sustainabledevelopment/blog/2023/08/explainer-what-is-plastic-pollution/.

To give an example of plastic pollutions negative effects, one of the ecosystems where impacts of plastics has been most documented is in the ocean and marine environments. Plastics are by far the majority of marine litter.[9] The World Bank estimates that 4.8 to 12.7 million tonnes of plastic enter the oceans annually, with 80 percent of this total coming from Asia.[10] Further projections see East Asia and the Pacific generating 602 million tonnes of waste per year by 2030 and 714 million tonnes by 2050.[11] The same is true with other regions and areas that are hotspots of plastic pollution: as consumption increases, so is the likelihood of plastic waste and pollution being generated, making it a truly global problem and crisis.

As noted above, several areas or regions around the world are considered as plastic pollution hotspots, or places where plastic waste management is of increased concern. The level of contribution to plastic marine litter by a country or locality depends on a number of factors.[12] Along with these factors, plastic pollution "hotspots" have been identified around the world.[13] Some of these regions notably include Southeast Asia, Latin America and the Caribbean, and the South Pacific.

Socio-economic aspects – or a country's level of development – appears to be one of the factors which affects levels of plastic pollution. According to the World Bank, rich countries tend to produce the most plastic waste per person,[14] whereas mismanaged waste tends to be much higher in low-to-middle-income countries,[15] even if plastic waste produced person is lower compared to higher income countries. This is because these countries – lower-income and developing economies – tend to have poorer waste management infrastructure.[16] This aligns and correlates well with barriers and challenges to waste management which many developing economies continue to face at increasing rates.[17]

Plastic waste mismanagement and pollution to the open environment is not the only significant impact of plastic pollution. A cursory analysis of these data shows that hotspot countries are also where more people are disproportionately impacted by marine plastic pollution. This makes the issue of marine plastic pollution not only a question of what the appropriate waste management policies and strategies are, but also more importantly as an issue with environmental justice implications.[18] In many developing countries, those already vulnerable and marginalized – women and children, indigenous peoples, farmers and fisher communities, to

[9] Ibid.

[10] World Bank Group, *Market Study for the Philippines: Plastics Circularity Opportunities and Barriers*, (2021), p. 12.

[11] Silpa Kaza, et., al., *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050* (Washington DC: International Bank for Reconstruction and Development/The World Bank, 2018), p 28, available at https://openknowledge.worldbank.org/handle/10986/30317.

[12] ORA, 2010 *cited in* Olha Krushelnytska, Solving Marine Pollution: Successful models to reduce wastewater, agricultural runoff, and marine litter (Washington Dc: World Bank 2018), available https://documents1.worldbank.org/curated/en/651521537901259717/pdf/130154-WP-PUBLIC-SolvingMarinePollution.pdf. These factors are: Geography; Environment; Infrastructure; Institutional capacity; Demographics; and, Economy.

[13] *See Socioeconomics effects on global hotspots of common debris items on land and the seafloor*, available at https://www.sciencedirect.com/science/article/abs/pii/S0959378021001394?via%3Dihub; and Ocean Conservancy, *Where are the plastic pollution hotspots?*, available at https://oceanconservancy.org/blog/2021/09/15/worlds-plastic-pollution-hotspots/.

[14] *See Plastic waste generation per capita,* available at https://ourworldindata.org/grapher/plastic-waste-per-capita, last accessed on 30 March 2024.

[15] *See Share of global mismanaged plastic waste,* available at https://ourworldindata.org/grapher/share-of-global-mismanaged-plastic-waste, last accessed on 30 March 2024.

[16] Hanna Ritchie et.al., *Plastic Pollution*.

[17] *See* discussion in Section 2.1.1 *Barriers and Challenges* below.

[18] *See See* Gregorio Rafael Bueta, *Cleaning-Up the Blue Economy: Intersections of Marine Pollution and Environmental Justice Towards Achieving Ocean Equity in Asia and the Pacific*, (ADBI), *Forthcoming.*

name a few – are doubly impacted by plastic pollution and waste mismanagement. This results in their worsening condition and state, making it even more difficult to escape their vulnerable state, and to address their other pressing socio-economic needs and concerns.

1.2 The Global Response: Recent Developments to Address Plastic Pollution

As one of the triple planetary crises, plastic pollution and waste management has gained considerable attention not only at the local/domestic level, but critically at the international stage. Pollution has been an issue many countries have been dealing with for decades, yet it is only recently that considerable efforts at the global level have progressed. In particular, plastic pollution and its impacts on human and planetary health have been put on the international spotlight.

Below is a brief discussion of some of the more recent international and regional developments which are helping shape global and local plastic policies and strategies. These give a glimpse of how national and local plastics policies are shaping up as influenced and affected by global developments.

1.2.1 International Developments

a) The Global Plastics Treaty

The on-going negotiations for the Global Plastics Treaty is one of the most significant developments on waste and plastic pollution at the international level in recent years. At the resumed fifth session of the United Nations Environment Assembly (UNEA), countries adopted UNEA Resolution 5/14 to commence work to develop a binding treaty to end global plastic pollution, with a view toward completing negotiations by 2024. An intergovernmental negotiating committee (INC) met in November 2022 to begin discussions on the content of this instrument, which should be based on a comprehensive approach that addresses the full life cycle of plastic, including its production, design, and disposal.[19]

Since then, 2 more INCs have taken place as negotiations push forward and global support and action increased. At the recently concluded INC-3 held in Nairobi, Kenya last November 2023, the zero-draft text of the treaty was discussed, and many expected a breakthrough,[20] especially with the momentum and increasing global awareness and efforts surrounding the plastic pollution crisis.

However, observers note that INC-3 did not meet its ambitious targets. Some organizations noted that the global community is not on track to meet the goals and targets set by the UNEA Resolution – there was failure to agree on rules of procedure (particularly voting), scope of the treaty (what plastic pollution really is), and intersessional work.[21] whereas others argues that "the influence of the global petrochemicals industry and plastic-producing

[19] UNEP, *Intergovernmental Negotiating Committee on Plastic Pollution*, available at https://www.unep.org/inc-plastic-pollution.

[20] *See* UNEP, *Report of the intergovernmental negotiating committee to develop an international legally binding instrument on plastic pollution, including in the marine environment, on the work of its third session*, (UNEP/PP/INC.3/5, 1 December 2023), available at https://wedocs.unep.org/bitstream/handle/20.500.11822/44760/INC3ReportE.pdf.

[21] Joan Marc Simon, *Global plastics treaty: the show must go on?*, 20 November 2023, available at https://zerowasteeurope.eu/2023/11/global-plastics-treaty-the-show-must-go-on/.

countries has frustrated meaningful progress towards agreeing a Global Plastics Treaty."[22] This same sentiment was echoed by another organization which said that low ambition countries have allowed "…fossil fuel interests to drive the negotiations towards a treaty that will absolutely, without question, make the plastic problem worse and accelerate runaway climate change."[23]

Industry and business groups had a somewhat similar, yet more optimistic take. For the World Economic Forum (WEF), there was a stalemate in the negotiations at INC-3 but it presents a unique opportunity to increase collaboration and engagement between the different countries to ensure they align their positions and interests.[24] The Business Coalition for a Global Plastics Treaty noted that although some topics described by the Coalition as "critical issues" were not discussed at INC-3, it reiterates that many Member States envisioned strong, legally binding provisions that would cover the whole life cycle of plastics. It encourages governments to conduct further consultations ahead of INC-4, at least informally, and underlines its own commitment to 'work[ing] alongside committed parties and observers in this next stage of developing an ambitious and effective Global Plastics Treaty'.[25]

b) The High Seas Treaty

Another recent and significant development is the so-called High Seas Treaty. The "Agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ agreement)" was adopted by the international community last June 2023, and it will represent the third implementing agreement to the United Nations Convention on the Law of the Sea (UNCLOS), the constitution for the ocean; building upon the other two provisions of the Convention (the other two implementing Agreements address Part XI of UNCLOS, and the conservation and management of straddling fish stocks and highly migratory fish stocks, known as the UN Fish Stocks Agreement).[26] It is considered by many as an important step, especially since UNCLOS has significant impacts on the protection and preservation of the marine environment.

The pact extends for the first time environmental protections to two-thirds of the ocean that lie beyond national jurisdictions and will allow for the creation of marine protected areas and the use of other so-called "area-based management tools" to more sustainably manage ocean resources.[27] The lack of protection in the high seas since it lies beyond national jurisdictions has left it in a "free-for-all" situation, often exploited and abused. This despite the scientific fact that oceans and waters are interconnected, and what happens in one region (like plastic pollution and marine litter) will inevitably affect the health and balance of the ocean ecosystem.

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[22] Environmental Investigation Agency (EIA), *Big Oil influence at UN talks thwarts progress towards reaching an effective Global Plastics Treaty,* 21 November 2023, available at https://eia-international.org/news/big-oil-influence-at-un-talks-thwarts-progress-towards-reaching-an-effective-global-plastics-treaty/.

[23] Greenpeace International, *UN INC3 ends in frustration as governments allow low ambition countries to derail Global Plastics Treaty*, 19 November 2023, available at https://www.greenpeace.org/international/press-release/63663/un-inc3-ends-in-frustration-as-governments-allow-low-ambition-countries-to-derail-global-plastics-treaty/.

[24] WEF, *INC-3: Here's what happened at the UN global plastics treaty talks,* (5 December 2023), available at https://www.weforum.org/agenda/2023/12/plastics-treaty-inc3-kenya/.

[25] Packaging Europe, *What did we learn from INC-3 in Nairobi?,* (22 November 2023), available at https://packagingeurope.com/news/what-did-we-learn-from-inc-3-in-nairobi/10646.article.

[26] OceanCare, *Relevance of the BBNJ Agreement for Plastic Pollution,* available at https://www.oceancare.org/en/stories_and_news/bbnj-and-plastic-pollution/.

[27] UNEP, *Marine biodiversity gets a lifeline with high seas treaty*, 20 June 2023, available at https://www.unep.org/news-and-stories/story/marine-biodiversity-gets-lifeline-high-seas-treaty.

One will observe that the BBNJ Agreement does not have any specific provisions on plastic pollution and other forms of marine litter. Although not directly related to plastic pollution and waste management, the BBNJ Agreement does have several relevant benefits and implications on these, among which are:[28]

- Provisions relevant for the prevention, reduction and control of plastic pollution of the marine environment and the remediation and removal of existing plastics, including abandoned, lost or otherwise discarded fishing gear (ALDFG);
- Environmental impact assessment (EIA) provisions that could have implications for the production of plastics, in particular since raw materials, such as oil and gas and microorganisms, are also derived from the ocean. This can help regulate and/or prevent the use of plastics in and release into the marine environment, improve waste management, and promote the remediation and removal of existing plastics, including clean-up operations and bioremediation; and,
- Provisions that promote effective and sustainable action to prevent plastic pollution, and also best environmental practices that respect biodiversity to avoid exacerbating harm in the remediation and removal of plastics.

c) The Basel Convention Plastics Waste Amendment

The Basel Convention is important for any discussion about waste and plastic pollution since it is currently the only multilateral environmental agreement (MEA) directly dealing with waste – albeit the transboundary movement and shipment of waste among countries. The overarching objective of the Basel Convention is to protect human health and the environment against the adverse effects of hazardous wastes. Parties to the Convention must ensure that transboundary movements of wastes are reduced to the minimum and consistent with environmentally sound and efficient management.

In recent years the Basel Convention has also focused its attention on plastics. The ubiquitous transboundary movement of plastic wastes and microplastics is becoming a major concern as their property of durability makes their particles remain for a long period of time—these account for around 10 percent of the total waste generated and constitutes approximately 90 percent of all trash floating on the ocean's surface, with 46,000 pieces of plastic per square mile.[29]

During the 14th Meeting of the Conference of the Parties to the Basel Convention in 2019, governments amended three annexes of the convention to include plastic waste in a legally-binding framework which will make global trade in plastic waste more transparent and better regulated, whilst also ensuring that its management is safer for human health and the environment.[30] The amendments become effective as of 1 January 2021 and it is up to each Party to take the necessary measures to transpose the new entries into national law.

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[28] OceanCare, *Relevance of the BBNJ Agreement for Plastic Pollution*.

[29] *See* Basel Convention Secretariat, *Plastic Wastes*, available at www.basel.int/Implementation/Plasticwastes/Overview/tabid/6068/Default.aspx.

[30] *See* Gregorio Rafael P. Bueta, *Waste trade in the Philippines: How local and global policy instruments can stop the tide of foreign waste dumping in the country*, (Greenpeace Philippines and EcoWaste Coalition, March 2020) available at https://www.greenpeace.org/philippines/publication/4208/waste-trade-and-the-philippines-how-local-and-global-policy-instruments-can-stop-the-tide-of-foreign-waste-dumping-in-the-country/.

1.2.2 Regional Initiatives and Responses

a) The Association of Southeast Asian Nations (ASEAN)

Many countries in Southeast Asia continue to be challenged by waste management issue brought about by developing economies and increasing populations. Equally alarming is that the region is at the forefront of the plastic waste crisis, with several members among the hotspots for sources of pollution. Thus, it comes as no surprise that the Association of Southeast Asian Nations (ASEAN) has placed addressing this issue at the top of the regional environmental agenda.

ASEAN Member States adopted two documents to guide regional and national action on marine litter: i) the *Bangkok Declaration on Combating Marine Debris in the ASEAN Region;* and ii) the *Regional Action Plan for Combating Marine Debris 2021-2025*. The General activities under the Regional Action Plan are expected to help build knowledge and capacities to address sea-based sources of marine plastic pollution. These include the development of a Guidebook for Common Methodologies for Assessment and Monitoring of Marine Litter; strengthening the ASEAN Regional Knowledge Network on Marine Plastics; and implementation of Regional Training Programs on Waste and Plastic Waste Management (among others).[31] In addition, to minimize leakage of sea-based sources of marine plastic pollution specifically, the Action Plan proposes the development of a Best Practice Manual for reducing, collecting and treating fisheries marine plastic. This is envisioned as guidance for ASEAN Member States seeking to develop waste management regulations for vessels and ports, as well as a compilation of successful examples of retrieval and marking of fishing gear, clean-up operations, and incentives for stakeholders.[32]

b) The European Union (EU)

The European community has been a strong voice pushing for improvements of waste management and strategies to address plastic pollution. This is reflected in the bloc's different policies and strategies. One example is the EU's plastics strategy which aims to transform the way plastic products are designed, produced, used, and recycled in the EU.[33] Adopted in 2018, it is part of the EU's circular economy action plan[34] and builds on existing measures to reduce plastic waste. Its objective is to:[35]

> "*…protect our environment and reduce marine litter, greenhouse gas emissions and our dependence on imported fossil fuels. It will support more sustainable and safer consumption and production patterns for plastics. The plastics strategy also aims to transform the way plastic products are designed, produced, used and recycled in the EU.*"

In support of the above objectives, actions and initiatives have been identified to encourage the participation of the private sector. Businesses are viewed as essential partners in

[31] ASEAN Secretariat, *ASEAN Regional Action Plan for Combating Marine Debris in the ASEAN Member States* (Jakarta: ASEAN Secretariat, 2021), p. 35, available at https://asean.org/book/asean-regional-action-plan-for-combating-marine-debris-in-the-asean-member-states-2021-2025-2/.
[32] Ibid. p. 25.
[33] European Commission, *Plastics Strategy*, available at https://environment.ec.europa.eu/strategy/plastics-strategy_en.
[34] *See* European Commission, *First circular economy action plan,* available at https://environment.ec.europa.eu/topics/circular-economy/first-circular-economy-action-plan_en.
[35] European Commission, *Plastics Strategy*.

improving waste management and supporting efforts at addressing plastic pollution. This includes taking on greater responsibility for waste of its products through extended producer responsibility (EPR) schemes. Some of the actions identified in the EU's strategy include:[36]

- Making recycling profitable for business;
- Curbing plastic waste;
- Driving innovation and investment; and,
- Spurring global change.

c) Latin America and the Caribbean

The Latin America and Caribbean region is another plastic pollution hotspot grappling with the plastic waste crisis. One contributing factor is increasing waste generation – by 2019, the Wider Caribbean Region (WCR) was generating approximately 12 million tonnes of waste each year, with less than 5% of this considered properly disposed of.[37] This mismanagement of solid waste has been further exacerbated by rapid urbanization, with serious consequences for the environmental health and economic development of the entire region.

To address these critical issues, a Regional Action Plan for Marine Litter for the WCR was developed in 2007, and updated in 2014. Twenty countries have signed the plan, which has been preliminarily implemented in Guyana, Barbados, and Saint Lucia.[38] This was followed by a Regional Waste Management Action Plan in 2018, aimed at helping "catalyze the development of sustainable integrated waste management systems throughout the region" by funding solid waste management systems, expanding solid waste management infrastructure and fostering partnerships among others.[39]

More recently and to support the Regional Action Plan, a Regional Marine Litter Management Strategy was developed in 2021.[40] The strategy identified regional priorities across four themes: Research and Monitoring; Governance; Communication; and, Capacity Building. Other activities include regional platforms to support improved management of priority pollutants (i.e., nutrients, wastewater, and marine litter), and the launch and implementation of Caribbean Clean Seas Campaign on Marine Litter and Plastics. These have provided valuable jump-off points for regional actions as negotiations for the Global Plastics Treaty got underway.

Recognizing the importance of partnerships and bringing together stakeholders to address marine and plastic pollution, another significant regional initiative is the Caribbean Node of the Global Partnership on Marine Litter and Plastic Pollution (GPML-Caribe).[41] It represents a partnership for national and regional organizations, governments, research, and technical

[36] *See* For a full list of actions and timelines, see https://circabc.europa.eu/ui/group/2203ac52-e11f-4a4f-82d6-a3a72eda77aa/library/915ed7a7-557e-43d1-aa5e-b050138a1de4/details?download=true.
[37] *See* S.M. Diez, et.,al, *Marine Pollution in the Caribbean: Not a Minute to Waste*, (Washington, D.C. : World Bank Group, 2019).
[38] UNEP and Caribbean Environment Program, *Regional Action Plan on Marine Litter Management (RAPMali) for the Wider Caribbean Region 2014 - CEP Technical Report*, (2014), p. 72, available at https://wedocs.unep.org/handle/20.500.11822/33364.
[39] UNEP, *Caribbean Waste Management Regional Action Plan, (2018)*, p. 5, available at https://gefcrew.org/carrcu/LBSSTAC5/Ref-Docs/Carib_WMS_%20Oct2018.pdf.
[40] The Caribbean Node of the Global Partnership on Marine Litter and Plastic Pollution (GPML Caribe) (2021) *Regional Marine Litter Management Strategy for the Wider Caribbean Region,* (2021), available at https://www.gefcrew.org/carrcu/Reports/RegionalMarineLitterManagementStrategy.pdf.
[41] *See* GPML-Caribe website at https://gpml-caribe.org/.

agencies and individuals, that work together to reduce the quantity and impact of marine litter in coastal zones of the WCR.

d) The Pacific Islands

The Pacific Islands are also at the forefront of the plastic pollution crisis. One contributing factor, similar to Latin America and the Caribbean, is the region's increasing population and the expansion of urban areas: by 2030, it is estimated that a third of the region's population will live in cities.[42] As such, waste management and sanitation infrastructure tend to concentrate in these centers, whereas changing lifestyles and cultural patterns and transboundary waste have also compounded the situation of waste management in the region.

One organization spearheading regional efforts on addressing plastic pollution is the South Pacific Regional Environment Program (SPREP). Fourteen Pacific Island nations[43] are members of the SPREP, which was established in 1993 and tasked with the protection and sustainable development of the region's ocean resources. SPREP spearheaded the development of the 2018 to 2025 Regional Action Plan on Marine Litter Management,[44] which identified implementation activities to reduce and control waste from various shipping and vessel operations, transboundary sources, and domestic generation, including waste from take-away food and beverage containers particularly emphasized.

Regional efforts and cooperation are also reflected in Pacific countries' support for the Global Plastics Treaty. As early as 2021, Pacific Island nations had already raised the need for a new internationally binding instrument in the *Pacific Regional Declaration on the Prevention of Marine Litter and Plastic Pollution and Its Impacts*.[45] In this statement, countries broadly noted the impact of plastic pollution on the rights of future generations, as they called for an agreement with financial and technical support mechanisms, and ambitious and forward-looking implementation measures.[46]

This section highlighted important global and regional developments related to addressing plastic pollution and overall waste management. As can be gleaned from the discussion above, international efforts such as the Global Plastics Treaty, the High Seas Treaty, and the Basel Plastic Waste Amendment have been complemented by regional efforts – all pointing to the increased awareness and understanding of the issue. These developments also point to the importance of effective strategies and policies, at the international and national level, to deal with plastic pollution. More importantly, it emphasizes the increasing urgency of taking action and coming up with the right and appropriate policy solutions to deal with this crisis.

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[42] World Economic Forum (WEF), *Why cities are key to sustainable development in the Pacific Islands*, (18 October 2022), available at https://www.weforum.org/agenda/2022/10/why-cities-key-development-pacific-islands/#:~:text=Rapid%20urbanization%20in%20the%20Pacific%20Islands&text=Nearly%20one%2Dquarter%20of%20Pacific,third%20of%20the%20region's%20population.

[43] These are: American Samoa, Mariana Islands, Cook Islands, Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu and Wallis and Futuna.

[44] SPREP, *Marine Litter – Pacific Regional Action Plan 2018-2025, (*Samoa: SPREP, 2018), available at https://kiribati-data.sprep.org/system/files/Pacific%2520Regional%2520Action%2520Plan%2520-%2520Marine%2520Litter.pdf.

[45] *Pacific Regional Declaration on the Prevention of Marine Litter and Plastic Pollution and its Impacts,* (2021), available at https://www.sprep.org/sites/default/files/documents/circulars/Cir21-113_SPREP%20Ministers%E2%80%99%20High-Level%20Talanoa%202021%20Declaration%20on%20Plastics.pdf.

[46] Ibid.

2. Survey of Plastic Policies and Strategies

The increased attention on plastic pollution and its impacts on human and environmental health has also resulted in an uptick of different policies, strategies, tools, and processes to address the issue. Governments, private sector, civil society, and other stakeholders have been increasingly exploring and implementing policies on plastic pollution as science and data continuously point to the alarming effects of mismanaged plastics on human and environmental health.

At this juncture of the report, it will be prudent to highlight that plastic policies and strategies vary among countries and jurisdictions. Different factors have to be considered in developing and implementing the right plastics laws and regulations, including those that may be voluntarily implemented by other stakeholders such as community organizations and the private sector. One study established that the strategies that are adopted by different countries to manage plastic waste are based on their economic, social, geographical, and environmental capabilities.[47]

Thus, it becomes essential to survey plastic waste management policies and strategies around the world in order to see what is effective and most appropriate in dealing with plastic waste management issues. In particular, this is important information for many developing countries at the forefront of the plastic waste crisis, who are at the early stages of developing strategies to deal with this issue.

2.1 An Overview of Plastic Management Strategies

As noted above, plastic management strategies vary and may differ across jurisdictions or under different conditions. One classification of strategies is through its implementation timeline, as there might be some "low hanging fruits" actions, whereas others may take more time and resources to be implemented. For example, a 2019 report from UNEP and the Institute for Global Environmental Strategies (IGES) identified strategic measures for the short, medium and long-term to address marine plastic pollution:[48]

- **Short term** – Mitigate plastic waste leakage into the environment, including by preventing plastic littering, improving plastic waste collection and transportation and improving plastic disposal sites;
- **Medium term** – Increase plastic waste recover and recycling, including by introducing plastic waste separation at source and using appropriate technologies for plastics waste treatment and energy recovery; and,
- **Long term** – Establish sustainable plastic production and consumer society, through eco-design and sustainable lifestyles.

