

Overarching opportunities and priorities

- **Explore the possibility of a multilayer data and information hub:** There is a need to bring together data, methodologies, science and best practices on marine litter and microplastics at the national, regional and global level. In terms of data, an information hub could incorporate in situ data, data from satellites and remote sensing, global models and citizen science.
- **Analyze data availability and data gaps:** There is a need to understand the availability and quality of information on the sources, flows, extent, risks, impacts and exposure covering the full life cycle of plastics and microplastics - what exists, and for what geographic locations, national and regional. This would also help inform capacity building efforts in Small Island Developing States and other countries with less developed monitoring systems.
- **Promote research and the link between science and policy:** There is a need to make scientific information accessible and useable for policy through improving the science-policy interface. On many issues, there is sufficient information to act now to address concerns, but additionally, there are many research topics related to marine litter and microplastics where more information is needed. A mechanism for bringing together scientific knowledge, research and efforts of different global bodies and researchers could be explored.
- **International collaboration on monitoring:** International collaboration between stakeholders is essential. A global mechanism for monitoring could be considered in order to help inform policy and assist in reaching global ambitions, legal reform and improve knowledge on marine litter and microplastics.
- **Timing:** A global partnership or informal mechanism on monitoring could be a short term option in order to promote short-term wins while pursuing longer term objectives. Keeping the status quo will not result in the action needed; however, there is a need for action even without a global instrument entering into force. Following the example of the Minamata Convention, a global partnership could be established in parallel with the negotiating process.

Underlying principles for improving monitoring and reducing barriers

- **Open access data and information sharing:** Data and information on marine litter and microplastic should be available on an open access platform. There is a need to make methodology, terminology and information more harmonized, standardized, accessible and useable. This would require international collaboration and engagement.
- **Utilize existing data and mechanisms:** The experiences of the Regional Seas and existing data collection mechanisms should not be duplicated.
- **Galvanizing public interest in data:** The public can be engaged in data collection and use through Citizens Science, educational, and other programmes. This would both improve data and increase public ownership of data, along with awareness on impacts.
- **Financial resources:** Identifying financial resources for data collection and processing underlies the ability to effectively monitor.
- **Life-cycle approach/recycling/reduction:** Monitoring should encompass a national inventory approach which includes not only monitoring of plastic in the ocean or plastic waste, but plastic production, importation, and recycling.
- **Consumer awareness for behavioral change:** Information and data must be communicated in a way that builds awareness of the public so that consumers can make informed decisions. This includes sharing clear reduction and prevention targets with the public.
- **Up-to-date information:** There is a need for information on the state of global marine environment with regard to marine litter and microplastics including cumulative effects of actions taken towards reducing marine litter and microplastics based on existing data and information. This includes the identification of hotspots.

Elaboration of research and Information priorities

- **Transparency on plastics:** Tracking and labelling of plastics and microplastics by type of plastic, including plastic related e-waste and additives (and toxicity) in plastics, is needed.
- **Microplastics:** Understanding the sources of microplastics and nanoplastics, and their impacts on human health, ecosystems and socio-economic costs is a priority.
- **Trade-offs:** Understanding when the alternative to plastic is worse than the use of plastics is a challenge – areas could include food safety, medical uses etc. Trade-offs need to be understood and managed in life-cycle approaches.
- **Research on emerging issues:** A non-exhaustive list of emerging research topics includes research related to alternatives to single-use and problematic plastics (e.g. non recyclable); import and export patterns of plastic raw material, products and waste; the health and environmental implications of additives; sources of plastics and microplastics by type, location, quantity, distribution and flow; the contribution of the fishing industry and other sea-based sources of pollution; illegal imports and exports; and the impacts of policy interventions and existing actions.

Potential policy considerations and actions

- **Data sharing between governments, industry and relevant stakeholders:** Data sharing mechanisms which facilitate the sharing of data between partners in a way that ensures transparency and trust in data would help build an environment of collaboration. Guidelines and data validation considerations should be included in any data sharing mechanism.
- **Waste management systems:** Not all waste management systems have the same capabilities. There is a need to consider the type of plastics entering the market versus the ability of a national waste management system to manage waste – a one-size-fits-all approach may not work.
- **Types of plastics:** It may be useful to identify main types of plastics which could be promoted and the use of other types of plastics could be discouraged.
- **Illegal imports:** There is a need to identify ways to strengthen customs to prevent illegal importing.
- **Regional planning and action:** Regional action can help reduce plastic pollution and promote healthy marine environments. There are existing regional actions which have demonstrated success by various Regional Seas Programmes and regional fisheries organizations.

How monitoring relates to an international governance and architecture

- **Global monitoring architecture:** Monitoring is relevant for all options. However, the mechanism for monitoring will depend on the requirements elaborated in any legally binding or non-legally binding option pursued.
- **Multilateral environment agreements (MEAs):** Existing MEAs, such as the Basel, Stockholm, MARPOL, London, Regional Seas Conventions and UNFCCC, can support information on monitoring; however, the current MEAs do not provide a framework which would capture national plastic production, use and international trade and some other topics. There is a need for an harmonized and comprehensive monitoring approach that takes into consideration upstream information, production patterns, design and use (an examples of a governance approach that take into consideration the whole life cycle is the Montreal Protocol).