These are further presented under five policy interventions, namely regulatory, economic, technology, data or information, and voluntary:[49]

[47] Sayaka Ono, et., al, *Towards Plastic Circularity: Current Practices in Plastic Waste Management in Japan and Sri Lanka,* **(***Sustainability* 2023, *15*(9), 7550), available at **https://doi.org/10.3390/su15097550.**

[48] UNEP and Institute for Global and Environmental Studies (IGES), *Strategies to Reduce Marine Plastic Pollution from Land-based Sources in Low and Middle Income Countries*, (2019), p. 13, available at https://wedocs.unep.org/bitstream/handle/20.500.11822/31555/Marine_Plastic_Pollution.pdf?sequence=1&isAllowed=y.

[49] Ibid.

Table 1: Policy Interventions for Plastic Strategies

Policy Interventions	Key Questions
Regulatory	Policies that address the issue of marine litter overtly, whether these specifically pertain to solid waste management, or to the adoption of more sustainable practices in general
Economic	Policies that prescribe fiscal incentives or disincentives, including tax or duty deductions or exemptions, penalties, levies and other charges.
Technology	Policies that support research and development of alternative products and new technology.
Data or Information	Policies that support the updating of relevant data, establishment of baselines, and studies on emerging issues.
Voluntary	For actions which are not obligatory, as where policy language is less prescriptive and more engaging.

Source: Adopted from Legal Guidance on Sea-Based Sources of Marine Litter in the Seas of East Asia, Regional Gap Analysis and Assessment 2021

Consistent with the above discussions and drawing from the European experience, a brief by the European Environment Agency (EEA) suggests three main pathways which can make the production and consumption of plastics more sustainable: smarter use of plastics, increased circularity, and more renewable materials.[50]

Going further into the specificities of an ideal intervention strategy for plastic waste management, some core obligations included in the negotiations for the Global Plastics Treaty also give a glimpse of different strategies, policies, and interventions – taken from Member State's views and submissions – that are being put on the table to address plastic pollution.[51] The options are "based on a comprehensive approach that addresses the full life cycle of plastics."[52] These include *inter alia*:

- Phasing out and/or reducing the supply of, demand for, and use of primary plastic polymers;
- Banning, phasing out, and/or reducing the use of problematic and avoidable plastic products;
- Banning, phasing out, and/or reducing the production, consumption, and use of chemicals and polymers of concern;
- Reducing microplastics;
- Strengthening waste management;
- Fostering design for circularity;
- Encouraging "reduce, reuse and repair" of plastic products and packaging;

[50] European Environment Agency, *Scaling up best practices can boost sustainability of plastics*, (20 February 2023), available at https://www.eea.europa.eu/en/newsroom/news/scaling-up-good-practices-can-boost-sustainability-of-plastics.
[51] Charlotte Mack-Heller, *5 Best Practices to Combat Ocean Plastic*, (15 May 2023), available at https://www.resonanceglobal.com/blog/best-practices-to-combat-ocean-plastic.
[52] Ibid.

- Improving the integrity of necessary plastics to make them safer and more durable for longer-use;
- Ensuring plastic products are easier to break down and recycle into something else that is usable;
- Promoting the use of safe and sustainable alternatives and substitutes; and,
- Eliminating the release and emission of plastics to water, soil, and air.

As a complement to these global and regional strategies, a recent study of different plastic management interventions and their environmental aspects identified six commonly used management techniques:[53]

- *Landfilling* – The most rudimentary technique of plastic waste disposal and contain a great deal of garbage and have been linked to a number of issues.
- *Recycling* – Generally, is the procedure through which plastic waste is re-extruded. Plastic waste is mostly recycled mechanically, which is one of the most cost-effective methods.
- *Pyrolisis* - A method for converting home and industrial PW to fuel by subjecting it to severe process conditions, most notably elevated temperature. It entails the degradation of polymeric plastic molecules with a high molecular weight into light gas and liquid hydrocarbons in the absence of oxygen to avoid the creation of oxygen-containing by-products, such as sulfur and carbon oxides, in a reactor devised to endure severe conditions.
- *Liquefaction* – Hydrothermal liquefaction has a prolonged history of being used to convert biomass, primarily of algal origin, to bio-oil. It entails the transformation of cellular material into valuable liquid fuel. The method has been adapted to absorb plastic waste and is particularly appealing since it allows for the recovery of plastic for reuse alongside liquid gasoline.
- *Road construction and Tar* – Tar is an organic compound with a variety of different structures and compositions. Tar is produced in significant amounts when plastic waste is co-gasified or co-pyrolyzed with other compounds such as heavy metals.
- *Concrete production* – Recent concrete research has emphasized the use of various ingredients, with a focus on lighter materials, as alternatives to natural aggregates in concrete. Plastic waste has the potential to be employed in the manufacture of concrete as an aggregate substitute.

In summary, the brief discussion above shows that considerations of plastic management strategies should factor in the time needed for implementation and execution – from short-term to long-term programs and actions –, as well as regulatory environments and economic and social conditions, along with technological innovation (such as using smart technology). Appropriate technologies and methods are also considered across different jurisdictions, reflecting the varying conditions and considerations different countries have to factor in.

[53] *See* S. Huang, et., al, *Plastic Waste Management Strategies and Their Environmental Aspects: A Scientometric Analysis and Comprehensive Review*, (Int. J. Environ. Res. Public Health 2022, 19, 4556), available at https://doi.org/10.3390/ijerph19084556.

2.1.1 Barriers and Challenges

Several studies have identified critical barriers and challenges faced by different stakeholders when dealing with plastic pollution. One study identified the following as common barriers and challenges in dealing with marine litter as a framework for analysis:[54]

- Legal and policy;
- Institutional;
- Capacity, Funding, and Resource;
- Implementation and Enforcement; and,
- Political, Societal, and Cultural.

The above common barriers and challenges point to legal and policy gaps which many countries face. Applying the above framework, a recent study on the East Asian Seas identified some gaps and barriers in addressing sea-based sources of marine litter in the region. The table below lists down legal and policy gaps and barriers in relation to the three objectives of mitigating waste leakage into the environment; increasing waste recovery and recycling; and, creating a sustainable plastic production and consumer society (Table 2).[55]

Table 2: Legal and Policy Gaps and Barriers

	Mitigate waste leakage into the environment	**Increase waste recovery and recycling**	**Create a sustainable plastic production and consumer society**
Barrier/Gap			
Legal and Policy	• Lack of a regional or internationally binding treaty on marine litter • Absence of treaty banning waste imports (particularly plastics) into the region, specifically ASEAN countries	• Absence of regional policy on waste recovery and recycling	• Need for a regional policy and strategy on sustainable consumption and production
Institutional	• Absence of a permanent regional body to consolidate efforts on marine litter • Limited and ad-hoc coordination between COBSEA countries (project-based)		
Capacity, Funding, and Resource	• Limited capacity of national government agencies (including local governments) to implement regional targets and programs	• Limited support to research and development, and new technology	

[54] This framework for analysis, using the gaps and barriers listed, was adopted from: UNEP and Coordinating Body on the Seas of East Asia (COBSEA), *Legal Guidance on Sea-based sources in Marine Litter in the Seas of East Asia: Regional Gap Analysis and Assessment 2021*, (2021), available at https://wedocs.unep.org/20.500.11822/37982; and UNEP and COBSEA, *Legal and Policy Guidance on Addressing Marine Litter in the Philippines: Gap Analysis and Needs Assessment,* (2021), available at https://wedocs.unep.org/handle/20.500.11822/37777.

[55] *See* UNEP and COBSEA, *Legal Guidance on Sea-based sources in Marine Litter in the Seas of East Asia: Regional Gap Analysis and Assessment 2021.*

	Mitigate waste leakage into the environment	Increase waste recovery and recycling	Create a sustainable plastic production and consumer society
Barrier/Gap			
Implementation and Enforcement	• Weak implementation and enforcement national waste management laws	• Lack of accessible and functional waste infrastructure, such as recycling facilities in majority of countries	• Limited research on regional state of marine litter • Lack of research to establish clear baselines in majority of countries
Political, Societal, and Cultural	• Impact of regional and national politics in the implementation regional action on marine litter	• Prevalence of throw-away/wasteful culture • Weak programs to shift consumer behavior	

Source: Author/Consultant

One study also elaborated on the capacities lacking in many developing countries when it comes to dealing with plastic pollution:[56]

- Policy and legislative capacity – the capacity gaps in preparing national plans, sector-based policies/strategies, local planning, etc.;
- Institutional capacity – the capacity to coordinate and implement through sectoral and hierarchal collaborations;
- Monitoring and reporting capacity – refers to identifying local targets and indicators, and the potential to collect data and maintain information systems;
- Human resource and leadership capacity – refers to the availability of both technical and managerial human resources;
- Financing capacity – refers to financing capacities for resource mobilization and strengthened public finance processes; and,
- Information and technological capacity – relate to information, knowledge sharing, technology, and innovation to accelerate implementation.

2.2 Survey of Select Countries Plastic Policies and Strategies

This present report surveyed and conducted desk research on the existing plastics policies and strategies in 26 countries from the following regions: East, Southeast, and South Asia; Central Asia; West Asia; South Pacific; Africa; Latin America and the Caribbean; and Europe. No specific criteria were used for the selection. Instead, the countries were chosen to entail a balanced representation of developed and developing economies, and also to highlight challenges across different states with varied local conditions and contexts. The selection was also based on public information found available.

In this report, laws, policies, strategies, and regulations are generally understood to be issuances, decrees, and enactments by either the Executive branch of government (i.e., policies, regulations, and strategies) or the Legislative branch (i.e., laws and statutes). Judicial issuances, or orders, directives, and rules of the courts have been excluded unless stated otherwise due to relevance or importance.

[56] *See* R. Sobir, *UNDESA – Review of capacity, needs, gaps, and priorities,* (2019), p. 34.

A detailed chart of the findings for each country is in **Annex A**.

Below is a chart summarizing the different laws, policies, and strategies in the select countries (Table 3).

Table 3: Summary of Country Laws, Policies, and Strategies (next page)

Country	National and Local Level	Sub-national legislation	National roadmap/strategy	Plastics regulation (Bags, SUPs)	Single-use plastic ban	Take-back/deposit return scheme	Levy/fee for plastic use	Taxes on plastic production and/or use	Extended producers responsibility program	Recycling mandates and schemes	Use of Recycled content	Eco-design/clean production/bio-d packaging	Labelling	Waste-to-energy	Incentives
Albania	✓		✓												
Bahamas				✓	✓							✓			
Belize				✓	✓	✓						✓			
Brazil	✓	✓	✓	✓	✓	✓				✓		✓	✓		
China	✓	✓	✓	✓	✓							✓			
Colombia	✓		✓	✓	✓			✓	✓	✓					
Comoros				✓											
Fiji	✓		✓	✓	✓		✓		✓	✓					
India				✓	✓	✓			✓					✓	
Indonesia	✓		✓	✓	✓	✓			✓						✓
Jordan	✓		✓	✓	✓							✓			
Kenya	✓		✓	✓					✓			✓			
Kyrgyzstan	✓			✓	✓										
Lebanon			✓												
Lesotho				✓											
Malaysia	✓		✓	✓	✓				✓	✓					
Maldives	✓				✓		✓	✓	✓						✓
North Macedonia	✓		✓	✓	✓		✓		✓			✓			
Philippines	✓	✓	✓	✓	✓	✓	✓		✓				✓	✓	✓
Peru		✓		✓	✓		✓	✓			✓	✓			
Samoa	✓		✓	✓	✓										
Serbia	✓	✓	✓	✓		✓			✓						
South Africa	✓		✓	✓					✓						
Uruguay	✓			✓	✓				✓		✓	✓			
Uzbekistan	✓			✓		✓				✓					
Vietnam	✓		✓	✓	✓				✓						

✓ = enacted/in effect

✓ = planned/pipeline

✓ = private sector led

✓ = local government/sub-national level only

Source: Author/Consultant

2.2.1 Common Policies and Strategies

Based on the research and the above chart, the most common plastics-related policies and strategies identified in this report were: i) national strategy or roadmap; ii) plastics regulation; iii) single-use plastics (SUP) bans; iv) EPR schemes and programs; and, v) eco-design, clean production and biodegradable packaging.

- *National strategy or roadmap*

The majority of surveyed countries have a national strategy or roadmap related to or with relevance to plastics. Common among these types of plans is the topic of addressing marine pollution in the form of action plans or strategies that target marine litter. These can be found in countries such as the Philippines, Malaysia, Vietnam, Brazil, and Fiji – all of which are islands and/or coastal states. This reflects the importance placed by these regional strategies and action plans on marine pollution particularly from plastics, since many of the countries are considered as plastic pollution hotspots, or are bearing the brunt of plastic pollution impacts.

Other countries have strategies and plans that directly deal with and tackle plastics. The concept of sustainable consumption and production[57] has recently been identified as one important aspect of addressing waste and plastic pollution issues and moving towards a circular economy. It has been pushed for in different countries as a way to comprehensively deal with waste management with both upstream (i.e., reduction in production and use of raw or virgin materials) and downstream measures (i.e., recycling and reuse methodologies). Examples of these can be found in Lebanon, Kyrgyzstan, the Philippines, and Vietnam. These countries have sustainable consumption and production action plans which target plastic production and use among other products and aspects of waste management.

Dealing with plastics can also be through other types of national plans and strategies. For example, Albania has a National Integrated Waste Management Plan from 2020 – 2025, similar to Serbia's Waste Reduction Plan, which prioritize dealing with plastic pollution. Another common type of strategy are national development plans, such as those in Uzbekistan, Malaysia, and the Philippines, which have targets or provisions related to waste management and plastics. To illustrate, the Philippines' previous national development plan 2017 -2022 provided for a national waste diversion target of 80% within the period of the said plan.

Climate action and carbon reduction plans have also included targets to reduce plastic consumption and pollution. This is a recognized intersection between the issue of climate change and plastic pollution, given that plastics are derived from fossil fuels; and the continued production of plastics which requires fossil fuels directly contributes to increased carbon emissions and to climate change. An example of this type of plan is China's carbon emission reduction plan, that has provisions on types of plastic packaging and its production and use among its action items to address climate change.

In a similar manner, trade measures have also been used to deal with plastic pollution. Of particular note is the shipment and inter-country movement of waste, under the ambit of the Basel Convention. Although the convention provides for safeguards (such as prior informed consent)

[57] UNEP, *Sustainable Consumption and Production Policies*, available at https://www.unep.org/explore-topics/resource-efficiency/what-we-do/sustainable-consumption-and-production-policies#:~:text=Sustainable%20consumption%20and%20production%20refers,the%20service%20or%20product%20so.

and sanctions to ensure the protection of environmental and human health, risks and challenges remain especially for developing countries with poor or inadequate waste management systems seeming reliant on the economic benefits of waste trade.[58] As a response to this issue and to curb the potential risks, China instituted some years ago a National Sword Policy preventing the importation of waste products, including those recyclables such as plastics, into the country; while other countries like Belize and Samoa – smaller countries but which have seen the dangers of waste trade – have also placed trade restrictions on plastics to prevent waste pollution – notably two nations which are heavily reliant on imports.

[58] *See* Gregorio Rafael P. Bueta, *Waste trade in the Philippines;* and, Gregorio Rafael P. Bueta, *Waste Trade in Southeast Asia: Legal Justifications for Regional Action,* (EcoWaste Coalition July 2021), available at https://ipen.org/sites/default/files/documents/waste_trade_in_asean-final_revised.pdf.

Country Examples on National Strategy or Roadmap: Malaysia and Vietnam

Malaysia and Vietnam's national plans related to plastics have some of the most comprehensive and wide-ranging targets and goals. This indicates the importance of looking at the issue of plastic waste management from a broader perspective, encompassing different aspects of society, governance, and institutions.

Vietnam's National Action Plan on Sustainable Consumption and Production (2021-2030)

- Specific objectives by 2030 are set up in the Plan, which include:
  1) Effectively improve and implement legal policies on sustainable consumption and production;
  2) A 7 – 10% decrease in resources and materials used by major production sectors such as textile, steel, plastic, chemical, cement, alcohol and beer, beverage, paper, seafood processing and some other production sectors; 100% of industrial parks, clusters, trade villages organize communication to raise awareness on sustainable consumption and production;
  3) Disseminate, replicate models of cleaner production, sustainable consumption and production;
  4) 100% of provinces and cities directly under the Center organize communication, to raise awareness on sustainable lifestyles and consumption; and,
  5) 100% of supermarkets, commercial centers use eco-friendly packaging which gradually replace single-use, non-degradable plastic items.

Malaysia's National Marine Litter Policy and Action Plan 2021-2030

a. Policy adoption and implementation
   i. Phaseout of bioplastics by 2023
   ii. Reduction of unnecessary SUPs in packaging by 2023
   iii. Ban most common or damaging types of plastic marine litter like microbeads, fish-egg-sized nurdles by 2028
b. Deployment of technologies, innovation, and capacity building
c. Improve monitoring and data collection on marine litter
d. CEPA (Communication, Education, and Public Awareness) Outreach and Engagement
e. Adopting whole-of-nation and multi-stakeholders approach in harmonizing cross-cutting objectives
   i. Establish dedicated recycling facility that will process and recycle plastic resins. Facilities must be enabled to buy this material with help from EPR monies by 2023
   ii. Create Plastic-Free Islands, targeting the marine parks and other tourist-islands in Malaysia by 2024

- *Plastics regulation*

It comes as no surprise perhaps that based on the data gathered by this Report, plastics regulation – generally dealing with the production, use, and disposal of plastics – is by far the most popular law and policy on plastics: 23 out of 26 countries surveyed have a specific law or policy on plastics, albeit with varying focus and specific targets, some of which will be highlighted below.

Some countries began to tackle the issue of plastic waste management quite earlier than recent emergent cases. Early adopters include South Africa, with policies on plastics in place as early as 2002 and 2003 – more specifically on plastic carrier bags used in retail stores and

establishments – as compared to Kyrgyzstan, with its 2023 law providing for a nationwide plastic bag ban by 2027.

In line with these early adopters, most countries plastics regulation are targeting SUPs, carrier bags, and containers. This can be expected since these are also the most commonly produced and used kinds of plastics, and no wonder that different regions are having similar approaches to tackle this sort of materials. Countries like Uruguay, Columbia, and Peru are Latin American countries with specific regulations on these products, whereas in Europe, North Macedonia and Serbia also have similar targets, which include rules for imported materials and collection schemes for producers and sellers, analogous to EPR regulation. In the Caribbean, the Bahamas has specific regulation focusing on polystyrene, along with a mandate to use biodegradable materials. In Asia, countries like Malaysia and Vietnam have included the regulation of microplastics, microbeads, and nurdles in its plastics regulation and strategies.

Some countries provide for regulation or strategies which cover and/or include other actions or interventions, in the absence of any specific law or rule on plastics. An example is inclusion of these types of regulation in waste reduction action plans. Like in Indonesia's National Plastic Waste Reductions Strategic Actions document, packaging regulation and a SUP ban have been included among the action points. The law further mandates the implementation of mandatory EPR programs for plastic products.

Enforcement mandates can also be an aspect of plastics regulation. For example, in Jordan its regulations on shopping bags have included increased inspections of production facilities and retail shops. It also imposes a ban on the use of non-biodegradable bags – which can be considered as a ban on SUPs.

Country Example on Plastics Regulation: China

China's ***Excessive Product Packaging Restrictions Law*** may be a good example of plastics regulation which targets new sources of plastic waste owing to changes in consumer behavior and practices. Some of the provisions of the law relate to:

- Restriction of excessive material in packaged food and cosmetic products;
- Strict bans on packaging material for festive foods; and,
- Regulation of packaging for fresh foods, health-focused foods, takeaway foods, and foods purchased via e-commerce.

It is worth noting that not a lot of countries have banned these items specifically. The provision on the packaging of goods purchased via e-commerce is especially relevant as more consumers purchase online now. Cosmetic products' packaging also needs to be specifically addressed since cosmetics often come with thick, excessive packaging, and given that they are packed differently (in comparison to usual commodities).

- *SUP bans*

As noted above, SUPs have been identified as one of the most problematic types of plastic waste, so that several countries have taken their plastics regulation a step further and have banned the use of particular types of SUPs at the national level. To emphasize this point and as an example, almost all countries in Asia Pacific that were surveyed by this report are following this.

SUP bans are oftentimes imposed alongside other laws and regulations. This is especially the case if the legislation is in more advanced stages of development, where the measures can then come in the form of a package or suite of policies tackling various aspects of plastic waste management – from regulations to bans, among others. For example, the SUP ban in Maldives includes provisions on tariffs, taxes, and subsidies, and it further mandates EPR schemes for plastic products. In addition, it includes awareness raising and education campaigns to inform the public of the phase-out plans for SUPs.

Another example is in Kyrgyzstan, where its plastic bag ban law targets carrier bags in tourist attractions and in protected natural areas – an example of a tie-up with protected areas management laws and regulations. In Jordan, its SUP ban specifically targets non-biodegradable bags, alongside increased inspection and monitoring for facilities and establishment. This is an example of a SUP ban being implemented alongside the promotion of biodegradable bags and materials.

Country Example on SUP Bans: Vietnam and Peru

Vietnam and Peru are two countries with ambitious and progressive targets in relation to SUP bans.

In Vietnam, its relevant decree targets restricting production and import of SUP products, non-biodegradable plastic packaging and products and goods containing micro plastics by 2025 and 2026 *(Vietnam Decree No. 8/2022).*

In Peru, deadlines to accomplish full prohibition of SUPs and containers have been provided. By December 2021, every commercial establishment should progressively replace the delivery of non-reusable polymeric-based bags with reusable bags that do not generate pollution. Furthermore, the establishment is obliged to deliver for monetary consideration, the amount of plastic bags the consumer needs, informing them explicitly before they charge for it.

- *EPR schemes and programs*

EPR schemes have been increasing in popularity among policies makers and other stakeholders. Aside from the recognition and acknowledgement that producers and manufacturers should have greater responsibility for the end-of-life of the products that they make and market, it also allows for greater opportunities for cooperation and collaboration between the private sector, the government, and consumers alike. In several countries, it has also proven to be an opportunity where collaboration with community organizations and the informal waste sector can be facilitated – resulting in additional socio-economic benefits aside from improved waste management.

Provisions on EPR can either be in a specific law or part of a wider package or list of measures on plastic waste management. For example, countries like the Philippines have specific EPR laws (which amended the country's primary waste management law to include EPR mandates), whereas other countries have incorporated EPR provisions into other laws, or specifically within broader plastics regulations. For example, India's regulation on plastics includes collection and take back mechanisms, an online portal for registration of stakeholders, and co-processing of multi-layered plastic packaging in waste-to-energy facilities by obliged enterprises.

EPR provisions can also be part of marine litter management strategies. This is particularly relevant for archipelagic and coastal states, many of which have to deal with marine pollution from land and/or sea-based sources. For example, in Malaysia, Vietnam, and the Philippines, EPR provisions have been included as strategies to implement its action plans to address marine litter. Oceans policies – or plans which tackle wider ocean-related issues and challenges – have also included mandates for EPR. In the Pacific, where several countries have enacted an oceans policy, countries such as Fiji and Samoa have made reference to EPR schemes as one of the measures to protect its oceans and waters.

Country Example on EPR: Brazil

Brazil's new EPR law (Decree No. 11413, effective April 2023) is innovative and can be an example of a comprehensive measure. It employs a multi-stakeholder approach or gets all stakeholders to participate, which is imperative to any successful EPR system. Some of its measures include:

- Comprehensive legal framework regulating reverse logistics systems (aka take-back systems) for products and packaging in Brazil;
- Establishment of reverse logistics systems for products and packaging, either through collective models (where multiple companies collaborate, similar to European Producer Responsibility Organisations or PRO) or individual models (where companies operate independently). The decree mandates the establishment of reverse logistics systems for products and packaging to ensure that they are collected, processed, and reintegrated into the production process after reaching the end of their useful life; and,
- Introduces three (3) types of certificates for proving compliance with the reverse logistics targets:
    a. Reverse Logistics Certificate;
    b. Environmental Compensation Certificate; and,
    c. Certificate of Credit for Future Mass.

- *Eco-design, clean production, and biodegradable packaging*

Upstream measures – those that concern production, manufacturing, and aspects of the product life cycle before it is put out on the market – is a critical component of plastic waste management. Increasing production which leads to increased consumption results in increased waste, further straining already challenged waste management systems. This is of critical importance especially for developing countries and those considered as plastic hot spots.

In response to this and to promote more upstream policies, several countries have also instituted measures related to the design of and materials used in plastic products. For example, China has issued national regulations regarding the thickness of shopping bags – quite common across countries where this type of measure is present. In Jordan, the country has banned the production and use of non-biodegradable plastic bags, with the expectation that it will help spur the production and use of biodegradable alternatives. In Uruguay, its laws exempt from the scope of bans and prohibitions plastic bags that have been designed specifically to be re-used several times. This measure, though not a ban or prohibition on the use of plastic bags, helps in reducing plastic waste which leaks into the open environment through reuse.

Some countries have specifically pushed for and mandated the use of biodegradable materials. In North Macedonia, its regulations call for the use of biodegradable materials in reusable packaging and point out that oxo-biodegradable materials are not to be considered as biodegradable. Other countries with similar policies, albeit at varying degrees and specifications, include Kenya, Peru, Bahamas, and Belize – an indication that upstream policies are gaining traction and recognition as an important component of plastic waste management.

Country Example on Eco-design, Clean Production, and Biodegradable Packaging: Vietnam

Vietnam's *Roadmap for Control of Manufacture and Import of SUPs* (Decree No. 8/2022) provides for some examples of comprehensive and specific measures on upstream measures:

- On and after January 1, 2026, the manufacture and import of poorly degradable plastic bags of 50cm x 50cm or smaller and 50μm (micrometer) thick or less shall be prohibited. However, this excludes cases where the bags are intended for export or packaging of other good;
- Business entities that manufacture or import single-use plastic products and/or poorly degradable plastic packaging materials shall implement the recycling and treatment obligation under the Extended Producer Responsibility (EPR) scheme as stipulated in the Decree; and,
- On and after December 31, 2030, the manufacture and import of the following products shall be prohibited:
    - Single-use plastic products (excluding Vietnam Green Label certified products)
    - Poorly degradable plastic packaging materials (including poorly degradable plastic bags, and plastic foam containers for food packing)
    - Products containing microplastics (excluding cases where they are intended for export or packaging of other goods).

2.2.2 Observations

The previous section provided a glimpse of different plastic waste management strategies that are being employed across the world. This again points to the importance being placed by policymakers and different stakeholders on the plastic waste crisis as one of the triple planetary crises the global community faces. It also shows how government policies can help shape action on this issue.

This section will discuss and present several observations against the different plastic policies and strategies surveyed by this report.

1. *Most countries have in place some national strategy or policy in relation to plastics policies – but few have specific or stand-alone policies on plastics only*

It is worth noting that majority of countries have enacted at least one national policy or strategy touching upon aspects of plastic waste management and strategies. These plans deal with marine pollution, sustainable consumption and production, waste trade, and even on carbon emissions and climate targets. However, only a few countries have specific policies which implement or institute plastic waste management strategies or deal with plastic pollution per se (and not just as part of overall waste management).

Although it is a positive development, this may be critical because oftentimes the issue of plastic waste management is diluted by either other waste streams or overarching waste management strategies. Experts have stated that dealing with the plastic pollution issue requires

a specific and targeted approach, and inter alia mention as core reasons the pervasive and varied uses of plastics, the need for interventions at all stages of the life cycle of the plastic product, and the dangers and risks posed by improper management (be it through recycling or final disposal) on environmental, human, and overall planetary health.

The issue is further amplified as most plastic pollution hotspots are in developing countries who are already challenged and overburdened with waste management challenges, in addition to other equally critical social and developmental issues – poverty alleviation, health care, and basic education, to name a few. The presence of a specific policy on plastic waste management can help effectively and efficiently use scarce resources (i.e., human capital and financial) in such scenarios, whereas it can also assist in identifying the right tailor-fit solutions attuned to the local contexts.

2. *Most policies seek to regulate or ban plastic use, particularly SUPs*

As noted above, the most popular type of policy or strategy among the surveyed countries is the regulation and/or ban of plastics, in particular of SUPs. The regulations vary between countries – from listing down when and where plastics can be used, to specifications on the composition of plastic bags, or on its thickness or if biodegradable materials are required. This reflects the growing awareness and concern of countries around the world on the impacts of plastic use and waste management. This also aligns with current global trends and developments such as the on-going negotiations for the Global Treaty on Plastics. In the said negotiations, dealing with the most problematic types of plastics, such as SUPs, are on top of the mandatory policies wish list of many stakeholders.

It is also interesting to note that most countries in Asia Pacific and in Latin America and the Caribbean have SUP bans, either under implementation or in the pipeline. Many countries in this region are considered plastic pollution hot spots, or major sources of mismanaged plastic waste. SUP bans have been seen by governments as an effective policy intervention to reduce the amount of plastic waste which leaks into the open environment. It is a popular and oftentimes easy to enact and implement upstream measure to reduce the potential amount of plastic waste which waste management systems may need to cope with.

However, in some cases the bans are usually not absolute and certain types and uses of SUPs are generally allowed. For example, the use of plastic bags for wet produce and fresh products is often considered as an exception to the prohibition. In some cases, continued SUP use is allowed if there is an available recycling program, or an EPR scheme. Furthermore in some cases, bans are contingent on the presence of viable alternatives to the SUP. Thus, although plastic regulation and bans are quite common, its specific provisions, or mode of implementation varies between countries.

3. *EPR is gaining popularity among countries, but implementation levels and specifics vary*

Another policy intervention or strategy that is gaining popularity is EPR. Most of the surveyed countries have very nascent EPR laws and are in the early stages of implementation. As noted above, this reflects the demand from both governments and stakeholders for greater action and accountability from the private sector and businesses – those who produce, manufacture, and sell plastic products. Many have linked this to the polluter pays principle which broadly holds those responsible for the pollution (in this case that of plastic waste) accountable and liable for the damage or impacts it has caused. This has been expanded to also mean responsibility for a product which is a potential pollutant, or one that can be expected to cause

harm to the environment because of the way it is produced, sold, used, and disposed of. Therefore, taking guidance from the polluter pays principle, EPR makes it the responsibility of businesses which manufacture, sell, and use products like plastics to ensure that the said product does not cause harm to the environment and to peoples' health.

EPR also emphasizes that governments should not be left alone to deal with plastic waste management. In many jurisdictions – like those in the surveyed countries – waste management is the primary responsibility of government (in most cases of local or sub-national government units). With the myriad of other issues and social services which government has to address and provide, waste management often takes a backseat and is not prioritized. Thus through EPR, critical stakeholders like the private sector share in the government's responsibility on waste management. This also echoes calls for a whole-of-society approach, with businesses covering areas of financing, investment in infrastructure, and implementation and execution of EPR schemes and programs; governments enacting the necessary enabling policies and ensuring a conducive, fair, and incentivized business environment; and the public to comply with laws and support EPR programs, and to agree to cultural and societal changes which may be effected because of EPR.

Many of these EPR laws in the surveyed countries are in the early stages of implementation, particularly in majority of the developing countries. Levels of compliance and specifics of the system vary and are in early stages of development, so despite its growing popularity and documented effectiveness in several developed countries, it remains to be seen if EPR can take off and become one of the tools to allow developing countries to deal with the plastic waste crisis.

4. *Majority of strategies are new and/or in the early stages of implementation*

As with EPR discussed above, one important observation is that majority of laws, strategies and policies are either new or at nascent stages of implementation. Several countries have enacted or instituted plastic specific laws and rules only in the past decade, with very few regulations before 2010. Majority have been enacted in the last 5 years, especially in the developing countries surveyed in the report. Moreover, laws which relate to upstream measures (e.g., clean production, eco-design, and use of biodegradable materials), are even newer or in early stages of development.

The developments above reflect and coincide with the increasing global awareness to the risks and threats of plastic use and pollution across the globe. With increasing awareness comes increased public clamor for government action, thus leading to the development of laws and policies which tackle the issue. This trend is further evidenced by international developments such as the Global Plastic Treaty, the Basel Convention Plastics Amendment, and also by the numerous laws and strategies surveyed by this report from different regions of the world.

One impact of law and policies being in the early stages is the fact that implementation and execution has just begun, at the same time that plastic use and pollution continues to grow and rise. All these are happening alongside other ever-increasing strains on the environment such as biodiversity loss and climate change, along with other global social and development issues and goals. The other components of the triple planetary crisis also require considerable amount of effort and resources to stop the continued loss of ecosystems, and to adapt to or mitigate climate impacts. On the economic front, geopolitical tensions and the 2019 Coronavirus pandemic recovery have also made focusing on the economy a priority.

The challenge therefore is whether or not these nascent interventions on plastic waste management can keep up with this situation – put differently, how can the plastic waste crisis rise above the noise and be placed on top of national and international policymaking agendas? More importantly and critically, a further challenge is if these young policies can be effectively implemented with already strained and limited government resources.

5. *There are few countries with policies on upstream measures – which may make the other policies ineffective*

A further critical observation is that there are very few policies among the countries surveyed with measures targeting upstream stages of the plastic chain.[59] Most of the policies, including those already enforced or under implementation, focus on the downstream aspect, or when the plastic is already used and discarded, and considered as waste. In particular, the following upstream policies and strategies have scarcely appeared in the surveyed countries: i) use of recycled content; ii) recycling mandates and targets; iii) taxes on plastic production/use; iv) incentives; and v) labelling requirements.

The risk is that with the absence or lack of upstream measures, other strategies and interventions may turn out to be ineffective in dealing with plastic waste. Upstream measures are critical for a holistic approach to plastic waste management. For example, the absence of mandates to use recycled content and recycling targets – and taxes on its use – means that virgin materials and plastics will continue to be used, which leads to the continuous strain on nature and natural resources.[60] This also increases the risk of more plastic waste leaking into the open environment due to lack of adequate infrastructure and waste management systems, especially true for developing countries. As another example, the absence of standardized labelling requirements means recycling cannot be done efficiently and effectively, both by the consuming public and those engaged in waste management and the implementation of EPR programs. Therefore, even if there is an EPR or a mandatory recycling law, its implementation will be difficult in the absence of proper labels which will make operations streamlined, uniform, and effective.

3. Best Practices in Plastic Waste Management

The previous section discussed different plastic waste management laws, policies, and strategies in select countries around the world. This presented the legal frameworks used by different governments to manage plastic waste and to deal with plastic pollution. In general, laws and rules on plastic waste management are present – reflecting the global concern and attention to this issue. Though specific interventions and modalities vary per country, each country analyzed has at the very least one strategy in place in relation to plastics.

This section will then present and discuss some best practices in plastic waste management from around the world. These interventions were identified based on research conducted for this Report, and do not necessarily result or are derived from the laws and policies

[59] According to the Ellen Macarthur Foundation (EMF), upstream measures, or what they refer to as *upstream innovation*, is about tracing a problem back to its root cause and tackling it there. It means that rather than working out how to deal with a pile of waste, we prevent it from being created in the first place. *See* https://www.ellenmacarthurfoundation.org/upstream-innovation/overview.

[60] This situation – of continued use of virgin materials for new plastics – is also a climate issue since plastics are derived from fossil fuels and therefore its use contributes to greenhouse gas emissions. *See for example* World Wide Fund for Nature Australia, *Plastic Waste and Climate Change – What's the Connection*, (10 July 2023), available at https://wwf.org.au/blogs/plastic-waste-and-climate-change-what-is-the-connection/.

discussed in the previous section. However, in some cases and in specific countries which were part of the Report, the laws may have contributed to the success of the identified cases.

In summary, the best practices identified by this report are the following (Table 4):

Table 4: Summary of Best Practices

Best Practice	Key Considerations/Elements
Developing appropriate laws and policies	• Overall legal and institutional framework, policy or strategy • Specific enabling legislation • Guidance for actors and different stakeholders
Community involvement	• Mechanisms to allow for community participation and involvement • Engagement at the community and grassroots level, including with local/sub-national government units • Considerations for environmental justice and issues of vulnerable and marginalized members of society
Broad stakeholder participation	• Presence of an effective mechanism or fora to allow for participation and involvement of all concerned stakeholders • Sufficient identification of all stakeholders concerned • Adequate and effective means of communication, cooperation, and collaboration
Data-driven approaches	• Clear data collection and collation methodologies • Transparent, accessible, and understandable data widely available to the public • Data which support and is used in decision and policy making processes
Financing options	• Identified sources of financing to implement policy interventions, including appropriate enabling policies • Clear processes and procedures for investment and financing options

Source: Author/Consultant

3.1 Summary of best practices

3.1.1 Developing Appropriate Laws and Policies

As the previous section of this report points out, having the right laws and policies in place is critical in ensuring the right and effective strategies and interventions on plastic waste management. Legal frameworks and mandates can both ensure compliance with regulations, and at the same time drive innovation and broad public participation and support to address critical issues such as plastic pollution.

One aspect where having the right policies and strategies in place has proven effective is as regards ***circular economy (CE) policies***. CE can provide the overarching framework and guidance to steer policies and interventions towards the common goal of addressing plastic pollution and improving overall waste management. It can help effectively manage limited and scarce resources, especially in developing countries, many of which are plastic pollution hotspots.

Several countries have been identified as leaders in instituting circular economy policies.[61] Some of these countries are France, the Netherlands, Spain, Portugal, and Chile. In France, the government has pushed for a circular, solidarity-based, and social economy. It has also enacted a 2018 roadmap for circular economy,[62] and the 2015 energy transition law for green growth. Additionally France enacted a law against squandering in a circular economy, also known as the Anti-waste Law of 2020, which aims to eliminate waste and pollution from the design stage and transform the system of production, distribution, and consumption from a linear to a circular economic model.[63] The law also pioneered on policies and mandates banning the destruction of unsold non-food products, and mandatory repairability of electronic and electric products (or what some would refer to as the Right to Repair concept).

The Netherlands has an ambitious project to become a country 100% based on circular economy by 2050 under its circular economy plan,[64] with a series of transition agendas approved in 2018 focused on 5 sectors, whereas Spain[65] and Portugal[66] have likewise adopted and are implementing circular economy policies and strategies.

In another part of the globe, Chile's circular economy roadmap has a vision of a regenerative, fair, and participatory circular economy and is underpinned by goals to create jobs, reduce waste, increase recycling and material productivity, and recover illegal dump sites.[67] The detailed action plan includes upstream and downstream activities to create a robust circular economy innovation system, make circular practices the norm, ensure the regulatory framework supports circularity, and adapt to Chile's sixteen regions.[68]

Laws at the national level need to be translated – and oftentimes implemented – through local governments (or sub-national governments). ***Sub-national approaches*** have also proven to be critical components of developing laws and policies on plastic waste management. City action plans are effective means of cascading national and global policies to local levels, for a more direct and effective implementation.[69] For example, UN Habitat and WWF developed a template city action plan which covers plastic waste prevention and collection, plastic reuse and recycling and other focus areas, to be tailor-fit to these local conditions.[70]

Both national and local/sub-national government units rely on both global and local knowledge and best practices to craft and implement the most appropriate policies and interventions. Thus, ***guidance documents*** that help in developing and crafting national and local level policies are also critical, as they breakdown global approaches to local scenarios, ensuring

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[61] *See* Construcia, *Which countries are leading the change in circular economy?*, (30 September 2020), available at https://www.construcia.com/en/noticias/which-countries-are-leading-the-change-in-circular-economy/#:~:text=new%20Circular%20Economy%20Action%20Plan.

[62] EU, *Circular economy roadmap of France,* available at https://circulareconomy.europa.eu/platform/en/strategies/circular-economy-roadmap-france-50-measures-100-circular-economy.

[63] *See* EMF, *France's Anti-waste and circular economy law,* (12 September 2022), available at https://www.ellenmacarthurfoundation.org/circular-examples/frances-anti-waste-and-circular-economy-law.

[64] *See* https://www.icex.es/icex/es/navegacion-principal/todos-nuestros-servicios/informacion-de-mercados/paises/navegacion-principal/noticias/paises-bajos-economia-circular-new2020854939.html?idPais=NL.

[65] *See* https://www.construcia.com/en/noticias/moving-towards-circular-economy-and-zero-waste/.

[66] *See Açao Plan for a Circular Economy in Portugal* 2017-2020.

[67] EMF, *Chiles' Circular Economy Roadmap: collaboration for a shared action plan*, (12 September 2022), available at https://www.ellenmacarthurfoundation.org/circular-examples/chiles-circular-economy-roadmap.

[68] Ibid.

[69] *See for example* WWF, *City action plans,* (28 July 2023), available at https://plasticsmartcities.org/city-action-plan/.

[70] For a copy of the template, see https://unhabitat.org/sites/default/files/2023-05/City_Action_Plan_Template_June_2022.pdf.

that best practices and effective strategies from around the world are replicated and cascaded to countries which need it the most. One example is the *National Guidance on Identifying Plastic Pollution Hotspots*,[71] which helps identify data gathering techniques and interventions critical for the development of appropriate policies.

Identifying legal gaps and barriers has also proven to be useful interventions in law and policy development in relation to waste management. Some examples include legal and policy gap analysis of sea-based sources of marine litter, and developing national source inventories, among others.[72]

3.1.2 Broad Stakeholder Participation

The importance of working and involving different stakeholders in implementing effective plastic waste management strategies cannot be over emphasized. As this issue affects almost every aspect of society and daily life, its solutions also require everyone to do their part – the government, the private sector, and concerned citizens cannot do it alone. As a starting point, it would be good to have an understanding of who the stakeholders are. According to the World Bank:[73]

> *"**Stakeholders** are persons or groups who are directly or indirectly affected by a project, as well as those who may have interests in a project and/or the ability to influence its outcome, either positively or negatively. Stakeholders may include locally affected communities or individuals and their formal and informal representatives, national or local government authorities, politicians, religious leaders, civil society organizations and groups with special interests, the academic community, or other businesses."*

Once the concerned individuals and groups have been identified, the next important step is to determine how best to engage and interact with them. This is done through stakeholder engagement, which is emerging as a means of describing a broader, more inclusive, and continuous process between a company [or an organization or project proponent] and those potentially impacted that encompasses a range of activities and approaches, and spans the entire life of a project.[74] For the Asian Development Bank (ADB), stakeholder engagement is an inclusive process initiated as early as possible in the project concept design phase, and conducted throughout the preparation and implementation phases of a project cycle.[75] Also referred to as a multi-stakeholder process (MSPs), it is "a process of decision-making, consensus building, or equivalent communication among three or more stakeholders with equal representation" – unlike

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[71] UNEP, *Guidelines target plastic pollution hotspots*, (21 July 2020), available at https://www.unep.org/news-and-stories/story/guidelines-target-plastic-pollution-hotspots.

[72] *See* UNEP and COBSEA, *Legal Guidance on Sea-Based Sources of Marine Litter in the Seas of East Asia: Regional Gap Analysis and Needs Assessment*; and UNEP, *A National Source Inventory (NSI) Approach for Marine Litter in the Philippines*, (Working Paper, Nairobi, 2022), available at https://wedocs.unep.org/bitstream/handle/20.500.11822/41878/marine_litter_philippines.pdf?sequence=3&isAllowed=y.

[73] The World Bank Group, *Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets*, (2007), p. 11, available at https://documents1.worldbank.org/curated/en/579261468162552212/pdf/399160IFC1StakeholderEngagement01PUBLIC1.pdf .

[74] Ibid. at p. 2.

[75] Asian Development Bank (ADB), *Draft Stakeholder Engagement and Information Disclosure (Environmental and Social Standards)*, (2023), available at https://www.adb.org/sites/default/files/institutional-document/908561/ess-10-stakeholder-engagement-draft.pdf.

PPPs which are contract-based.[76] Thus, it can be gleaned that stakeholder engagement is not a one-time activity – rather it is a continuous process which needs to be part and parcel of project activities and processes.

For government agencies in particular, stakeholder engagement is a way to ensure that its actions are reflective and responsive to public concerns and needs. For example, according to the United States Fish and Wildlife Service:

> *"[s]takeholder engagement enables the government to incorporate public concerns, needs, and values into projects and decisions.[77] Stakeholder and public engagement recognizes that people should have a say in decisions about agency actions that affect their lives; it can strengthen agency decisions and improve conservation outcomes.[78]*

Before starting any stakeholder engagement process, it is important to determine what parameters and principles will guide the process. This means that ensuring broad stakeholder participation begins with ***having the right principles as a foundation***. For UNEP, an ideal stakeholder engagement may be guided by the following principles:[79]

- ***Acknowledgement of the intergovernmental nature of UNEP processes***: decision-making within UNEP remains the prerogative of Member States;
- ***Participation in decision-making processes***: in line with the Rules of Procedures, UNEP will grant participation and access privileges to all accredited stakeholders;
- ***Access to information***: acknowledging the critical importance of disseminating and making accessible information concerning UNEP's work or information generated through its programme as widely as possible, in line with its Access to Information Policy;
- ***Transparency and accountability for mutual benefit***: engagement with Major Groups and Stakeholders is based on the premise of mutual trust and benefit, transparency, responsibility and accountability;
- ***Respect for diversity of views and self-organization***: UNEP acknowledges the diversity of views among its stakeholders and, in striving for greater openness and with a view to embracing the full spectrum of civil society actors, will ensure that those differing voices are heard, including those outside the nine Major Groups; and,
- ***Improvements to current engagement practices***: UNEP will promote continuous improvement of its current practices.

Having the right principles to guide the consultation processes will need to be supported by a clear, open, and participatory process. The ADB defines ***meaningful consultation*** as a two-way process[80], noting that communication and consultation are continuously part of each stage

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[76] Asokan V.A., et;, al, *National Plastic Action Partnerships (NPAP): A Multistakeholder Approach to Addressing Plastic Pollution in Developing Countries*, (Center for Global Commons at the University of Tokyo (CGC) and Institute for Global Environmental Strategies (IGES), 2023), p. 8, available at https://doi.org/10.57405/iges-13061, citing Hemmati et al. (2002).

[77] *See* United States Fish and Wildlife Service, *What is Stakeholder Engagement and Why Do It?,* available at https://www.fws.gov/stakeholder-engagement/what-and-why.

[78] Ibid.

[79] UNEP, *Stakeholder Engagement Handbook*, (2020), p. 15, available at https://wedocs.unep.org/bitstream/handle/20.500.11822/32831/stakeholder_handbook_EN.pdf?sequence=11.

[80] *See* ADB, *Draft Stakeholder Engagement and Information Disclosure (Environmental and Social Standards).* It is a process that:

of the project, allowing both the proponent and concerned stakeholders to engage in dialogue to address any issues or concerns.

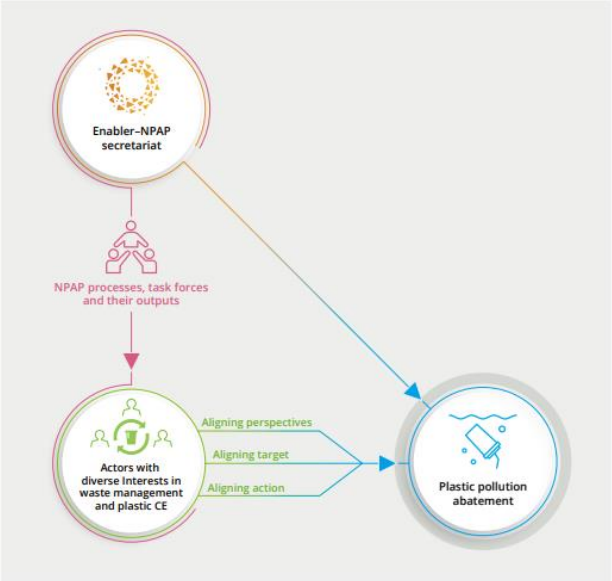
One approach which seeks to ***bridge and bring together global and national/local stakeholders*** is the *WEF's Global Plastics Action Partnership*.[81] Created in 2018 as the plastics pillar of the Platform for Accelerating the Circular Economy and the Friends of Ocean Action, GPAP and its partners are championing a universal shift towards a circular economy for plastics - one that directly addresses the root causes of plastic pollution by replacing the 'take-use-dispose' model with a closed-loop approach throughout the plastics life cycle, from production to consumption to reuse. The initiative's objectives are to convene a range of stakeholders in targeted countries to create context-specific roadmaps and support financing in order to move away from the existing system surrounding plastic pollution through using SYSTEMIQ's modelling and approach.

The GPAP model highlights the role of central actors in bringing local stakeholders together to form National Plastics Action Partnerships (NPAPs) (see below **Figure 2**).

i. Begins early in the project planning process to gather initial views on a project proposal and inform project design;
ii. Is conducted in a transparent and accessible manner;
iii. Encourages stakeholder feedback, particularly as a way of informing project design, identification and mitigation of E&S risks and impacts, and other project implementation issues;
iv. Is undertaken in an atmosphere free of external manipulation, discrimination, coercion, intimidation, and threat of reprisal and appropriately designed to address these concerns;
v. Is continuous throughout the design, preparation, and implementation phases of a project cycle, as E&S risks and impacts arise and project benefits are recognized;
vi. Is based on early disclosure and dissemination of information in a form, language, and manner that is culturally appropriate, gender-responsive, understandable, and readily accessible to project-affected persons;
vii. Supports active and inclusive engagement with project-affected persons and is tailored to different stakeholder needs;
viii. May involve separate discussions for different project-affected persons and take into account the local languages of project-affected persons and educational differences as well as potential social bias;
ix. Considers and responds to feedback from stakeholders; and (x) Will include new or updated information relevant to a project.

[81] *See* Global Plastics Action Partnership, *https://www.globalplasticaction.org/* ; and, Asokan V.A., et;, al, *National Plastic Action Partnerships (NPAP): A Multistakeholder Approach to Addressing Plastic Pollution in Developing Countries.*

Figure 3: Role of central actor in aligning perspectives, targets, and action



Source: WEF/GPAP

NPAPs help align the divergent interests of various stakeholders, such as perspectives, targets, priorities, and timelines, aiming to engineer and leverage the desired changes. It recognizes that the plastic value chain involves many stakeholders and has a fragmented institutional structure that may hinder coordinated action.[82] To deal with this, NPAP has engaged stakeholders from the upstream to downstream stages of the plastic chain; producers to consumers; and private sector to public sector, with actions intended to support the stakeholder collaboration process[83]

3.1.3 Community Involvement

Broad stakeholder participation naturally includes, and crucially involves the community – the local population and grassroots stakeholders who will be affected or involved in the activities or interventions. Perhaps the most critical of stakeholders, the local community is important in several ways: i) first, compliance with existing waste management laws and regulations largely depends on the local constituency; ii) second, they are aware of unique local conditions and contexts which may impact interventions and compliance; and, iii) third, locals are well-placed to effectively implement solutions and best practices, with its positive impacts being immediately felt.

One example and success story of working with communities is the ***Wangwa Community Model***.[84] The model of this community, located in the Klaeng district of the industrial province of Rayong, on the eastern coast of the Gulf of Thailand, makes households responsible for segregating their waste into four streams: organic, recyclable, hazardous and general waste, and promotes material reuse, recycling and transformation into new products, promoting a circular economy that limits waste from entering the environment. It is driven by a community that is

[82] Asokan V.A., et;, al, *National Plastic Action Partnerships (NPAP): A Multistakeholder Approach to Addressing Plastic Pollution in Developing Countries*, p. 7.
[83] Ibid.
[84] UNEP and COBSEA, *Circular solutions for plastic pollution: Innovative local strategies for effective plastic waste management models*, available at https://wedocs.unep.org/bitstream/handle/20.500.11822/40521/strategies_plastic_waste.pdf?sequence=3&isAllowed=y.

involved, understands the need to sort waste at source, and possesses the right knowledge for it.[85]

The Wangwa experience points to some important lessons when it comes to community involvement (see Figure 3 below):[86]

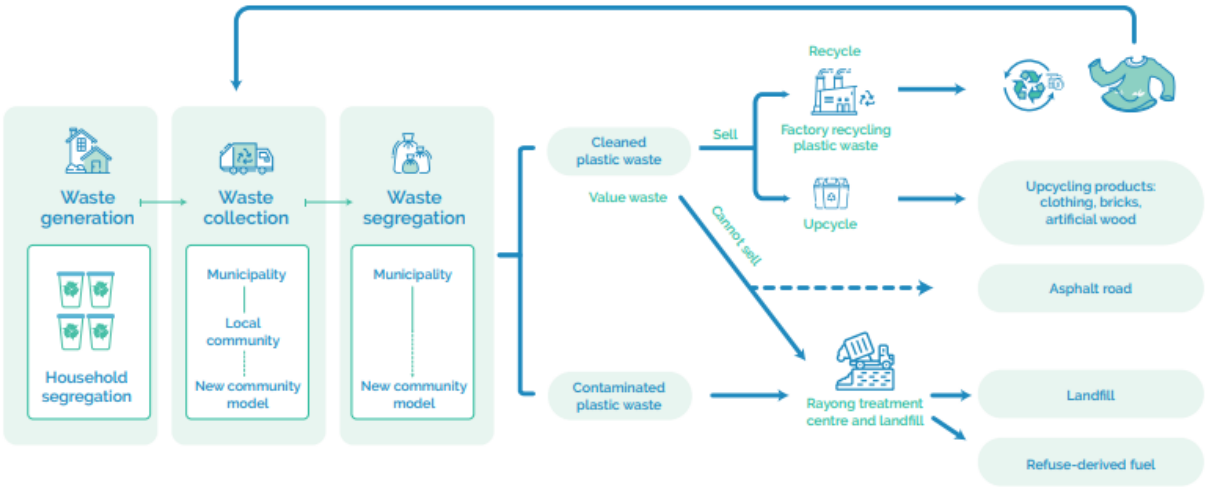
- Self-sustaining circular system. The model for sustainable waste management in Wangwa promotes material reuse, recycling and transformation into new products, creating a circular economy that limits waste from entering the environment. It is driven by a community that is involved, understands the need to sort waste at source and possesses the right knowledge;
- Appropriate technology and local capacity. The waste management system should be affordable, simple and something a community can handle. Easy and accessible innovation and technology can be sustained over longer periods of time;
- Community commitment and partnerships. Big investment is not the key success factor. It is more crucial to have a committed community leadership supported by its members, with a successful network of local authorities and related businesses united to collaborate on improving waste management and reducing plastic waste;
- Enhanced community knowledge. Continuous efforts to educate and raise awareness about managing and sorting waste, including plastics, among constituents and especially the younger generation are entrenched in the community of practice; and,
- Income for the community. Recycling plastics and processing organic waste have brought economic benefits to the community.[87]

[85] Ibid. at 9.

[86] Ibid. at 8-10.

[87] According to the report: Thirty thousand kilograms of organic waste per month are processed into fertilizer, which is sold to visitors and used for community tree planting and gardening activities. This translates into a monthly income of about THB 21,600 (approximately US$650). The proceeds are reinvested into the community and used to provide scholarships and free public Wi-Fi. The income from sorting and selling recyclables ranges from THB 12,000 to THB 15,000 (approximately US$360–460) per month.

Figure 3. The Wangwa community model



Source: PPP Plastics (2020)

Similar to the Wangwa experience, several organizations in Vietnam have also initiated community-based waste management initiatives and established materials recovery facilities to benefit local communities.[88] In both countries, the programs achieved success because of the involvement of the local community. The citizens took ownership of the waste management initiatives and saw for themselves the benefits – both ecological and economic – of implementing innovative waste management activities.

Engaging local communities also has another important benefit – it allows for opportunities to ***work with and support vulnerable sectors in society***. When it comes to waste management issues, informal waste workers, and women and youth groups, and other vulnerable members of society are disproportionately affected by pollution. In many developing countries, informal waste sector (IWS) workers provide for the backbone of waste collection and management at the community level. That is why involving IWS workers and including their issues and concerns in any intervention is a critical aspect of plastic waste management strategies. Their inclusion into the formal waste management system recognizes the value these workers bring to the local economy, particularly waste collection and recycling sectors, and supports their health and safety so they can better sustain their livelihoods.[89]

Many organizations provide direct support and assistance to IWS workers. A few years ago, Mother Earth Foundation (MEF) from the Philippines launched *Project Tuloy*, an initiative dedicated to aiding waste workers who play a crucial role in waste collection and sanitation services within the so called "zero Waste communities".[90] *Saahas Zero Waste* has initiated Social

[88] *See* https://plasticsmartcities.org/vietnam-community-based-municipal-solid-waste/

[89] WWF, *Waste Worker Inclusion*, 22 July 2023, https://plasticsmartcities.org/waste-worker-inclusion/.

[90] *See* https://www.no-burn.org/shining-the-spotlight-on-waste-workers-and-waste-pickers-through-just-transition/. During the COVID19 pandemic, they launched **Kusina ni Juan**, a community kitchen designed to provide nutritious, freshly cooked meals served in reusable containers for waste workers. They also have a long-running scholarship program for children of waste

Inclusion Projects to leverage the entrepreneurial nature of stakeholders in the informal sector and truly integrate them into the formal waste management ecosystem.[91]

Using ***emerging and developing technologies in the digital age*** can also prove beneficial for community engagement. As such, other initiatives have leveraged technology and digital solutions for the benefit of IWS. For example, *Sweepsmart* provides modern segregated waste management solutions based on European waste management knowledge but tailored to emerging and developing countries. [92] With local partners, Sweepsmart turns waste pickers into waste managers. They collect, segregate and recycle waste, to offer a professional waste management service. *Recykal* is another example – it is a recycle-enabling technology that seeks to increase collection and recycling rates by merging the informal and formal waste sectors.[93] It is an end-to-end cloud-based waste and recycle-enabling technology that connects waste generators with collectors, processors and recyclers. The software assures transparency and traceability in supply chains, transparency in pricing and recorded electronic payments to improve conditions for waste pickers.

The plastic waste crisis is also a critical gender issue. The waste sector is assumed to be gender neutral, but gender inequalities and norms are embedded in almost every aspect of waste management, leading to a gendered division of labor.[94] These impacts are felt disproportionately by socially disadvantaged groups such as women in rural communities and amongst the urban poor, who may be uniquely exposed to environmental threats whilst facing limited access to social protection and the resources to build resilience.[95] One example of the disproportionate impact on women is in Ghana:[96]

> *"In Ghana, little data is available on labour force participation within the plastics value chain, of which men constitute about 61% and women about 39%. However their respective roles are not equal. Women work predominantly in the informal economy as itinerant waste-pickers (64%) and in recycling companies as washers and sorters (68%). The formal economy within the value chain, with greater protections, social security and higher status (i.e. waste management firms, plastic sourcing, production and manufacturing companies), had the lowest representation of female workforce (12%); men constitute 89% of plastics manufacturing and 92% of waste management workforce."*

Children and youth are also critical stakeholders when it comes to waste management. They can be both direct beneficiaries and change-agents and implementers of initiatives. Youth-led organizations prove effective in raising awareness of the dangers of plastics to our environment by offering local community engagement workshops, organizing beach clean-ups,

workers. Through the program, they have supported over 200 children, providing them with gadgets for e-learning and additional allowance that enabled them to purchase school supplies.

[91] *See for more information,* https://saahaszerowaste.com/. This includes holistic efforts in capacity building, introducing them to customers, hand holding through various compliance requirements, book-keeping, health and safety standards, and assistance in interactions with the local governments, among others.

[92] *See* for example Sweepsmart, available at https://plasticsmartcities.org/sweepsmart/.

[93] See for example Recykal available at https://plasticsmartcities.org/recykal/.

[94] UNEP, *Gender and Waste Management: E-waste and Plastic Waste*, available at https://www.unep.org/ietc/resources/factsheet/gender-and-waste-management-e-waste-and-plastic-waste.

[95] See UNEP and COBSEA, *Gender Equality and Preventing Plastic Pollution*, (Issue Brief 02, Bangkok: UNEP, 2019).

[96] WEF, *Why gender is at the heart of transforming the plastics value chain*, (26 May 2021), available at https://www.weforum.org/agenda/2021/05/gender-women-plastics-ghana/.

promoting plastic-free products, lobbying with local and national governments, and speaking at public events and in schools.[97]

One best practice example is ***Bye Bye Plastic Bag (BBPB)*** from Indonesia.[98] BBPB is an NGO launched in 2013 in Bali by two sisters who were then 10 & 12 years old. BBPB raises awareness and educates youth about the harmful impact of plastic on our environment, animals and health while also sharing how to be part of the solution.[99] Since its inception, BBPB has grown to include a volunteer team of students from local and international schools around the nation, and other change-makers of all ages. In 2016, BBPB went global and has since established 50 new BBPB groups in cities around the world.[100] The BBPB team has spoken to 50,000 students across 22+ countries in nine different languages.

3.1.4 Data-driven Approaches

Having the right and adequate information is always critical when developing and crafting policy approaches and interventions, especially at the local level. Policy and decision makers often look at existing laws and policies, whether local or international, when developing proposed policies. This helps with knowing what has worked, and garnering information about best practices from places and communities which may have had similar experiences.

One way to have a repository of this information accessible is to develop websites which serve as search tools. One such example is Duke University's ***Plastics Policy Inventory*** which is a rich source for information on policies related to plastics from around the world.[101] In a recent brief by the team behind the inventory on annual updates tracking worldwide trends and gaps in government responses to the problem of plastic pollution, key findings include:

- Nearly 130 countries have at least one national or subnational policy documented in the inventory. The policies are written in a total of 34 languages.
- Regulations, such as bans on the use of specific types of plastics, tend to be the policy tool favored by governments for addressing plastic pollution. Research shows that these policies, as well as taxes and fees, are most effective when paired with public education or outreach campaigns, but these approaches are rarely coupled on the national level.
- Since 2017, national policies have increasingly targeted plastic bags and other single-use macroplastics. There is also movement toward considering the benefits and harms of substituting fossil-fuel-based, single-use plastics with biodegradable or compostable ones.
- Growing scientific evidence shows that microplastics — including microbeads in toothpaste, clothing fibers and tire abrasions — have a significant ecological impact. Yet few national policies exist to address them, and there "appears to be little to no momentum in acting" at the national level.
- Policies targeting the production and use of plastics outnumber policies targeting the management of plastic waste.

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[97] WWF, *Youth-Led Initiatives*, (6 August 2023), available at https://plasticsmartcities.org/youth-led-initiatives/.
[98] *See* http://www.byebyeplasticbags.org/.
[99] WWF, *Youth-Led Initiatives*.
[100] Ibid.
[101] *See* Karasik R., Virdin J., J. Wilson. (Editors), 2023. *Plastics Policy Inventory, available at* **https://nicholasinstitute.duke.edu/plastics-policy-inventory**, last accessed on 30 March 2024.

The analysis outlined above is an example of how the inventory provides useful information for policy and decision-makers when designing and crafting interventions within the local context. More importantly, it also identifies gaps, barriers, and challenges which policymakers need to take into consideration in developing laws and policies.

Knowing what and where the data on plastics is within a country is another important source of information for policy and decision makers. One activity that allows this is the ***National Source Inventory*** approach:[102]

> ***"NSIs are decision and policy-making tools that promote the use of data/evidence****. The NSI provides an integrated assessment of sources of marine plastic litter from plastic production to waste management, estimating leakages to the environment, whether via wastewater or waterways, thereby allowing the identification of accumulation zones in coastal regions, and the modelling of litter dispersion at sea and in-situ monitoring systems to complement and validate the models and estimates.[103] NSIs aim to inform national and regional action plans for tackling marine litter, allowing policymakers to better design evidence-based, targeted, and effective interventions to reduce and eliminate the flow of litter and microplastics into the marine environment, including through legislative tools and incentives."*[104]

By bringing different data sources together, the NSI approach can provide the basis for identification and prioritization of actions, strategic development of national marine litter action plans in line with regional frameworks, and better tracking of results achieved - in other words, NSIs are a key building block for evidence-based and effective national marine litter planning.[105]

Figure 4: National Source Inventory approach

Source: A National Source Inventory Approach to support and inform marine litter action planning, available at https://wedocs.unep.org/bitstream/handle/20.500.11822/31009/NSI%20WSH15.11.19.pdf?sequence=1&isAllowed=y#:~:text=In%20a%20national%20source%20inventory,interventions%2C%20building%20on%20existing%20frameworks.

[102] See UNEP, *A National Source Inventory (NSI) Approach for Marine Litter in the Philippines*.
[103] UNEP, ***Marine Litter: Guidelines for designing action plans*****,** (2019), p. 8.
[104] Ibid.
[105] UNEP and COBSEA, *Meeting Summary: Workshop: A national source inventory approach to support and inform marine litter action planning*, (15 November 2019), available at https://wedocs.unep.org/bitstream/handle/20.500.11822/31009/NSI%20WSH15.11.19.pdf?sequence=1&isAllowed=y#:~:text=National%20source%20inventories%20are%20a,environment%2C%20waterways%20and%20coastal%20seas.

Having local data is also critical for developing policies which are tailor-fit to local contexts and conditions. The ***Municipal Measurement Program***[106] is another tool to assist in data gathering for plastic waste interventions, with specific focus at the local/municipal level. It is a free program assessment and planning tool that delivers insights and actionable recommendations to municipal waste management agencies,[107] through a centralized database of municipal information that government agencies can use to improve recycling.[108] The program's current target market is in the United States and Canada.

Another example of data gathering tools and methods is the ***Plastic Waste Inventory Toolkit*** by the Basel Convention Secretariat.[109] According to the Secretariat:[110]

> "*The first step to increase the capacity to implement the environmentally sound management (ESM) of plastic waste is to develop national ESM strategy for plastic waste. In order to develop ESM strategy, it is necessary to carry out national plastic waste inventory and understand the scope of plastic waste that needs to be managed. The toolkit consists of the inventory methodology for plastic waste and an associated Excel tool for data entry and computation of the inventory results. The methodology uses a material flow analysis approach. The material flow analysis allows: The mapping of flows of plastic waste arising from sources of generation (e.g., householders and businesses), through the formal and informal waste management systems, and to its disposal or recovery, or leakage into the environment. The assessment of the degree of 'leakage' of waste plastics from the waste management system. Understanding the points at which leakage occurs is critical for allowing targeted intervention to tackle plastic pollution."*

3.1.5 Financing Options

Financing is one of the most challenging aspects of any policy or strategy intervention. The lack of financial resources, especially among developing countries, has often been noted as a significant gap or barrier to effectively addressing waste management and plastic pollution issues. As the OECD notes:[111]

> *"Additional investments in developing countries are a key requisite to eliminate plastic leakage globally. Given the large burden that will fall on developing countries, as well as their crucial role in the fight against plastics pollution, there is a strong rationale for increased international co-operation and development financing."*

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[106] *See* Municipal Measurement Program at https://www.municipalmeasurement.com/.
[107] WWF, *Municipal Measurement Program*, (6 August 2023), available at https://plasticsmartcities.org/municipal-measurement-program/.
[108] Ibid.
[109] *See* Basel Convention Secretariat, *Guidance on plastic waste inventory toolkit,* available at https://www.basel.int/Default.aspx?tabid=4210&meetId=0EE51495-1012-EC11-B9FD-005056857856&lang=en.
[110] Ibid.
[111] *See generally* OECD, *Cost and financing for a future free from plastic leakage: Policy highlights*, available at https://www.oecd.org/environment/plastics/Policy-Highlights-Cost-and-financing-for-a-future-free-from-plastic-leakage.pdf.

One popular option is through the private-public partnership (PPP) modality. PPPs combine the deployment of private sector capital and, sometimes, public sector capital to improve public services or the management of public sector assets.[112] This option not only eases the use of public funds but at the same time gives the private sector the opportunity to support and contribute to addressing waste management issues – and even to take more responsibility and accountability for the same.

One study identified some recent successful PPP models and projects on waste management:[113]

- European Investment Bank (EIB) financed PPP between Viridor Laing (Greater Manchester) and Ineos Runcorn, and TPS Greater Manchester Waste Disposal Authority for incineration project, which increased recycling and composting by 50% and divert 65% of the waste from landfill.
- World Bank USD25 million PPP project in Jordan with the Amman City Authority improved the operational, financial and environmental performance of its municipal solid waste system.
- JICA and local NGO in Sao Paolo, Brazil formalized 'Coopamare' (privatizing informal recycling activities) which improved the recycling rate and helped lower the poverty line.

The study noted several conclusions and considerations for sustainable waste management options.[114] It emphasized the importance of implementing various strategies that support PPPs and waste management. In particular the need for implementing effective waste management and having the right policies in place. It noted that PPPs can complement community-based waste management efforts to support overall waste management.

Blended financing is another option which has been explored to address plastic waste management issues.[115] Through blended finance, both public and private funds are used and invested to finance a project or activity. It gives green and sustainable investors an opportunity to support sustainable waste management initiatives, guaranteed by the government or financial institutions. Some examples include:

- Circulate Capital[116] is an investment management firm dedicated to financing innovation, companies, and infrastructure that prevent the flow of plastic waste into the world's ocean while advancing the circular economy.
- Finiloop - FINILOOP (Financial Inclusion and Improved Livelihoods Out of Plastics) aims to create green jobs and local circular economies by optimizing the sorting and collection of household waste, reducing usage of plastic and improving recycling. To

[112] International Monetary Fund (IMF), *Public-Private Partnerships,* available at https://www.imf.org/external/pubs/ft/fandd/2001/09/gerrard.htm.

[113] Agamuthu P., *Best Practices and Innovative Approaches for Sustainable Waste Management,* (Institute of Biological Sciences, Faculty of Science, University of Malaya, Malaysia), available at https://www.un.org/esa/dsd/susdevtopics/sdt_pdfs/meetings2010/icm0310/2a_Agamuthu.pdf.

[114] These conclusions and considerations are:

- The implementation of various strategies is important
- Appropriate policy and effective WM are crucial
- Waste management should be economically appealing
- PPP and community based waste management can enhance sustainable WM system.

[115] *See* examples WWF, *Blended Financing,* available at https://plasticsmartcities.org/blended-financing/.

[116] *See* WWF, *Circulate Capital,* available at https://plasticsmartcities.org/circulate-capital/.

improve and scale plastic waste management systems in Asia and Africa, FINILOOP uses the WASTE Business DIAMOND approach: (local) government, households, entrepreneurs, financiers and others organize themselves in such a way that they are able to sustain a local plastic recycling value chain to ensure that citizens can live in a clean and healthy environment.

- OECD has also published "Making Blended Finance Work for Water and Sanitation**"**, which provides for other best practices and examples of successful blended financing projects.[117]
- GPAP, discussed above, also published and discussed several case studies on investments to deal with plastic pollution and waste management.[118]

As the examples above will show, government or public coffers are usually not enough to fund the needed investments on plastic waste management. This situation is particularly true for many developing countries. That is why options such as PPPs and blended financing are an ideal model to leverage private funds to support public funding and public goals such as improved and effective waste management.

4. Conclusions and Recommendations

This section of the Report will summarize and piece together the research findings and analysis presented in the previous sections. It will begin by discussing if policies and strategies above support or align with the best practices. This will be followed by key considerations for choosing the right and appropriate policies, concluding then with a discussion of proposed steps towards the design of appropriate plastic waste management strategies.

4.1 Critical question: Do policies reflect/support best practices?

After looking at both policies and best practices when it comes to plastic waste management, one critical question to ask is this: Do the policies reflect, support, or enable the implementation and execution of best practices? Is there an alignment between the policies which countries have enacted or are in the pipeline with what has been proven to be effective and successful?

Before answering this question, it will be good to point out why these best practices are important to support plastic waste management strategies. The identified best practice work together in synergy, complimenting each approach for the success of the others, in order to achieve the goal of effective plastic waste management. First, ***data driven approaches*** will provide the needed information to make informed policy decisions. Any proposed policy or intervention will therefore be based on sound and solid data. Second, to ensure that crafting the laws and policies will have everyone on board, ***broad stakeholder approaches*** help identify how the different actors can be engaged and involved, not just in the development and crafting of the policy, but more importantly in the implementation and execution of the same. With data available and stakeholders on board, policy makers can now move into ***developing the appropriate laws and policies***. These will not only provide legal mandates and institutional responsibilities, but also overall guidance and direction to implement a wide range of strategies and interventions.

[117] OECD, *Making Blended Finance Work for Water and Sanitation Unlocking Commercial Finance for SDG 6,* (2019), available at *https://www.oecd.org/environment/resources/Making-Blended-Finance-Work-for-Water-and-Sanitation-Policy-Highlights.pdf.*

[118] *See* GPAP, *Unlocking the Plastics Circular Economy: Case Studies on Investment*, (December 2022), available at https://www.thecirculateinitiative.org/_files/ugd/77554d_e2bbec97047f40e5891d346a82d24fcc.pdf?index=true.

Next, implementation and successful execution will need ***community involvement*** – perhaps the most crucial piece of the plastic waste management strategy puzzle. Getting local citizens and the grassroots involved, including local/sub-national government units involved will be crucial for the success of the interventions. Local ownership of the activities and participation will also help strengthen stakeholder support, provide local-level data, and assist in fine-tuning existing policies, or identifying any gaps and barriers in the implementation. Lastly, but equally important, all these approaches will cost money, thus policymakers need to identify ***financing options*** to help fund these initiatives and interventions. Getting the private sector involved here will be important, not only to sell and support the business case of plastic waste management, but to also help ensure the sustainability of the activities and its long term success.

Moving back to answering the question of this section – based on an analysis of the research data and findings above, it would appear that the answer to the above questions is no: policies do not necessarily support or enable the best practices, and there is no clear alignment between the successful best practices and existing policies. The different examples and case studies appear to have been successful not because of an policy only, but because of a group of factors.[119] Therefore, it is of course possible for the existing policies to indirectly support these best practices or provide an overall enabling legal framework that allows for these activities to flourish and bear fruit.

The table below summarizes ideal policies in support of best practices, and which countries/organizations have been identified as having these activities present (Table 5).

Table 5: Summary of Ideal Policies in Support of Best Practices

Best Practice	Ideal Supporting Policies (or provisions with these policies)	Countries and/or organizations where best practice examples are present	Number of Surveyed Countries with these policies
Developing appropriate laws and policies	• Overarching law or framework directly dealing with plastics • Clear targets, goals, and outcomes • Presence of upstream and downstream measures • Clear lines of responsibility among government agencies and other stakeholders	• France • Netherlands • Spain • Portugal • Chile	19

Broad stakeholder participation	• Clear stakeholder and community engagement plan (with conduct of comprehensive stakeholder mapping)
	• Inclusion of critical stakeholder such as informal waste sector, social enterprises, local (sub-national) government units, and community/grassroots organizations (where present)
		• Multilateral development banks and international development organizations
		  ○ ADB
		  ○ World Bank
		  ○ UNEP
		  ○ World Economic Forum
			6

Community involvement		• Myanmar • Vietnam • Philippines • Malaysia	4

[119] Authors note: The best practice examples were taken both from surveyed countries and those not included.

Best Practice	Ideal Supporting Policies (or provisions with these policies)	Countries and/or organizations where best practice examples are present	Number of Surveyed Countries with these policies
		• Indonesia	
Data driven approaches	• Clear and mandatory data collection and gathering methodologies • Relevant and up-to-date information • Open, public, transparent, accessible, and understandable data (preferably via digital methods)	• International organizations ○ Duke University ○ UNEP ○ Basel Convention Secretariat	2
Financing options	• Identified investment opportunities and financing methods • Availability of government counter-funds or support • Measures that support ease of doing business	• International organizations and multilateral development banks	1

Source: Author/Consultant

As the table above will show, only a handful of the surveyed countries have clear policies which directly support or enable the best practices identified by this report. Save for developing appropriate laws and policies and community involvement, the other best practices do not appear to be part of existing legal frameworks. At best, broad principles or plans are mentioned but no specific provisions are available or provided.

This reveals some critical gaps and barriers to effective plastic waste management strategies. As noted earlier, gaps in national policies include the absence of specific plans or measures on plastics. This is not to downplay the importance or negative impacts of other waste streams – they are equally risky and harmful for the environment and to human health; however, as emphasized elsewhere in this report, plastics are the most prevalent type of pollution which is causing multiple negative impacts and hazards on various aspects of nature and in different ecosystems. In short, it is a high concerning issue, deserving of attention and priority both at international and national levels.

Furthermore, where existing national laws, plans and strategies exist, these are often uncomplete, poorly connected, or unclear as to how addressing plastics fits into the overall narrative. In the absence of a specific plastics policy, addressing plastic pollution can oftentimes be done as an afterthought or as a secondary priority, with no clear action points or mandatory activities to be done.

This gap and inadequacy of policies is perhaps best revealed in the absence or scarcity of upstream measures in relation to the plastics chain. As noted in the previous sections, most laws, policies, and strategies that are widely supported and implemented are downstream measures – those that are meant to deal with plastics once they are discarded or are considered as waste. The continuous production and use of plastics, at ever increasing volumes across the world, will eventually put an unbearable strain on waste management systems and eventually plastic waste may end up leaking into the open environment and become detrimental to human health as well.

Lastly, and perhaps the most critical gap, is that in the policy approaches and best practices, there is no clear indication of improved implementation and enforcement of basic waste management systems. Many experts will argue that a properly functioning basic waste management system – which can be generally understood as one where basic segregation, collection, transport, and disposal are present – will be critical in implementing more advanced measures like recycling, EPR, and eventually achieving the circular economy.

4.2 Key Considerations for Choosing the Appropriate Policy

With the discussions above as background – in particular the point that most policies do not reflect or enable the identified best practices – the next critical step is to know how to choose and identify the appropriate types of plastic waste policies and interventions that are needed. Although there are essential types of policies such as the best practices, guidance on what the specifics are will be critical in ensuring the right mix of policies for each jurisdiction.

Below is a proposition of key considerations which policymakers and concerned stakeholders should ideally take into consideration when choosing and crafting the appropriate policies:

- Recognize that no one-size-fits-all;
- Tailor-fit interventions to local context;
- Ensure Comprehensive and whole-of-government and society approach; and,
- Promote a human-rights based approach.

4.2.1 No one-size-fits-all

It is critical to recognize as a starting point that each country or jurisdiction is unique – be it in its political and economic system, to socio-cultural norms and values. This uniqueness requires an equally unique approach to developing the appropriate policies and interventions, not just with plastic waste management but also as to any other law or policy in the pipeline. As such, what may work in one country may not necessarily be effective in another; or perhaps its transposition will not be as easy as in the source jurisdiction. Although there are general principles and best practices which serve as common elements of any policy or strategy (some of which have been discussed in this report), each country would have to determine the specifics of how to adapt the same to the national level.

Therefore, the experiences of other countries and regions serve as guides to what must be addressed and how to achieve success. They act as inspirations on what must be prioritized, and what careful planning, preparation, determination, political will and collaboration can achieve. These experiences also act as signposts of best practices, especially in situations where some factors or local conditions are the same (this is particularly true for countries within the same geographic region, where neighboring countries may perhaps share the same cultural values and traditions.

4.2.2 Tailor-fit to local context

Once it is acknowledged that each country has a unique context, some internal introspection is needed to be able to tailor-fit solutions to the local context. Policymakers and the different stakeholders must consider factors unique to each country. For example, questions can include: what is the current state of waste management systems across the country; and is there

a variance when it comes to urban and rural areas? Are basic waste management requirements being effectively implemented, are environmental laws being enforced? What is the institutional capacity of national and local/sub-national agencies to implement waste management laws? What is the current state of data as regards plastic waste?

To help answer some of these questions and to get a better understanding of local conditions, broad stakeholder participation and community involvement in consultations, technical working groups, and even in decision-making bodies is critical. More importantly, this will help identify the best ways of implementing planned policies and interventions at the local and community level.

4.2.3 Comprehensive and whole-of-government and society approach

One of the identified best practices, broad stakeholder participation, emphasizes the need not just for government to make plastic waste management and addressing the plastic pollution crisis as a priority, but to be a whole-of-society endeavor. Plastics cannot be dealt with in "isolation" from other concerns and issues in society, as each issue directly or indirectly impacts the others. That is why society must work together to identify solutions and interventions, and to ensure its success and effectiveness.

Broadly and as discussed in previous sections of the report, government takes charge of setting the legal and policy framework, the private sector supports through financing, investments, and compliance with schemes such as EPR, while the general public complies with general waste management laws and promotes a societal and cultural shift towards addressing the plastic waste crisis.

4.2.4 Human rights-based approach

Environmental and climate justice considerations which promote a human rights-based approach to plastic waste strategies, are particularly critical for developing countries seeking to identify policies and interventions to address the plastic crisis. The social and economic prosperity of all people relies on a healthy and functioning biosphere. Plastic pollution and the resulting degradation of marine and coastal ecosystems - and the services they provide - threaten human well-being and human rights.[120]

Environmental justice can be described as "the fair treatment of all people, no matter what their race, color, national origin, or income level, in the development, implementation [,] and enforcement of environmental laws, regulations, and policies."[121] It provides an added lens through which the issue of plastic pollution can be tackled. It calls on stakeholders and duty-bearers (such as governments and the private sector) to ensure that environmental justice considerations – particularly for the vulnerable and marginalized, or those considered to be justice-deprived – are accounted for in marine pollution policy, processes, and costs.[122]

While the problem of plastic pollution is acknowledged, less attention is given to its environmental justice and human rights implications. Policy actions and priorities tend to focus on

[120] UNEP and COBSEA, *Gender Equality and Preventing Plastic Pollution*.
[121] United States Environmental Protection Agency, *Environmental Justice, available at* http://www.epa.gov/environmentaljustice.
[122] See Gregorio Rafael P. Bueta, *Cleaning-Up the Blue Economy: Intersections of Marine Pollution and Environmental Justice Towards Achieving Ocean Equity in Asia and the Pacific*.

3Ps – policy, price, and procedure – and not on the human impacts of marine litter.[123] Those already vulnerable and marginalized in society – such as women, children, Indigenous Peoples, and persons living below the poverty line – are disproportionately affected by polluted oceans, seas, rivers, and waterways.

Approaches to addressing plastic pollution and improving plastic waste management thus also need to take into account peoples' right to a clean, healthy, and sustainable environment. As human rights and the environment are interdependent, a clean, healthy and sustainable environment is necessary for the full enjoyment of a wide range of human rights, such as the rights to life, health, food, water and sanitation, and development, among others.[124]

This position was further strengthened on 28 July 2022 when the UN General Assembly adopted a landmark resolution recognizing the human right to a healthy environment.[125] Though not legally binding, it is a strong message that substantive and procedural rights must be respected, and steps need to be taken by duty-bearers to ensure the respect for and protection of this right.[126]

4.3 Proposed Steps in Determining Appropriate Policies and Approach

Once the key considerations have been analyzed, the next step is to determine the specific policies and approaches on plastic waste management. Given the complex and challenging nature of plastic waste management, it is ideal that an organized and well-planned approach is taken to determining the right policies and strategies for the country. This will not only allow for managing expectations, goals, and targets, but it will also allow for the most efficient and prudent use of resources – oftentimes limited and lacking in developing countries which are considered as plastic pollution hotspots.

This section will present a step-by-step guide on how to determine what the right kind of policies, strategies, and interventions are, taking into account the key considerations discussed above. These steps are (Table 6):

Table 6: Step-by-step Guide to Plastic Waste Management Policy and Strategy Development

STEP-BY-STEP GUIDE TO PLASTIC WASTE MANAGEMENT POLICY AND STRATEGY DEVELOPMENT		
Steps	**Specific activities, actions, and interventions**	**Best practices supported or aligned with**
Step 1 – *Conduct National Assessment and Scoping*	• Gap analysis and assessment of laws and policies • Gap Conduct National Source Inventory • Alignment with regional plans and international obligations/global developments	• Developing appropriate laws and policies • Data-driven approaches • Broad stakeholder participation • Financing options

[123] Ibid.
[124] UNEP, United Nations Human Rights Office of the High Commissioner, & United Nations Development Programme , *What is the Right to a Healthy Environment? - Information Note*, (2022), available at https://wedocs.unep.org/20.500.11822/41599.
[125] UN General Assembly, *The human right to a clean, healthy, and sustainable environment*, A/RES/76/300 (28 July 2022).
[126] Gregorio Rafael P. Bueta, *Cleaning-Up the Blue Economy: Intersections of Marine Pollution and Environmental Justice Towards Achieving Ocean Equity in Asia and the Pacific*.

	• National and local level consultations
	• Consider establishing a national-level Stakeholder Hub
	  • Stakeholder mapping
	  • Focal points and Secretariat
	  • Stakeholder Wheel concept	

Step 2 – *Develop National Roadmap (or Action Plan) with Menu of Options*	• Identify existing laws which need to be implemented properly • Work on gaps and barriers in the law, including data gaps, identified in the assessments • Identify roles and responsibilities of each stakeholder • Definite and concrete timelines and targets	• Developing appropriate laws and policies • Broad stakeholder participation • Financing options
Step 3 – *Public Consultations and Pilot Testing*	• Broad stakeholder consultations • Revise roadmap and plans as needed • Pilot test particular activities or interventions at the local/sub-government or community level	• Community involvement • Broad stakeholder participation
Step 4 – *Implementation*	• Use SH Hub model for implementation and execution • Ensure accountability for commitments • Have political will to continue with implementation and execution	• Developing appropriate laws and policies • Financing options
Step 5 – *Monitoring and Evaluation*	• Identify potential revisions and amendments needed • Address emerging challenges, including new obligations based on international development	• Developing appropriate laws and policies • Broad stakeholder participation • Data-driven approaches

Source: Author/Consultant

4.3.1 Step 1 – *Conduct National Assessment and Scoping*

Perhaps the most important first step is to know where a country stands, and what its current state is as regards plastic waste management. Any intervention at this point will not happen in a vacuum – for example, there will already be some basic waste management laws, or some projects and programs already being implemented or in the pipeline. A national assessment and scoping will consist of several activities to gather the needed data and information.

One critical initial activity is the conduct of a *gap analysis and assessment of laws and policies.* This will help policy and decision makers have an overview of the current state of the legal framework governing plastic waste management, including any gaps, issues, and barriers which new policies and strategies may need to revise or amend. This also includes identifying what rights exists and what are most affected – whether it be environmental or human rights concerns and obligations. This step can also help ensure alignment of plastics-related policies with other relevant or related laws, including other government plans and programs. The assessment should also ideally include looking at *alignment with regional plans and international obligations/global developments*. The country developing policies may be parties to, or supporting particular treaties. In most cases, treaties entered into by a state will form part of its national legal framework, thereby making them mandatory and sources of legal rights and obligations. This also includes listing down any regional plans, programs, and agreements which the country supports.

By conducting this gap analysis and assessment, overlaps between and among existing laws and policies can be avoided, and a more organized and synergistic approach to plastic waste management can be ensured.

Parallel to the gap analysis and assessment of laws and policies, it will also be critical to look at the current state of data and information on plastic waste in the country. Through a *National Source Inventory (NSI)* policy and decision makers will be able to look at the current state of data to both determine what appropriate policies are needed, or if any data gaps and barriers exists which need addressed as part of the activities and interventions. The NSI can initially be done via desk research and secondary data gathering. A more comprehensive NSI can follow once the data and information gaps have been identified.

The success of both the gap analysis and assessment will hinge on the *active and meaningful participation of concerned stakeholders.* This is a crucial step to help ensure that all views, issues, and concerns are taken into account in preparing a national roadmap, action plan, or identifying a menu of options (see Step 2 below). One way of ensuring broad stakeholder participation and capturing the different views and perspectives is by establishing a national-level stakeholder hub (SH Hub).[127] This Report proposes the use of the Stakeholder Wheel concept as a guide to establishing the SH Hub. The Stakeholder Wheel concept can be a guiding framework for stakeholder engagement and for designing, conceptualizing, and implementing a SH Hub on plastic waste management. Elements of the Stakeholder Wheel concept include (See Figure __):

1. **The Wheel** – The central figure in the framework is composed of the SH Hub as the center of the wheel. Connected to it are the different stakeholders (the "spokes"), which connect the hub to the main wheel composed of action items which the different stakeholders have agreed upon.

2. **The Central Actor/s** – Taking off from discussions of the GPAP, these are key stakeholders which have been identified as critical in gathering other stakeholders into the SH Hub, or in implementing and executing agreed upon action points. Together with the initial stages, they provide the "push" to move the stakeholder wheel forward.

3. **Initial Stages** – This comprises: i) design and concept; ii) consult and pilot; iii) implement; and, iv) monitor, evaluate, and sustainability. To be discussed in more detail below, these are actions which need to be developed in establishing and successfully operationalizing the SH Hub.

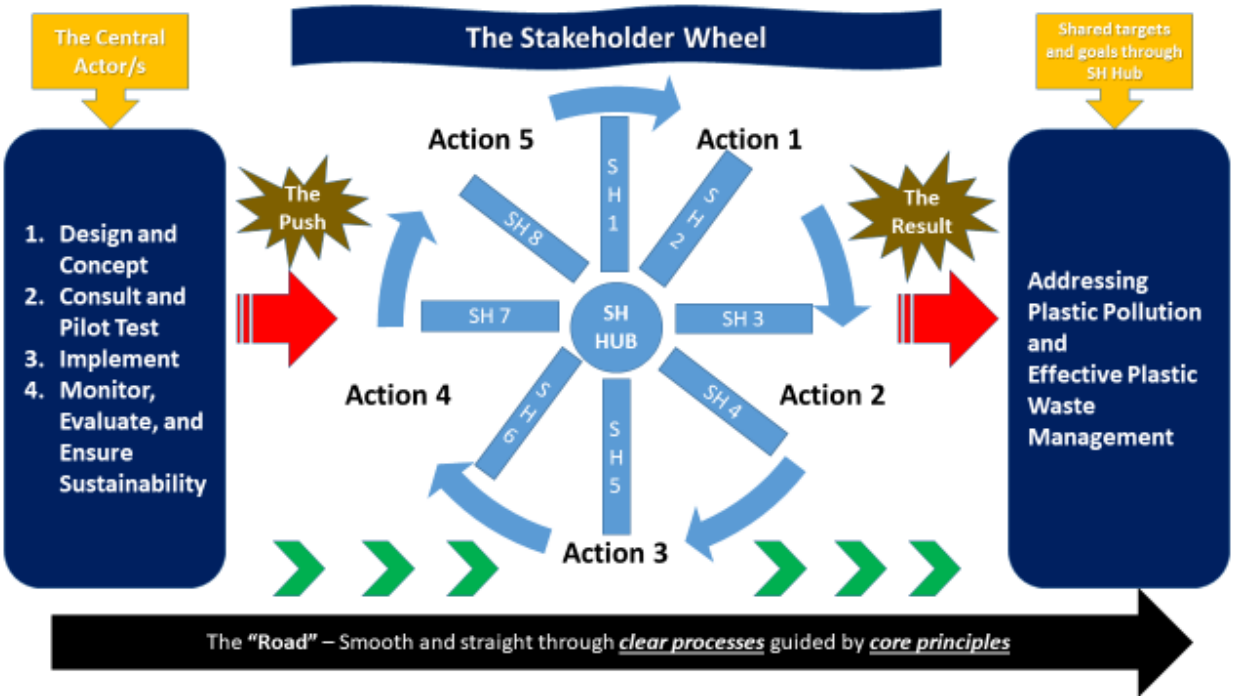
4. **The "Road"** – Where the Stakeholder Wheel will move along. Ideally smooth and straight, the "road" comprises critical processes of the SH Hub and its stakeholder-members. It also includes identifying core principles to guide design and implementation – the absence of which may cause "bumps" along the way.

5. **Shared targets and goals** – Metrics to determine if the end results have been successfully and effectively achieved. These are determined through the mechanisms and processes of the SH Hub, ideally continuously evaluated and revised as needed to meet emerging challenges and changing societal conditions.

[127] *See* **ANNEX B** on the Stakeholder Hub Concept as prepared as part of this Report.

6. **The Result** – The end vision to be crafted and determined by the SH Hub mambers and stakeholders. The result and vision may vary from country to country, taking into account the local context, challenges, and conditions.

Figure 5: The Stakeholder Wheel Concept



Source: Author/Consultant

4.3.2 Step 2 – *Develop National Roadmap (or Action Plan) with Menu of Options*

With the data gathered from the conduct of the national assessment and scoping, the next step is to use all these information to develop a roadmap or action plan, including a menu of options or interventions that need to be taken. The goal of this step is ensure synergy and harmonization of actions of both the government and other concerned stakeholders. It also aims at channeling oftentimes limited resources towards the most needed and impactful actions and solutions on plastic waste management.

The results of the gap analysis and assessment should help paint a picture of the current state and landscape of laws and policies – in particular of other national plans, programs, and strategies which may be of relevance to plastic waste management. This is important information because there may be instances when a national roadmap or action plan may be in conflict with existing ones. This Report recommends that a roadmap or action plan specific to plastic waste management be developed to ensure that the issue is given the priority and importance that it requires. The roadmap or action plan can be standalone document, or can be included in a separate document, plan or strategy. However, in the case of the latter, what is important is that specific actions and interventions are included, with a clear menu of options to be implemented and executed.

Whether as a solo document or as part of another, it is critical to include and consider the following points as action items:

- *Identify existing laws which need to be implemented properly* – As has been stated often, these new laws, policies, and strategies will not be operating in a vacuum – there will already be in place some of the basic waste management laws in the country. The local populations may already be familiar with a certain form or waste management system, especially at the local or community level. Some form of integration into the system may be needed to ensure alignment and effective implementation. For any future activities or interventions to be successful, it is important that these basic laws be properly implemented and executed.

- *Work on gaps and barriers in the law, including data gaps, identified in the assessments* – As noted above, the results of the previous step's gap analysis and assessment, and scoping will be critical in developing specific action plans and interventions. The current roadmap must specifically target and address the gaps and barriers in laws and policies, and also those on data and information. Specific actions, tasks, and interventions must outlined to address this. The goal is to plug the gaps in order for the successful implementation of existing and proposed laws.

- *Identify roles and responsibilities of each stakeholder* – Through the stakeholder mapping and the creation of the SH Hub, each stakeholder should ideally be assigned definite roles and responsibilities. This will not only avoid overlaps, especially among government agencies who may have overlapping jurisdictions, but also help channel limited and scarce resources, especially in developing countries. This can also help in defining the role of non-government stakeholders in the implementation of plastic waste management strategies who can complement and support government stakeholders in implementing the plans and programs.

- *Clearly outline activities, programs, and interventions* – By this time, policy and decision makers should ideally have a clearer picture of what needs to be done, what has to be prioritized, and where resources and efforts must be channeled in order to put in place effective plastic waste management strategies. A clear outline of activities, programs, and interventions must be established. These must not just be "broad stroke" measures but needs to be as specific as possible on what needs to be done, who will do it, and how it will be achieved and when. Of course, the finer details and modalities of implementation can best be left to the responsible government agency or stakeholder concerned – but the roadmap or plan must be clear as a guiding document.

- *Definite and concrete timelines and targets* – A critical action point which any action plan or roadmap must include is a set of definite and concrete timelines and targets. This is important in several ways. First, concerned stakeholders – whose roles and responsibilities have also been identified, clearly knows what needs to be done and achieved, and within what timeframe. Second, it allows for proper budgeting and allocating of resources, especially for more longer term plans and programs which may need to be programmed over several years and budget cycles. Next, any shortfalls, missing elements, or needed resources can be easily identified. Lastly, and perhaps most important of all, the definite timelines and targets will allow for clearer lines of accountability, especially among government stakeholders who have made commitments to implement the needed plastic waste management strategies.

4.3.3 Step 3 – *Public Consultations and Pilot Testing*

The successful completion of the assessment, scoping, and development of a national roadmap or action plan does not mean public consultations have ended. Policy making, and the implementation of the same, requires *constant and continuous consultations and engagement with the public and concerned stakeholders*. As many have said, it is folly to assume that the work of engaging the public ends when policies begin. Keeping lines of communication open with other stakeholders will help ensure that plans and programs are still responsive to the needs of the people, and address the most pressing challenges and issues – including any changed conditions.

As noted in the proposed SH Hub and Stakeholder Wheel Concepts above, mechanisms and avenues for continuous consultations and feedback are essential. Policymakers must include clear lines for feedback, which includes a grievance mechanism which will also be critical for the implementation stage.

The *public consultations to be conducted must be national in scope* – it must ideally reach different regions of the country and target different segments and sectors of the population. It must be accessible, allowing different stakeholders – including those from vulnerable and marginalized sectors of society – to participate. If resources allow, there can be several rounds of consultations before finalization and moving into the implementation stage. Lastly, the consultations, and the information it will present, must be shared through means which will be understandable and better appreciated by the participants. In some instances, digital technology may not be the most ideal medium; or perhaps there needs to be translation in local dialects, or avoidance of technical terms and jargons. The point here is that every effort must be made to make the consultation process meaningful and inclusive, especially to those who will stand to lose or benefit the most from the plastic waste management strategy being implemented.

In the course of the public consultations, or at its conclusion, new insights, points, and perspectives may have been raised which were not captured in earlier consultations. Thus, a *revision or adjustment of the roadmap and plans may be needed to factor in the new information*. It is important to be flexible with the roadmap and action plan, especially given the complex and ever fluid nature of environmental issues such as plastic pollution and waste management.

Once public consultations and any revisions or improvements to the roadmap and action plan have been completed, *a pilot testing of particular activities or interventions may be considered before full implementation*. This can be related to preparatory or initial activities of the roadmap or plan. Coordination with a particular local or sub-government unit, or with a community organization can be done for easier implementation. The pilot test can thus serve as a proof-of-concept of the success and feasibility of proposed activity or intervention on plastic waste management. Of note is that the pilot test should also have a clear timeframe so as not to delay the full implementation of the roadmap or action plan.

4.3.4 Step 4 –*Implementation*

Completing Steps 1 to 3 now leads to the real challenge of implementation. Ideally, at this stage with the results of the assessment and scoping, the finalized national roadmap and plan, and the public consultations and scoping, all is set for implementation and execution of the plans and programs, and interventions that have been outlined. The *SH Hub, which should have ideally been established as part of the roadmap and action plans, can be used as a mechanism for effective and coordinated execution and implementation*. Regular communication and feedback

among all stakeholders will be crucial for success. The SH Hub can also be an opportunity for the general public to participate in the implementation, and also to provide critical feedback on the plan's effectivity or otherwise.

During implementation, it is also important *to ensure responsibility and accountability for commitments made in executing the roadmap or plan*. This not only applies to government agencies and officials but also to other concerned stakeholders like the private sector and even community organizations. This is where the clear and concrete targets and timelines will come in handy as there will be clarity in who needs to do what, how, and when.

Lastly, policy and decision makers must have the *political will and determination to ensure the effective implementation and successful completion of the roadmap or action plans*. Oftentimes new policies and initiatives lose steam and eventually fail because of the waning or lack of political will. All stakeholders concerned, especially those in authority, must see the plans and interventions for the long term and not something for expediency or just for the next election cycle. Even with the change in leadership, administrations, and governments, the country must commit to implementing the agreed upon roadmaps and plans to eventually achieve the goal of a successful and effective plastic waste management strategy.

4.3.5 Step 5 – *Monitoring and Evaluation*

Recognizing changing conditions and situations, and the ever complex nature of environmental issues and challenges such as plastic waste management, a system for monitoring and evaluation (or M&E) of the implementation of the roadmap or action plan should be established. M&E should be a regular part of implementation, and the policy planning and making process. It is rarely the case that the conditions under which a policy has been drafted remains the same over time, thus policy and decision makers must be flexible and agile to meet these changes.

Through the M&E process, *potential revisions and amendments to the roadmap and action that are needed can be identified*. This includes identifying any missing resources, or perhaps key stakeholders which can aid in successful implementation. There may also be missing pieces of the implementation puzzle that are needed that only become apparent upon initial execution of the activities and interventions.

The M&E process can also *help address emerging challenges* which may be brought about by new technologies, or even new data and discoveries from scientific research and activities. In addition, there may arise the need to include new obligations based on regional and international development. Through the M&E process, these new developments can be captured and assessed, and the appropriate way of responding or complying can be determined.

4.4 Epilogue: Meeting the Challenge of Effective Plastic Waste Management Strategies

This Report began with bleak and alarming picture of the global plastic waste crisis, and its detrimental and harmful impacts on the health of people and planet. The reader saw why pollution – in its many forms, but particularly that coming from plastic – is one of the triple planetary crises facing humanity. These challenges and issues facing the global community has put immense pressure on everyone in the midst of other socio-economic and political problems.

However, the succeeding pages and sections of the Report have also revealed that there is much to be hopeful for. Global developments like the Global Treaty on Plastics have put the

spotlight on the issue of plastic pollution. The survey of laws and policies from different countries around the world – an interesting and diverse mix of countries – has also shown how all countries are moving forward on the law and policy front to meet the waste management and plastic pollution issue. More importantly, the Report has pointed to best practices which have relatively been successful, and can thus perhaps be scaled up and emulated by different countries around the world.

It can thus be safely argued that with the right approach and guidance, through this Report and countless other resources and references, countries can achieve the right and appropriate mix of policies and strategies on plastic waste management. But challenges remain as these findings and takeaways from the research of this report will show:

- Around **seven (7)** countries have already regulated or banned plastic shopping bags in groceries, supermarkets, retail stores, or other commercial establishments.
- **Eight (8) countries** have EPR laws or EPR schemes within another national law.
- At least **two (2)** countries have banned plastic cutlery.
- Only **one (1)** country has imposed regulations specifically for the packaging of cosmetic products.
- Only **one (1)** country has imposed regulations specific to food purchased via e-commerce.
- **Five (5)** countries have regulated/banned use of single-use plastics in beaches, natural parks, or other tourist areas.
- At least **three (3) countries** have included in their law or national action plan provisions on raising awareness on sustainable consumption.
- At least **two (2) countries** have incentives for those who participate in reverse logistics/buy-back/take-back schemes of plastic.

As the data above suggests, more areas of policy work can be improved in different countries to strengthen plastic waste management. There are a few concluding points worth mentioning at the end of the Report, both to emphasize some key findings, but also to point to future and further areas of research, study, and intervention.

Perhaps one of the most critical findings of this Report is that **policies and strategies are still aimed at downstream measures**. Most goals still focus on plastic products ending up as waste – whether in landfills, to be re-used, or to be recycled. There needs to be greater efforts at developing and implementing upstream policies – or those which seek to reduce plastic production or use, or those that promote natural and cleaner alternatives as opposed to plastics. As many experts and studies have pointed out, even with improved downstream waste management, the waste systems will not be able to keep up with the exponential increase in both human populations, production, and the concomitant waste generated.

Another important point, and one connected with the above concern on downstream measures is that despite the presence of laws and policies tackling plastic waste management, **there are very few specific plans and strategies which directly deal with plastic as a primary issue or product.** As stated in the previous section, it is ideal to have a specific plan or strategy on plastics, or to at least have a specific action points if it is to be included in a separate plan or document. It can be argued that a lack of a specific plan or strategy on plastics can dilute the importance placed on the issue by policy and decision makers, and by the country as a whole. One area for future research and analysis, ideally on a per-country or national level, is to determine if a specific plan or strategy on plastics is ideal for the local context, and how it will best fit into the current and existing legal and country framework.

One of the things that stood out was the fact that these countries have no clear plans or laws that require investing in research and technology that will provide the data required to properly show the solutions that best works for their country. Many of these countries have similar targets, bans, and regulations – but its bases are not clear. It is also worth noting that provisions on government incentives for businesses, big or small, are scarce. While laws and policies are in place imposing bans and regulating the use, production, and distribution of SUPs, more businesses would perhaps be keen on complying and embracing sustainable non-plastic alternatives if they could see tangible benefits to their business by investing in options that are not detrimental to the environment.

It is also unclear if the countries surveyed have mechanisms in place for stakeholder consultation and engagement. Many of the laws of the surveyed countries target businesses or producers (especially in relation to EPR), but involving communities and organizations may also be effective as it will likely create a ripple effect when it comes to plastic consumption.

Lastly, of special note is the **increasing interest of countries in adopting EPR as a solution to plastic waste**. As the survey of countries has shown, many countries have recently put in place EPR legislation. However, it should be emphasized that successful models of EPR did not happen overnight – many factors have come together, sometimes over a long period of time, before EPR has become the effective system it is today. It is of course a good start for the countries with EPR legislation, but care must be taken in its implementation and ensuring that the appropriate waste management environment is in place. The role of the private sector and industry needs to be clarified in order for the system to be truly successful and effective.

In conclusion, laws and policies can be the game changers for plastic waste management. Not only do they establish legal rights and obligations, they also point to and identify what are mandatory and binding measures which all stakeholders must meet for proper and effective plastic waste management. The right laws and policies, aligned with strategies and best practices adapted to the local conditions and context, can help address the plastic waste crises and protect the rights of the most vulnerable and marginalized members in society. The threat of the triple planetary crises demands no less.

ANNEX A: ***Plastics Policies/Strategies from Select Countries***

Source: **Duke Plastics Policy Inventory** - Karasik R., Virdin J., J. Wilson. (Editors), 2023. Plastics Policy Inventory (**https://nicholasinstitute.duke.edu/plastics-policy-inventory**); with additional research from the consultant/author.

Country	Policies	Contents/Best Practices
Asia		
China	China's Action Plan for Reaching Peak Carbon Emissions by 2030. 2021 Packaging	• Carbon Peak by 2030 in all aspects of economic and social development ○ Gradual transition to renewable energy while promoting circular economy • Nationwide ban on the production, sale, and use of plastic shopping bags with thickness of less than 0.025mm (ultra-thin plastic shopping bags) *(2007 Notice of the General Office of State Council on Restricting the Production, Sale, and Use of Plastic Shopping Bags)* • Supermarkets and other retail stores cannot provide plastic shopping bags for free *(2007 Notice of the General Office of State Council on Restricting the Production, Sale, and Use of Plastic Shopping Bags)* • 2013 "Green Fence" Campaign (temporary restriction on waste imports) to 2017 Permanent Ban of importation of non-industrial plastic waste • Restriction of excessive material in packaged food and cosmetic products • Strict bans on packaging material for festive foods • Regulation of packaging for fresh foods, health-focused foods, takeaway foods, and foods purchased via e-commerce
	China SETC ban on production and use of plastic tableware, 2001	
	Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes (2020) Bags, SUPs	
	National Sword Policy - World Trade Organization, Regular notification 2017	
	Notice of the General Office of State Council on Restricting the Production, Sale and Use of Plastic Shopping Bags 2007, Bags	
	Administrative Measures for the Paid Use of Plastic Bags at Commodity Retailing Places 2008, Bags	
	National Ecological and Environmental Standard on Technical Specification for Pollution Control of Plastic Waste (HJ 364-2022).	
	Opinions on Further Strengthening Plastic Pollution Control **GEOGRAPHIC COVERAGE:** China **LEVEL:** National **YEAR AGREED:** 2020 **KEYWORD(S):** Bags, Single-Use Plastics (SUPs), Packaging	
	Excessive Product Packaging Restrictions **GEOGRAPHIC COVERAGE:** China **LEVEL:** National **YEAR AGREED:** 2005	

India	Ministry of Environment, Forest, and Climate Change Notification
	2016 gs)
		• *Plastic Waste Management Rules* mandate the responsibilities of local bodies, gram panchayats, waste generators, retailers, and street vendors to manage plastic waste.
		  ○ EPR applies to every Producer, Importer, and Brand Owner and shall be applicable to both pre-consumer and post-consumer plastic packaging waste.
		  ▪ Producer, Brand Owner and Importers need to work out collection back mechanism for the equivalent quantity of

	Notification of the Ministry of Environment and Forests 2003 Bags	
	Plastic Waste Management Rules 2016 EPR	

Country	Policies	Contents/Best Practices
		plastic waste introduced by them in Indian market to meet their EPR obligation. ▪ Producer, brand owners, importer and PWPs need to get registered with State Pollution Control Board/committee or Central Pollution Control Board through CPCB's online portal (if operating in more than 2 states) unless, their consent to operate will not get renewed. ○ Phaseout of single-use plastics ○ Plastic packaging that cannot be recycled or used as alternate source of energy will be phased out. ○ Multi-layered plastic packaging can be co-processed (waste to energy)
Indonesia	National Plastic Waste Reduction Strategic Actions for Indonesia. 2020, EPR, SUPs, packaging	• Waste banks in Indonesia ○ Similar to the system of regular banks, people have an account and bring their household waste (usually non-organic) to the bank and the monetary value of the waste is determined based on the rates by secondary waste collectors. People can save the value in their account and withdraw when necessary. • 5-Year Action Plan for Plastic Waste Reduction in Indonesia (2020-2025) ○ Banning the use and sale of certain single-use plastic goods ▪ Promoting “My Bag Campaign” ▪ Forming a guideline to promote prohibition on SUP-based items ▪ Regulating imports of non-dangerous plastic waste ○ Developing a policy option which mandates importers, factories, food, and beverage companies to bear some responsibility in recovering packaging waste (EPR) ○ Creation of team to handle plastic pollution (stakeholder involvement)
Malaysia	Twelfth Malaysia Plan 2021, SUPs Roadmap Towards Zero Single-Use Plastics 2018-2030 2018	• Implementation of waste separation at source and 3R initiatives • National Cleanliness Policy

Country	Policies	Contents/Best Practices
	National Marine Litter Policy and Action Plan 2021 - 2030 2021, SUPs, bottle, microplastics, EPR	○ Aims to further increase recycling initiatives among the public to support the waste-to-wealth agenda and contribute to environmental conservation efforts • National Marine Litter Policy and Action Plan 2021-2030 ○ Policy adoption and implementation ▪ Phaseout of bioplastics by 2023 ▪ Reduction of unnecessary SUPs in packaging by 2023 ▪ Ban most common or damaging types of plastic marine litter like microbeads, fish-egg-sized nurdles by 2028 ○ Deployment of technologies, innovation, and capacity building ○ Improve monitoring and data collection on marine litter ○ CEPA (Communication, Education, and Public Awareness) Outreach and Engagement ○ Adopting whole-of-nation and multi-stakeholders approach in harmonizing cross-cutting objectives ▪ Establish dedicated recycling facility that will process and recycle plastic resins. Faculities must be enabled to buy this material with help from EPR monies by 2023. ▪ Create Plastic-Free Islands, targeting the marine parks and other tourist-islands in Malaysia by 2024
Maldives	Single Use Plastic Phase Out Plan 2021	• Ban the Import, Production, and Sale of Specific SUP Products ○ President vested with powers to ban import of SUPs • Tariffs, Taxation, and Subsidies ○ Increase in tariffs for various SUPs ○ Duty exemption for alternatives to SUPs ○ Levies from consumers on point of sale from SUPs ○ Incentives for local businesses and SMEs that import, manufacture, and sell plastic-free alternatives

Country	Policies	Contents/Best Practices
		• Strengthening National Waste Data and Setting Reduction Targets for Plastic Packaging • EPR • Sustainable Provision of Alternatives • Education and Awareness – to create awareness for SUP phaseout plan and promote sustainable lifestyle
	National Waste Management Policy issued in 2015 (Ministry of Environment, Climate Change and Technology, 2015; Ministry of Environment, Energy and Water, 2008)	
Philippines	RA 9003, Ecological Solid Waste Management Act of 2000	
	RA 11898, EPR Act of 2022	
	RA 8749, Clean Air Act	
	RA 6969, Toxics and Hazardous Substances Act	
	National Plan of Action on Marine Litter (NPOA-ML)	
Vietnam	National Action Plan on Sustainable Consumption and Production (2021-2030).	• Specific objectives by 2030 are set up in the Plan, which include: 1. Effectively improve and implement legal policies on sustainable consumption and production; 2. A 7 – 10% decrease in resources and materials used by major production sectors such as textile, steel, plastic, chemical, cement, alcohol and beer, beverage, paper, seafood processing and some other production sectors; 100% of industrial parks, clusters, trade villages organize communication to raise awareness on sustainable consumption and production; 3. Disseminate, replicate models of cleaner production, sustainable consumption and production; 4. 100% of provinces and cities directly under the Center organize communication, to raise awareness on sustainable lifestyles and consumption; 5. 100% of supermarkets, commercial centers use eco-friendly packaging which gradually replace single-use, non-degradable plastic items; etc. • The Law sets up a concrete policy on an emissions trading system and carbon tax. In theory, businesses would be allocated their own emissions quota that can be sold, gifted or transferred on a market-based trading system. The Law introduces the concept of circular economy through fostering extended producer responsibility (EPR) policy, and highlights the responsibilities of ministries and localities to integrate circular economy in planning strategies, development plans, waste management, and waste recycling. The Law also highlights the responsibility of producers and importers to recycle products and packaging. The Article 54 and Article 55 detail requirements on collection, disposal, and recycling of waste products, plastic waste, and others. A
	Law No. 72/2020/QH14 on Environmental Protection. 2020, SUPs, microplastics, packaging	
	National Action Plan for Management of Marine Plastic Litter by 2030 2020, Bags	
	Decree No. 08/2022/ND-CP on elaboration of several Articles of the Law on Environmental Protection. 2022, microplastics, bags, SUPs	
	National Environmental Protection Strategy until 2030 and Vision until 2050. 2022, Bags, SUPs, microplastics	
	Circular No. 159/2012/TT-BTC - Detailing and Guiding a Number of Articles of the Law on Environmental Protection Tax 2012, Bags	
	Decision No. 2149/QD-TTg - Approving the National Strategy for Integrated Management of Solid Waste up to 2025, with a Vision to 2050 2009, Bags	

Country	Policies	Contents/Best Practices
		range of projects that use large areas of land/water and produce adverse effects on the environment/landscape, as well as those projects that generate large quantities of waste may be subject to an environmental impact assessment report (EIAR). A new master license and new procedure for environmental registration are proposed in the Law to replace a number of environmental permits and downsize the administrative procedures. *(Law No. 72/2020/QH14)*Roadmap for restricting production and import of single-use plastic products, non-biodegradable plastic packaging and products and goods containing microplastics by 2025 and 2026 *(Decree No. 8/2022)* • Roadmap for control of manufacture and import of SUPs *(Decree No. 8/2022)* ○ On and after January 1, 2026, the manufacture and import of poorly degradable plastic bags of 50cm x 50cm or smaller and 50μm thick or less shall be prohibited. However, this excludes cases where the bags are intended for export or packaging of other goods. ○ Business entities that manufacture or import single-use plastic products and/or poorly degradable plastic packaging materials shall implement the recycling and treatment obligation under the Extended Producer Responsibility (EPR) scheme as stipulated in the Decree. ○ On and after December 31, 2030, the manufacture and import of the following products shall be prohibited: ○ Single-use plastic products (excluding Vietnam Green Label certified products) ○ Poorly degradable plastic packaging materials (including poorly degradable plastic bags, and plastic foam containers for food packing) ○ Products containing microplastics (excluding cases where they are intended for export or packaging of other goods)
West Asia		
Jordan	Waste Sector Green Growth National Action Plan 2020 Waste Sector Green Growth Action National Action Plan 2021-2025 (GG-NAP) SUPs, 2020 Biodegradable Plastic Shopping Bags Regulations No. 45 of 2017	• Assessment of Current Impact of SUPs and Plastic Waste (GG-NAP 2021-2025) ○ One market assessment and detailed plastic waste stream analysis ○ One report to identify alternative options

Country	Policies	Contents/Best Practices
	Bags	○ Economic evaluation study of possible financial mechanisms ○ One report detailing the green growth cost-benefit analysis ○ Joint Public-Private Roadmap to reduce the use of SUPs ○ One year awareness campaign • Biodegradable Plastic Shopping Bags Regulations No. 45 - 2017 ○ Heightened inspection campaigns on factories and shops that produce, trade, and import plastic shopping bags ○ Ban on production of non-biodegradable plastic bags
Lebanon	Sustainable Consumption and Production National Action Plan	• No specific plan/policy on SUPs or plastics in general
Central Asia		
Kyrgyzstan **Note: Parliamentary ban on waste imports https://akipress.com/news:717588:Parliament_of_Kyrgyzstan_approves_ban_on_import,_production_and_sale_of_disposable_plastic_film_bags/**	Law of the Kyrgyz Republic On Production and Consumption Waste	NOTE: No specific law on waste management
	Procedure for Production and Consumption Waste Management	*Limited details on the policy available or accessible*
	Presidential Decree of March 19, 2021 "On measures to ensure environmental safety and climate sustainability"	*Limited details on the policy available or accessible*
	Program of Development of the "green" economy of the country for 2019- 2023 aimed at regulating waste management	*Limited details on the policy available or accessible*
	Plastic Bag Ban, 2023	• Ban on circulation of plastic carrier bags in popular tourist locations • Ban on polyethylene containers in protected natural areas • Nationwide ban on plastic bags and other single-use plastic items by 2027
Uzbekistan	Measures to Further Improve the System of Household Waste Management 2019, Bags	*Limited details on the policy available or accessible*
	National Development Plan II 2017-2021 2021, Bags	• By 2021, decrease the release of point-source pollution particularly to air and ground water by 20% ○ Promote recycling schemes and collection points ○ Develop dumpsites and landfills
South Pacific		
Fiji	National Ocean Policy 2020 – 2030	
	Maritime Transport Decree 2013 (Decree No 20 of 2013) Bottles	
	Act to Amend the Environmental Levy Act 2017, Bags	
	Environment Management (Amendment) Act No. 42 of 2020 SUPs	
	Environment Management (Budget Amendment) Act 2019 Bags	
	Environment and Climate Adaptation Levy (Plastic Bags) Regulations 2017 (L.N. No. 61 of 2017) Bags	

Country	Policies	Contents/Best Practices
	Environmental Management (Waste Disposal and Recycling) Regulations 2007 Bottles, EPR	
Samoa	Samoa Ocean Strategy 2020-2030	
	National Waste Management Strategy 2019-2023 2019, Bags, Bottles	
	Marine Pollution Prevention Act 2008 2008, Bottles	
	Plastic Bag Prohibition on Importation Regulations 2006 Bags	
	Public Notice Plastic Prohibition (Ban) 2019 Bags	
Africa		
Comoros	NOTE: No SWM policy but a law on plastics was recently passed by the National Assembly	
Kenya	Kenya Gazette Supplement - The Finance Act, 2008 Bags	
	The Wildlife Conservation and Management Act 2019 Bottles	
	Notice No. 2356 - The Environmental Management and Co-ordination Act 2017 Bottles	
	National Sustainable Waste Management Policy 2020 Bottles Packaging	
	Implementation Plan or the Ban of Single Use Plastics in Protected Areas 2020	
	Plastics Bags Control and Management Regulations 2018	
	National Sustainable Waste Management Bill 2019 EPR	
Lesotho	Customs and Excise Tariff 2018, Bags	
South Africa	National Waste Management Strategy 2020	
	Regulation on Plastic Bags (No. R. 543 of 2002)	
	Regulation on Plastic Carrier Bags and Plastic Flat Bags (No. R. 625 of 2003) **GEOGRAPHIC COVERAGE:** South Africa**LEVEL:** National**YEAR AGREED:** 2003	
	Amendment Regulations regarding Plastic Carrier Bags and Plastic Flat Bags, 2021, no. 317.	
	Extended Producer Responsibility aspect of the National Environmental Management Waste Act (NEMWA) - Section 18	
Latin America and the Caribbean		
Bahamas	Plastics regulations (polystyrene) • Environmental Protection (Control of Plastic Pollution) Act of 2019 National SUP Ban Use of bio-d alternatives	• EPA 2019 ○ The Act bans the import, distribution, manufacture, possession, sale, supply, or use of “single use plastic food ware” listed in the attached schedule (Art. 4(1)) and plastic bags

Country	Policies	Contents/Best Practices
		including biodegradable and oxo-biodegradable bags (Art. 7(1)). ○ The list of banned items includes polystyrene cups, polystyrene plates and food ware, plastic knives, forks, spoons, and straws. ▪ Reusable and compostable items, and plastic that is an integral part of food or drink that is sealed before arriving at the point of sale are exempt. ▪ Bags that are compostable, or used for unwrapped food; meat and fish; seeds; medicine; dry cleaning; ice for retail; used for wet umbrellas, etc. are also exempt. ○ Compostable bags may be sold. ○ Release of ballons filled with gas causing them to rise is prohibited ○ No limits to manufacture of expanded polystyrene for export.
Belize	Plastic regulation (SUP) - Environmental Protection (Pollution from Plastics) Regulations Imports ban/regulation Bio-degradable bags Return containers - Returnable Containers Act	• Environmental Protection (Pollution from Plastics) Regulations ○ Regulates the importation, manufacture, sale and possession of Restricted and Prohibited Products listed in the Schedules of the Regulations ○ Ban on importation of SUP products: ▪ Plastic “clamshells” ▪ Styrofoam and plastic plates, bowls, cups, and lids ▪ Plastic forks, knives, spoons, sporks, and cutlery ▪ Plastic carrier bags (shopping bags and t-shirt bags) ▪ Plastic drinking straws • Returnable Containers Act ○ Distributors and dealers must collect a deposit on beverage containers sold or distributed ▪ 1 gallon bottles/cans or those with less but made of plastic, glass, metal, aluminum, or steel
Brazil	Brazil has had a National Plan to Combat Waste in the Sea since 2019 National Plan of Solid Residues (goal of 45% reduction by 2031 in the amount of recuclables that go to landfills unnecessarily)	Not fully implemented Law 12,305 of 2010 • Has provisions on incentives for recycling and reverse logistics systems (EPR)

Country	Policies	Contents/Best Practices
	Law 12,305 (National Solid Residues Policy of 2010) Decree No. 11,413 (effective April 2023) on EPR[128]	• Manufacturers, importers, distributors and merchants of products sold in plastic packaging are obliged to build and implement reverse-logistics systems for use after the consumer has returned the product. The system must be independent of other public services such as urban cleaning and solid-waste management. Decree No. 11413 (effective April 2023) on EPR • Comprehensive legal framework regulating reverse logistics systems (aka take-back systems) for products and packaging in Brazil • It mandates the establishment of reverse logistics systems for products and packaging, either through collective models (where multiple companies collaborate, similar to European Producer Responsibility Organisations or PRO) or individual models (where companies operate independently). The decree mandates the establishment of reverse logistics systems for products and packaging to ensure that they are collected, processed, and reintegrated into the production process after reaching the end of their useful life. • Introduces three (3) types of certificates for proving compliance with the reverse logistics targets a. Reverse Logistics Certificate b. Environmental Compensation Certificate c. Certificate of Credit for Future Mass
	Subnational Law No. 7.465 on the obligation of using biodegradable packaging **GEOGRAPHIC COVERAGE:** Sergipe, Brazil**LEVEL:** Subnational**YEAR AGREED:** 2012 Law No. 14.128 providing for the State Policy on Recycling of Materials and the economic and financial instruments applicable to the Management of Solid Waste. **GEOGRAPHIC COVERAGE:** Minas Gerais, Brazil**LEVEL:** Subnational**YEAR AGREED:** 2001 Law No. 5.502 providing for the Replacement and Collection of Plastic Shoppers at Commercial Establishments within the State of Rio de Janeiro **GEOGRAPHIC COVERAGE:** Rio de Janeiro, Brazil**LEVEL:** Subnational**YEAR AGREED:** 2018	• Plastic material used to pack for commercial purpose must be oxo-biodegradable plastic packaging (OBO) • Encouraging the use, commercialization, and industrialization of recyclable materials • Mandatory replacement and collection of plastic shopping bags in commercial establishments in Rio de Janeiro ○ Reusable/returnable plastic shoppers and/or bags, must have a resistance of at least 4, 7 or 10 kilos more than 51% material from renewable sources, and should be made in the green colors (for recyclable waste) and gray (for other purposes), in order to assist the consumer in the separation of waste and to facilitate identification for the respective garbage collection. Commercial

[128] https://www.linkedin.com/pulse/reverse-logistics-certificates-brazils-approach-carbajosa/

Country	Policies	Contents/Best Practices
	Rio de Janeiro Law No. 8006 **GEOGRAPHIC COVERAGE:** Rio de Janeiro, Brazil**LEVEL:** Subnational**YEAR AGREED:** 2018 **KEYWORD(S):** Bags	establishments are prohibited from distribution of disposable plastic bags or bags composed of polyethylene, polypropylene or similar materials.
Colombia	Resolution No. 1558 - Prohibits the Entry of Single-Use Plastics in the Areas of the System of National Natural Parks Colombia 2019, bags, bottles Decree No. 2198/2017 - Regulation of Consumption Tax on Plastic Bags Bags National Plan for the Sustainable Management of Single-Use Plastics 2021 National Circular Economy Strategy Ley Nº 2232 – Se establecen medidas tendientes a la reducción gradual de la producción y consumo de ciertos productos plásticos de un solo uso 2022, SUPs Resolución 1407 por la cual se Reglamenta la Gestión Ambientalde los Residuos de Envases y Empaques de Papel, Cartón, Plástico, Vidrio, Metal y se Toman Otras Determinaciones 2018 Resolution 668/2016 - Regulation of the Rational Use of Plastic Bags and Adopting other Provisions Bags	*Resolucion 1407 of 2018* • Establishes the obligation for producers to formulate, implement and keep updated an environmental management plan for containers and packaging waste, which promotes the use • EPR for the producers of packaging and plastics, which must collect and process at least 10% of the products placed on the market (to be increased gradually year by year). • No incentives to achieve goals of reducing packaging and palstics *Resolucion 1558 of 2019* • Entry of SUPs is prohibited in areas of the Colombian National Natural Parks system *Law 2232* • Goal of all SUPs should be reusable, recyclable or compostable by 2030 *Resolution 668/2016* • Rational Use of Plastic Bags Program – distributors of plastic bags must formulate, implement, and keep updated the Program of Rational Use of Plastic Bags
Peru	Decreto Supremo que aprueba la reducción del plástico de un solo uso y promueve el consumo responsabledel plástico en las entidades del Poder Ejecutivo 2018, Bags Legislative Decree No. 1278 (Solid Waste Act) 2016 Supreme Decree No. 011-2010-MINAM 2010 Supreme Decree No. 006-2019-MINAM – Regulation of Law No. 30884, Law that Regulates Single-Use Plastic and Disposable Containers or Containers 2019, Bags, Bottles Law No. 30884, Law that Regulates Single-Use Plastic and Disposable Containers or Containers 2019, Bags, Bottles Reglamento Técnico sobre Bolsas de Plástico Biodegradables (Technical Regulation on biodegradable plastic bags) 2021 Lineamientos para el Desarrollo de Acciones de Comunicación, Educación, Capacitación y Sensibilizaciónsobre el Consumo Responsable y la	• Deadlines to accomplish full prohibition of SUPs and containers ○ By December 2021, every commercial establishment must progressively replace the delivery of non-reusable polymeric-based bags with reusable bags that do not generate pollution. Furthermore, the establishment is obliged to deliver for monetary consideration, the amount of plastic bags the consumer needs, informing them explicitly before they charge for it. ○ Consumption tax on plastic bags starting 2022 (gradual and is applied for the unit purchase of the plastic bags) • Prohibition of plastic use in beaches, coast, and protected areasManufacturers of PET bottles for beverages for human consumption, personal hygiene and other similar products must include post-consumer recycled PET material (PET-PCR) as input in at least 15% of its composition.

Country	Policies	Contents/Best Practices
	Producción Sostenible de los Bienes de Plástico y la Gestión Integral de sus Residuos 2021	Legislative Decree No. 1278 • Provides considerations for extended responsibility schemes, but no specific system yet for extended liability for the regulation of plastics
Uruguay	Resolución N° 272/021 - Reducción de generación de residuos plásticos. **GEOGRAPHIC COVERAGE:** Uruguay**LEVEL:** National**YEAR AGREED:** 2021 SUPs	• Prohibits the manufacture, import, distribution, sale and delivery of plastic bags that are not compostable or biodegradable (Law No. 19655) • The Decree No. 260/007 (Packaging Recycling Law, 2004) regulates Law No. 17849 and it seeks to prevent the generation of waste derived from packaging of any type, promoting the reuse, recycling and other forms of recovery of such waste, in order to avoid its inclusion as part of common or household waste. It uses the concept of extended producer responsibility (EPR), through the obligation for the producers to have management plans for packaging waste and used packaging. Manufacturers, importers, owners or representatives of a brand of packaged products that are marketed in the domestic market should (1) Use containers that due to their design and waste management system that generate, favor and ensure their adequate recovery for the recycling of high-quality materials, in which the material obtained can be entered as a substitute for raw materials to produce containers again; and (2) Include strategies to reduce the weight of the materials in the packaging in which their products are presented and to favor the use of returnable and reusable containers whenever possible.
	Law No. 19655 - Sustainable use of Plastic Bags 2018	
	Resolución N° 271/021 - Objetivos mínimos de recuperación y valorización de envases post-consumo no retornables. 2021 Bags	
	Decreto Nº 109/021 – Modificaciones del Decreto 3/019, Reglamentario de la Ley 19.655, relativa a medidas de prevención y reducción del impacto ambiental derivado de la utilización de bolsas plásticas. **GEOGRAPHIC COVERAGE:** Uruguay**LEVEL:** National**YEAR AGREED:** 2021 Bags	
	Decreto 03/019, de 07/01/2019 (Prohibición a la importación de bolsas plásticas no biodegradables) **GEOGRAPHIC COVERAGE:** Uruguay**LEVEL:** National**YEAR AGREED:** 2019 Bags	
	Law No. 19655 - Measures for the Prevention and Mitigation of the Environmental Impact Derived from the use of Plastic Bags **GEOGRAPHIC COVERAGE:** Uruguay**LEVEL:** National**YEAR AGREED:** 2019 Bags	
	Resolution 074/18, Intendencia de Salto, 2018 **GEOGRAPHIC COVERAGE:** Salto, Brazil**LEVEL:** Subnational**YEAR AGREED:** 2018 **KEYWORD(S):** Bags	
Europe		
Albania	Law n. 28/2022 on some additions and amendments to Law n. 10 463, dated 22.9.2011, on Integrated waste management.	
	National Integrated Waste Management Plan 2020-2035.	
North Macedonia	Law on Management of Packaging and Packaging Waste 2015, Bags, Bottles	• 2021 – ban on plastic bags

Country	Policies	Contents/Best Practices
	Law on packaging and packaging waste management. 2010	○ With the exception of biodegradable bags for carrying goods according to prescribed standards ○ End-users to pay for biodegradable bags for carrying goods ○ Government institutions will not be allowed to sign contracts with firms that do not have evidence that they have fulfilled their obligations under the regulation on the extended liability of the producer for managing specific waste streams
	National Waste Management Strategy 2008-2020 (unsure if it was revised to cover 2021-2032) - The draft NWMP (As of 2021) sets targets for MSW recycling at 25 % in 2025, 45 % in 2035 and 65 % in 2045 (including packaging waste)[129]	Mandatory selling of biodegradable bags by June 2023 Work Programme 2022-2024 https://vlada.mk/sites/default/files/programa/2022-2024/programme_of_the_government_2022-2024.pdf Law on Packaging - introduced EPR and obligations for the collection and treatment of packaging waste for the producers - North Macedonia EPR scheme includes packaging ○ organised either by the producers/importers independently or collectively through an agreement with a PRO, which takes over the responsibility of managing the packaging waste on behalf of the producer. The PRO is also obliged to ensure that the collection points are accessible and is responsible for informing consumers of the end-of-life treatment and benefits of recycling of the waste. The PROs report annually to the Ministry of Environment and Physical Planning, and the reports are monitored by the Department of Waste.

[129] European Environment Agency, Municipal waste management in Western Balkan countries – Country Profile: North Macedonia, 2021.

Country	Policies	Contents/Best Practices
Serbia	Regulation on the establishment of the Packaging Waste Reduction Plan for the period from 2020 to 2024 https://balkangreenenergynews.com/plastic-bags-must-be-regulated-by-comprehensive-law/ Law on the Capital City (Belgrade's basis for banning the class of plastics with thickness of 15 to 50 micrometers) Waste Management Program of the Republic of Serbia 2022-2031[130] National Sustainable Development Strategy Law on Waste Management Law on Packaging and Packaging Waste Law on Fees for the Use of Public Goods	Waste Management Program of the Republic of Serbia 2022-2031[131] - States that the general objective is to develop a sustainable waste management system in order to conserve resources, health of the people, and reduce negative environmental impact and space degradation. Law on Waste Management - Local self-government units, including cities and municipalities, are obliged to develop regional and local waste management plans and to monitor their implementation. - Law on Packaging and Packaging WasteSets the requirements in the field of environmental protection that relate to packaging and that it must be met in order to place packaging on the market; packaging and packaging waste management, reporting on packaging and packaging waste, economic instruments, as well as other relevant issues related to packaging and packaging waste management. - The law also regulates imported and manufactured packaging, i.e., packaging placed on the market, as well as packaging waste generated in business activities on the territory of the Republic of Serbia, regardless of its origin and purpose, and used packaging material. - The recycling of packaging waste in accordance with the principle of producer responsibility is supported by seven operators in the packaging waste management systems ("collective schemes"). 'Collective schemes' provide a service of taking on all obligations of manufacturers/importers. These packaging waste management operators organize the collection and recycling of packaging waste generated by the public sector and industry.

[130] https://www.ekologija.gov.rs/sites/default/files/2022-03/program_upravljanja_otpadom_eng_-_adopted_version.pdf
[131] https://www.ekologija.gov.rs/sites/default/files/2022-03/program_upravljanja_otpadom_eng_-_adopted_version.pdf

Country	Policies	Contents/Best Practices
		- Amendments to this Law are being prepared in order to further harmonize with EU Directives. Law on Fees for the Use of Public Goods - Mandatory fee for plastic bags

ANNEX B: PROPOSED STAKEHOLDER HUB CONCEPT AND DESIGN: The "Stakeholder Wheel" Towards Addressing Plastic Waste

A. Background and Introduction

Waste management, in particular that of plastic pollution, has been identified as one of the triple planetary crises along with biodiversity loss and climate change. These increasing and unprecedented challenges impact the global community and people from different walks of life – with vulnerable and marginalized populations doubly and disproportionately affected. No country, sector or industry can provide the right and effective solution. As it has been often repeated, everyone needs to do her/his part. A multi-stakeholder or a whole-of-society approach is an essential component of actions and strategies to effectively address the triple planetary crises.

On the pollution and waste management front, many laws, policies, strategies, and best practices have recognized the critical and essential role of working with all stakeholders in tackling these crises. Solutions, mandates and targets will be ineffective –and resources wasted– if key players are not considered in decision-making and find no place in interventions.

This Note will present ***the Stakeholder Hub Concept and Design*** (the SH Hub). It is a innovative recommended approach, based in the concept of the "Stakeholder Wheel", that aims to bring together the different critical and essential stakeholders for the proper and effective implementation of plastic management strategies. The discussion will begin with a brief outline of why working with stakeholders is important, followed by an overview of stakeholders approaches observed in some major international organizations and the presentation of the concept of Stakeholder Wheel, as the guiding framework for the SH Hub. Steps on how to design and eventually operationalize the SH Hub will then be discussed.

B. Why Stakeholder Engagement Matters

The importance of working and involving different stakeholders in implementing effective plastic waste management strategies cannot be over emphasized. As this issue affects almost every aspect of society and daily life, its solutions also require everyone to do their part. According to the World Bank:
[1]

> "***Stakeholders*** are persons or groups who are directly or indirectly affected by a project, as well as those who may have interests in a project and/or the ability to influence its outcome, either positively or negatively. Stakeholders may include locally affected communities or individuals and their formal and informal representatives, national or local government authorities, politicians, religious leaders, civil society organizations and groups with special interests, the academic community, or other businesses."

This approach of getting different stakeholders involved has generally been referred to as stakeholder engagement. According to the World Bank, "stakeholder engagement" is emerging as a means of describing a broader, more inclusive, and continuous process between a company

[1] WORLD BANK, Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets, page 11 available at https://documents1.worldbank.org/curated/en/579261468162552212/pdf/399160IFC1StakeholderEngagement01PUBLIC1.pdf .

and those potentially impacted that encompasses a range of activities and approaches, and spans the entire life of a project.[2] For the Asian Development Bank (ADB), stakeholder engagement is an inclusive process initiated as early as possible in the project concept design phase, and conducted throughout the preparation and implementation phases of a project cycle.[3] Also referred to as a multi-stakeholder process (MSPs), it is "a process of decision-making, consensus building, or equivalent communication among three or more stakeholders with equal representation" – unlike PPPs which are contract-based.[4]

For the US Fish and Wildlife Service, "[s]takeholder engagement enables the government to incorporate public concerns, needs, and values into projects and decisions:[5]

> "It is sometimes used interchangeably with other terms like public participation, public engagement, and community engagement. Central to all these terms is the idea that public involvement can produce better decisions with greater public support. Stakeholder engagement is an organized process. It is not a single event, but a series of activities and actions over the course of a decision process or project. It is intentional and involves seeking out public input and allowing it to have some level of influence over the decisions being made."

Stakeholder and public engagement recognizes that people should have a say in decisions about agency actions that affect their lives; it can strengthen agency decisions and improve conservation outcomes.[6] Stakeholder engagement sets up strong, constructive, and responsive relationships that are fundamental for successful assessment, management, and monitoring of a project's E&S risks and impacts and forms an integral part of informed decision making.[7] Engagement can also help build relationships and trust between the agency and the publics they serve[8]

C. Stakeholder Engagement Approaches

United Nations Environment Programme[9]

The United Nations Environment Programme (UNEP) strives to ensure effective, broad and balanced participation of Major Groups and Stakeholders as they play a central role in providing expertise and scientific knowledge, informing governments of local needs and opinions, as well as identifying the "on the ground" realities of policy decisions.[10] It recognizes and engages with nine categories of stakeholders represented by not-for-profit and non-governmental organizations, namely: Farmers; Women; Scientific and technological community; Children and

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[2] WORLD BANK, Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets, page 2 available at https://documents1.worldbank.org/curated/en/579261468162552212/pdf/399160IFC1StakeholderEngagement01PUBLIC1.pdf .

[3] https://www.adb.org/sites/default/files/institutional-document/908561/ess-10-stakeholder-engagement-draft.pdf

[4] https://rkcmpd-eria.org/wp-content/uploads/2023/09/GPAP_WEF_Report_230919-2_fin-1.pdf citing Hemmati et al. (2002)

[5] https://www.fws.gov/stakeholder-engagement/what-and-why

[6] https://www.fws.gov/stakeholder-engagement/what-and-why

[7] https://www.adb.org/sites/default/files/institutional-document/908561/ess-10-stakeholder-engagement-draft.pdf

[8] https://www.fws.gov/stakeholder-engagement/what-and-why

[9] *See* UNEP Stakeholder Engagement Handbook, available at: https://wedocs.unep.org/bitstream/handle/20.500.11822/32831/stakeholder_handbook_EN.pdf?sequence=11

[10] UNEP Stakeholder Handbook, page 14.

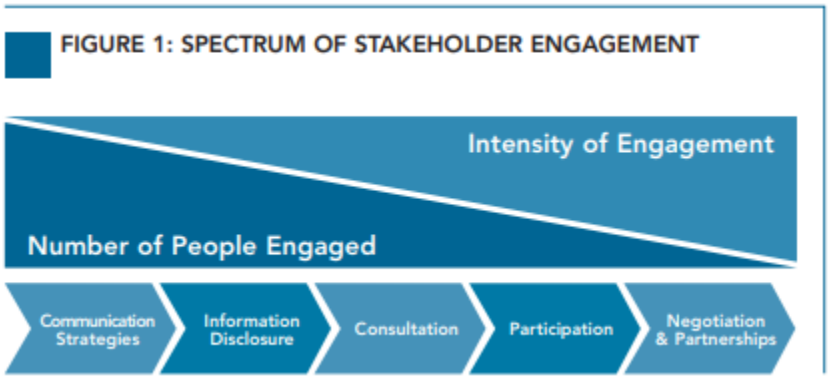
Youth; Indigenous Peoples and their Communities; Workers and Trade Unions; Business and industry; Non-governmental Organizations; and Local Authorities.[11]

UNEP has been guided by the following principles in terms of stakeholder engagement:[12]

- Acknowledgement of the intergovernmental nature of UNEP processes: decision-making within UNEP remains the prerogative of Member States;
- Participation in decision-making processes: In line with the Rules of Procedures, UNEP will grant participation and access privileges to all accredited stakeholders;
- Access to information: acknowledging the critical importance of disseminating and making accessible information concerning UNEP's work or information generated through its programme as widely as possible, in line with its Access to Information Policy;
- Transparency and accountability for mutual benefit: engagement with Major Groups and Stakeholders is based on the premise of mutual trust and benefit, transparency, responsibility and accountability;
- Respect for diversity of views and self-organization: UNEP acknowledges the diversity of views among its stakeholders and, in striving for greater openness and with a view to embracing the full spectrum of civil society actors, will ensure that those differing voices are heard, including those outside the nine Major Groups;
- Improvements to current engagement practices: UNEP will promote continuous improvement of its current practices.

The World Bank Group[13]

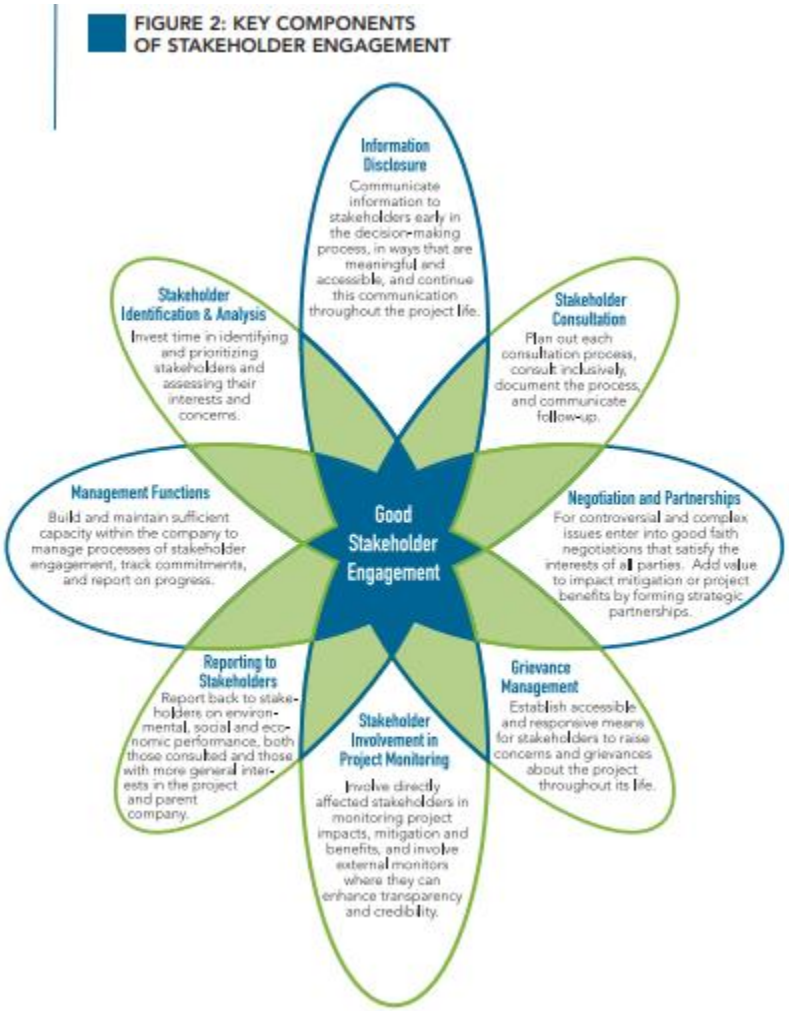
Stakeholder engagement is an umbrella term encompassing a range of activities and interactions over the life of a project.



These can be divided into eight components (see below): ■ Stakeholder Identification and Analysis ■ Information Disclosure ■ Stakeholder Consultation ■ Negotiation and Partnerships ■

[11] *Id.*
[12] *Id.* at page 15.
[13] *See* WORLD BANK, Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets available at https://documents1.worldbank.org/curated/en/579261468162552212/pdf/399160IFC1StakeholderEngagement01PUBLIC1.pdf .

Grievance Management ■ Stakeholder Involvement in Project Monitoring ■ Reporting to Stakeholders ■ Management Functions.



Asian Development Bank[14]

For the ADB, stakeholder engagement requires: (i) stakeholder identification and analysis; (ii) stakeholder engagement planning and implementation; (iii) information disclosure; (iv) meaningful consultation; (v) monitoring and reporting; and (vi) addressing and responding to grievances.

The regional multilateral development bank notes and highlights that meaningful consultation is a two-way process, that:

[14] *See* ADB Draft Stakeholder Engagement and Information Disclosure (Environmental and Social Standards) available at https://www.adb.org/sites/default/files/institutional-document/908561/ess-10-stakeholder-engagement-draft.pdf.

i. Begins early in the project planning process to gather initial views on a project proposal and inform project design;
ii. Is conducted in a transparent and accessible manner;
iii. Encourages stakeholder feedback, particularly as a way of informing project design, identification and mitigation of E&S risks and impacts, and other project implementation issues;
iv. Is undertaken in an atmosphere free of external manipulation, discrimination, coercion, intimidation, and threat of reprisal and appropriately designed to address these concerns;
v. Is continuous throughout the design, preparation, and implementation phases of a project cycle, as E&S risks and impacts arise and project benefits are recognized;
vi. Is based on early disclosure and dissemination of information in a form, language, and manner that is culturally appropriate, gender-responsive, understandable, and readily accessible to project-affected persons;
vii. Supports active and inclusive engagement with project-affected persons and is tailored to different stakeholder needs;
viii. May involve separate discussions for different project-affected persons and take into account the local languages of project-affected persons and educational differences as well as potential social bias;
ix. Considers and responds to feedback from stakeholders; and (x) Will include new or updated information relevant to a project.

A grievance mechanism is also a critical component. This process will respond to concerns promptly, effectively, and in a manner that is transparent, discreet, objective, culturally appropriate, and readily accessible to all project-affected persons. The grievance mechanism will: (i) be proportionate to the potential E&S risks and impacts of a project; (ii) be accessible and inclusive; (iii) be accessible at no cost to the complainant; (iv) allow for anonymous complaints to be raised and addressed; (v) utilize existing traditional dispute resolution methods, to the extent preferred and acceptable to project-affected persons and where feasible and suitable for a project; (vi) enable full and fair access by additional means for disadvantaged or vulnerable persons; and (vii) not preclude access to the national judicial or administrative remedies, or mediation.

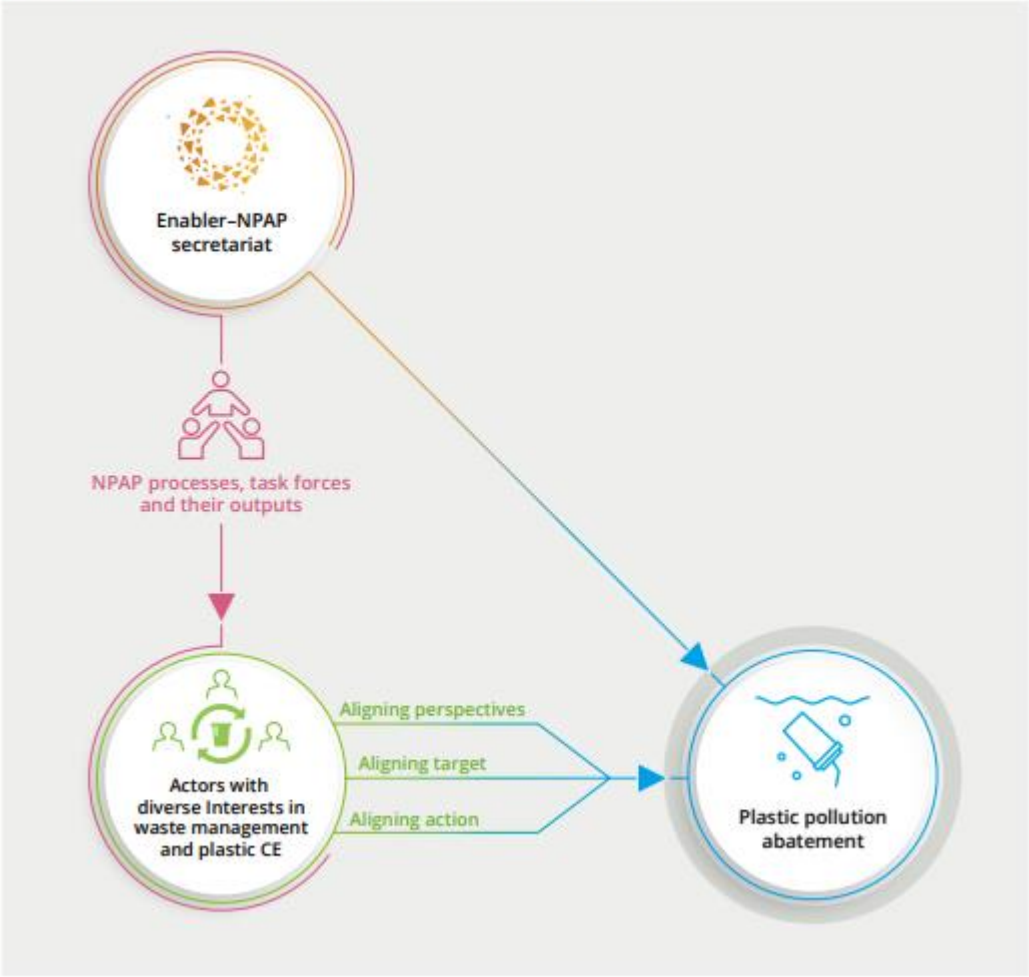
World Economic Forum Global Plastics Action Partnership[15]

The Global Plastic Action Partnership (GPAP) is the World Economic Forum's platform for translating plastic pollution commitments into concrete action. Founded by a coalition of public and private partners, it emerges as an ambitious new platform to accelerate the global response to the ballooning plastic pollution crisis. Created in 2018 as the plastics pillar of the Platform for Accelerating the Circular Economy and the Friends of Ocean Action, GPAP and our partners are championing a universal shift towards a circular economy for plastics - one that directly addresses the root causes of plastic pollution by replacing the 'take-use-dispose' model with a closed-loop approach throughout the plastics life cycle, from production to consumption to reuse.

The GPAP model highlights the role of central actors in bringing local stakeholders together to form National Plastics Action Partnerships (NPAPs) (see below).

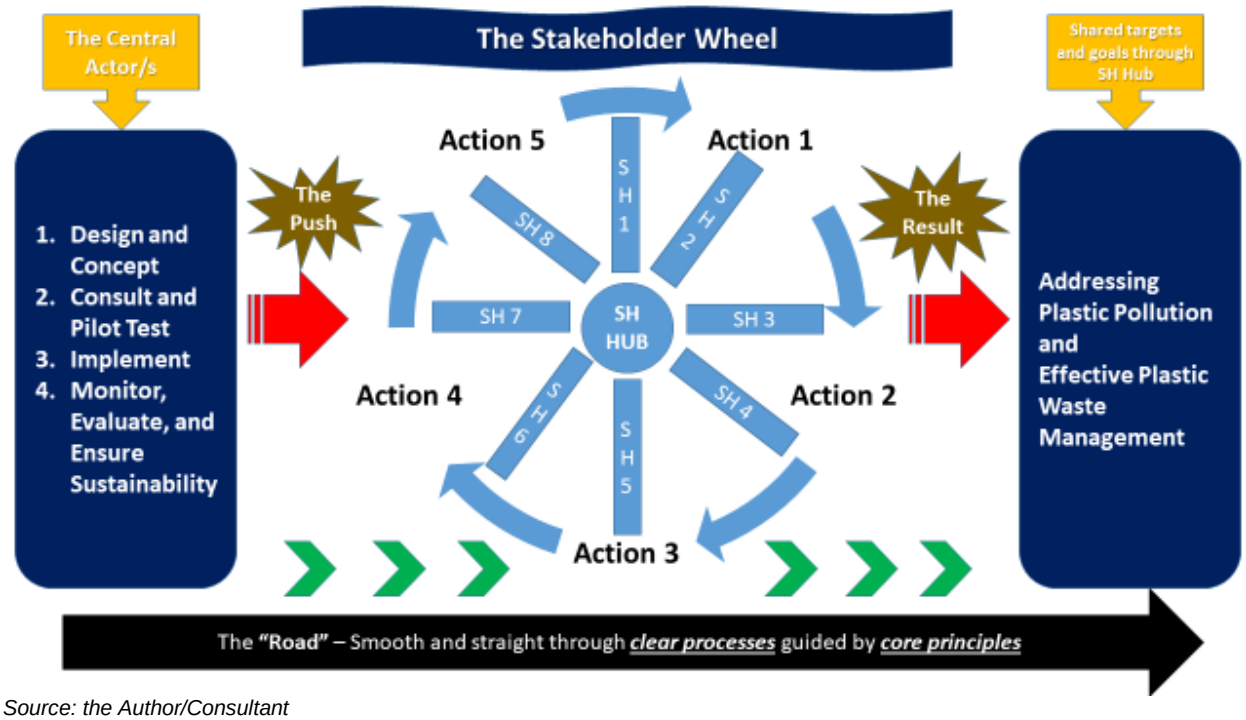
[15] *See https://www.globalplasticaction.org/* and https://rkcmpd-eria.org/wp-content/uploads/2023/09/GPAP_WEF_Report_230919-2_fin-1.pdf

Figure 3: **Role of central actor in aligning perspectives, targets, and action**



It also noted several recommendations on how to strengthen NPAPs: i) creating inter-ministerial coordination at the national level; ii) involve local government; iii) involvement of informal sector; and, iv) financial bankability.

D. The Stakeholder Wheel: A Guiding Framework for Stakeholder Engagements and SH Hubs



Source: the Author/Consultant

The Stakeholder Wheel concept is proposed to be a guiding framework for stakeholder engagement and for designing, conceptualizing, and implementing a SH Hub on plastic waste management. This section will begin by describing the elements of the Stakeholder Wheel (see image above). A discussion of each step of the initial process will be provided, as well as core principles to serve as guide for each step of the process.

Elements of the Stakeholder Wheel Concept

7. **The Wheel** – The central figure in the framework is composed of the SH Hub as the center of the wheel. Connected to it are the different stakeholders (the "spokes"), which connect the hub to the main wheel composed of action items which the different stakeholders have agreed upon.
8. **The Central Actor/s** – Taking off from discussions of the GPAP, these are key stakeholders which have been identified as critical in gathering other stakeholders into the SH Hub, or in implementing and executing agreed upon action points. Together with the initial stages, they provide the "push" to move the stakeholder wheel forward.
9. **Initial Stages** – This comprises: i) design and concept; ii) consult and pilot; iii) implement; and, iv) monitor, evaluate, and sustainability. To be discussed in more detail below, these are actions which need to be developed in establishing and successfully operationalizing the SH Hub.
10. **The "Road"** – Where the Stakeholder Wheel will move along. Ideally smooth and straight, the "road" comprises critical processes of the SH Hub and its stakeholder-members. It also includes identifying core principles to guide design and implementation – the absence of which may cause "bumps" along the way.
11. **Shared targets and goals** – Metrics to determine if the end results have been successfully and effectively achieved. These are determined through the mechanisms and processes of the SH Hub, ideally continuously evaluated and revised as needed to meet emerging challenges and changing societal conditions.

12. **The Result** – The end vision to be crafted and determined by the SH Hub mambers and stakeholders. The result and vision may vary from country to country, taking into account the local context, challenges, and conditions.

Stakeholder Hub and Stakeholder Wheel Implementation

This section will discuss the initial stages of the Stakeholder Wheel concept and framework. These are essentially the elements of the SH Hub, including processes and mechanisms, as well as core principles needed for effective implementation and execution.

Source: the Author/Consultant

1. **Design and Concept**

This stage, perhaps the most critical and challenging – and essential to get the wheel rolling – involves several activities and actions. These are presented in the suggested chronological order below

Step 1 – Identify the central actor/s – These stakeholders and key players are essential to ensure the needed "push" not only to establish the SH Hub, but also to move the SH Wheel forward. Central actors can either be those from government, or from the private sector or civil society who exercise significant positive influence on the different stakeholder groups when it comes to plastic waste management strategies. Ideally these individuals (or perhaps even agencies or organizations) have a proven track record of trust and relationship building, and has effectively worked across the different players in the stakeholder spectrum. Once involved, the central actor/s can then identify a core team to help with the next steps.

According to GPAP, central actors are critical because they can help align: i) perspectives; ii) targets; and, iii) actions.

Step 2 – Who are the stakeholders? Conduct a stakeholder mapping – Once the core team of the central actor/s has been formed, the next step is to conduct a stakeholder mapping. Important stakeholder groups include the following:

Stakeholder Group	Particular agency, office, or member	Reason/s
Government	These can be divided into national government and local (sub-national) government agencies. Agencies in the different branches of government (executive, legislative, and judiciary) should also be identified. Critical government agencies include those with functions on: • Environment • Local government (including law enforcement) • Trade and industry • Finance • Science and technology • Agriculture • Water and marine resources • Planning	Critical for enacting needed policies and regulations. Sub-national government agencies are also crucial for local and on-the-ground implementation. In many countries, primary responsibility for implementing waste management laws are with the local governments.
Private Sector/Business/Industry	This stakeholder group can be further divided into the following: • Manufacturers/Producers (including laboratories, research organizations involved in plastic manufacturing) • Importers and Distributors (including wholesalers) • Retailers and other users of products (such as restaurants, hotels, etc.) • Industry and business associations (such as chambers of commerce, clusters, etc.); or groups/associations of the above	This group can impact both the production and consumption side of plastic use and waste management. Most regulations, such as SUP bans and extended producers responsibility schemes target this stakeholder group. They can also be partners for the needed investments in waste management infrastructure; including in public-private partnership schemes
Waste management service providers (private sector)	This stakeholder group can be further divided into the following: • Operators of waste management facilities	These stakeholders typically work with the national and local government in implementing general waste

	such as sanitary landfills, co-processing facilities, or those handling hazardous waste • Recyclers, including aggregators • Transporters, haulers, organized and formal waste collectors • Operators of junk shops (registered as a business)	management laws. They are also important players in implementing EPR schemes and other waste and plastic management programs
Non-government organizations / Civil society organizations	This stakeholder group can be further divided into the following advocacy areas: • Environment and climate • Health • Consumer protection • Social justice • Urban poor (informal settler families) • Social enterprises • Academe	These organizations provide a view of a wide range of issues that are impacted by plastic waste management. They provide new information, and information from the grassroots and communities where they work with and operate This SH group can also provide new research
Grassroots and community organizations	These are groups or organizations working or operating directly with local communities. These also include associations or cooperatives of informal waste sector (IWS) workers. They are also typically involved with front-line waste management services in coordination with first-level local government units	They are also typically involved with front-line waste management services in coordination with first-level local government units They are critical stakeholders are most are the ones disproportionately affected by mismanaged waste and poorly implemented policies and regulations
International development organizations	These include UN agencies such as UNEP, or government development and aid organizations (e.g., GiZ, AfAD, etc). They also include multilateral development banks such as WB and ADB	Aside from technical assistance projects and grants, this SH group can also provide needed financial assistance for critical infrastructure in the form of official development assistance, loans, and leveraging private sector financing

Step 3 – Establish organizational and membership parameters – These will form part of the SH Hub "Rules of Engagement" (RoE). Essential RoE are the following:

- *Organizational structure* – the hierarchy (or can be linear), of the SH Hub. This can include the leadership, governing board/advisory board, and identification of sub-groups/committees on critical issues and actions points

- *Overall vision and goal* – what the SH Hub hopes to achieve, ideally quantifiable and can be shared by a broad range of SH and actors
- *Membership and accreditation* – to provide clarity on who is part of the SH Hub. This also helps ensure accuracy and transparency of information on the membership. This should ideally include the following from members: i) focal person of the member; ii) contact information; iii) expertise or specialization; iv) services, or potential contribution to the SH Hub; v) highlight project, acvitivity, policy, action – a best practice which other SH Hub members can emulate or take inspiration from.
- *By-laws* – how the SH Hub will operate and function. This includes regular meetings, establishing databases, public access to SH Hub information; feedback processes for the public; grievance mechanisms (internal and external); continuity of membership, including identifying focals and electing leadership (managing transitions); monitoring and evaluation processes; public communication strategy, including information and education campaigns.
- *Secretariat functions* – who will host the secretariat and where, mandated to look after the day-to-day operations of the SH Hub and its members. It might be through a government office or agency, created by law or regulation; or will it be private-sector or market driven and organized?
- *Timelines and Roadmap* – an initial timeline of when these initial actions and steps (including subsequent ones below) will be implemented. This will help guide actions and hold members accountable to commitments and targets.
- *Funding* – identify how the SH Hub will be funded – member contributions, government funded (if hosted by the government), donations, or conduct of fund raising activities
- *Partnership strategies* – methodology and plans to expand membership and to be on the lookout for potential new partners for the SH Hub

Step 4 – Agree on core principles, actions points, and targets – Along with the RoE as outlined above, the SH Hub members must identify core principles which will guide organization and implementation of the SH Hub. The members must also agree on what action points must be included or prioritized, and also what the shared targets and goals will be.

Some core principles which ideally must be included are:

- Human-rights based approach – there must be a recognition that plastic waste management and strategies impact human rights, particularly the right to a clean and healthy environment. This includes awareness of the impact on IWS, women and children, indigenous peoples, persons with disabilities, among many others
- Mutual respect and partnership – SH Hub members must recognize and respect the diversity of views of its different members. There should be non-discrimination of membership in the SH Hub – those willing and able to contribute must be allowed to join and participate in whatever capacity they can.
- Transparency – all processes must be transparent and open to the public, especially since government officials and agencies are involved. This also acknowledges that the whole society is affected by this critical issue.
- Access to information – SH Hub members and the general public should be able to easily and effectively access information not just on the SH Hub members, but also on its activities and interventions in implementing the action points. This will help generate public support for the SH Hub activities. Information must be

culturally appropriate, gender-responsive, understandable, and readily accessible by those most affected and the general public.

- Public participation – the general public and those affected by specific issues and action points must be able to participate in SH Hub processes and activities. Digital and modern technologies can be used (i.e., online and virtual meetings). However, it must be recognized that many vulnerable groups might not have access, or have effective means of using these technologies.
- Accountability – SH Hub members, especially its leadership, must be accountable for its actions and in implementing its plans and programs.

The action points and targets should ideally be agreed upon by the SH Hub members; or an initial list can be crafted by the central actor/s and core group, for approval and/or ratification by the members. These action points and targets must address the most critical plastic waste challenges of the country; or what the SH Hub thinks must be prioritized, leveraging the strengths of its membership.

*2. **Consult and Pilot***

Step 5 – Broader public consultations and pilot testing – Once the RoE, core principles, actions points, and targets have been outlined, broader and wider public consultation can take place. This will help ensure that all critical issues, including crucial stakeholder groups, have been identified. Meaning consultations can help gather support for the implementation and execution stage of the SH Hub, and its action points. Targets can also be adjusted based on what the broader public is willing to support, or perhaps what they are willing to "bite" or sacrifice.

Consultations should take into account geographical considerations, language barriers and requirements, method and manner of the activity, and ensuring participation of as many stakeholder groups and sectors as possible. Consultations can also be designed on a per stakeholder group basis, with mixed/broad consultation to be conducted at the latter stages.

The SH Hub design and structure can also be pilot tested in select areas or regions in the country to see if it can be replicated or implemented at a national (or even regional/international) level.

*3. **Implement***

Step 6 – Execution and launch – This public launch of the SH Hub can be done once wider public consultations have been completed and the RoE, actions points, core principles, and targets have bene ironed out and finalized. This can also be an opportunity to call on more stakeholders to participate in and support the SH Hub activities.

The execution should be guided by a timeline or roadmap which was developed and finalized during the initial stages discussed above.

*4. **Monitor, Evaluate, and Sustainability***

Step 7 – Monitor and Evaluate – This is a critical yet often overlooked stage of the process. It is important to regularly monitor the implementation of the action points and meeting the roadmap timeline. This is to ensure accountability and transparency in the process. There should also be a mechanism for evaluation wherein in action points and other interventions will be

reviewed to check on their effectiveness. This also helps ensure that the SH Hub and its implementation does not cause other issues, or impacts other rights and obligations in society.

Step 8 – Keep the momentum going/ sustainability – The RoE and other parameters of the SH Hub should ideally have been able to put in place mechanisms to ensure the continuity and sustainability of the SH Hub, to meet its roadmap and timeline, and to eventually achieve its goals and targets. The SH Hub core group and Secretariat must ensure that the initial "push" and movement of the SH Wheel is not wasted and that the momentum is kept going. This can be done through the monitoring and evaluation processes, as well as through regular and constant public consultations and regular release of information, education and communication campaign materials.

The Secretariat must also ensure that the work of the SH Hub is disseminated to potential partners, donors, and members to continuously garner support for the work of the SH Hub.

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