

G7 INNOVATION CHALLENGE TO ADDRESS MARINE PLASTIC LITTER

Plastics are one of the most revolutionary inventions of the past century and play an important role in our economy and daily lives. They are used in almost everything from cars, appliances and construction to packaging and food services, because they are low cost, durable and versatile. This Challenge provides an opportunity to spur innovation while promoting both environmental well-being and economic prosperity. The Challenge will also help retain the significant value, resources and energy lost in plastic waste, as well as minimize threats to the environment.

All countries face difficulties in addressing marine plastic pollution. G7 members are well positioned to share their expertise and promote innovations that can be used elsewhere, including among countries that are large sources of marine plastic litter. This G7 challenge is designed to stimulate innovations, raise awareness of how to address marine plastic litter or facilitate much needed improvements to the management of plastic, especially plastic waste, in developing countries. Scalable solutions are needed to foster a more sustainable use of plastic products and reduce plastic waste and marine plastic pollution including technological and social innovations in plastics design and production, use, reuse, as well as management of plastic waste.

G7 members are part of a larger global community committed to addressing marine plastic pollution. We acknowledge the essential role that the private sector, innovators and entrepreneurs play in developing innovative alternatives and solutions for increasing resource efficiency and circular economy in the use of plastics and plastic products by using their expertise, knowledge, and relationships.

‘Innovation challenges’ are a recognized and effective mechanism by which solutions can be developed and implemented in an economically viable way, as well be responsive to countries’ needs and target recipients.

While respecting each participating member’s expertise and reflecting national priorities, G7 members commit to undertake international and/or domestic initiatives, individually or jointly, in support of a common objective to promote innovation in addressing marine plastic pollution by managing plastics more sustainably throughout the whole life-cycle. G7 plastic initiatives will respond to varied individual country needs accordingly. For example, domestic initiatives could focus on plastic design or recycling questions in accordance with national needs, while international efforts could respond to the need for support in improving waste management systems or creation of secondary markets. G7 members commit to sharing information their activities in support of this Challenge through the G7 Alliance on Resource Efficiency.

In implementing the Challenge, G7 initiatives will aim to:

- Leverage, build on, and complement existing initiatives throughout the plastics lifecycle.
- Leverage the strength of a diversity of expertise, including entrepreneurs, innovators, small to medium enterprises, researchers, not for profit organizations, and/or large multinational companies.
- Support gender equality, women’s empowerment and women’s leadership.
- Encourage innovative solutions that are sustainable, feasible, lasting, economically viable, and scalable (scaling up of an existing initiative; or developing new initiatives that can be scaled up through mechanisms such as blended finance) as well as reflect local and regional circumstances and gender dimensions.
- Develop and maximize effective relationships by leveraging implementation mechanisms including international financial institutions such as the World Bank, Inter-American Development Bank, and Asian Development Bank, as well as pursuing alternative approaches including philanthropic foundations.

The overall objective of the Challenge is to incentivize the development of innovative social or technological solutions for a more sustainable management of plastics throughout their lifecycle in order to increase resource efficiency and to reduce marine plastic pollution including by finding innovative ways to enhance waste management of plastics that may become marine litter. More specific objectives to encourage innovation could include:

- **Product Design and Waste Prevention**

- Developing new product designs and management processes to increase resource efficiency and the durability, reusability and recyclability of plastic products, in particular those that are not currently recycled.
- Supporting technologies for repair, refurbishment and remanufacturing of plastic products.
- Developing processes to incorporate recycled content in local manufacturing processes and products to create markets for collected and recycled materials.
- Developing and using more sustainable plastics and environmentally sound alternatives within a context of science-based and lifecycle decision-making and in consideration of environment, social and economic factors. This may include areas of focus such as single-use plastics, packaging and other sources of marine litter.
- Developing solutions that reduce microplastics in products and reduce by design, to the extent possible, unintentional release of microplastics by wear and tear of products during their use.
- Improving production processes to minimize loss of plastic materials, including pellets and maximize resource efficiency in the use of the materials.

- **Waste and Wastewater Management and Clean-up**

- Supporting major source countries to manage waste (e.g. collection, sorting, treatment, recovery, refurbishment and recycling, disposal, infrastructure, legal frameworks) in a manner that is cost-effective and transferable in order to prevent plastics from entering the environment.
- Developing new cost-effective technologies and infrastructure to collect, recycle and treat plastic waste, including mobile and small scale technologies.
- Promoting technologies to improve collection and facilitate recycling or recovery of single-use plastics.
- Using technology to make it easier for remote and small island developing states to prevent and manage plastic waste.
- Developing new and utilizing existing technologies and processes to prevent plastic litter and microplastics entering water bodies through improved storm water and waste water management, effectively cleaning-up marine plastic litter from waterways and shorelines in an environmentally sound manner.
- Strengthening measures to prevent plastics entering the sea from fishing (including ghost gear) and shipping, and to ensure adequate reception facilities in ports to collect and manage the waste from ships and facility users (including passively fished waste and old/derelict fishing gear).
- Creating new technologies and processes or improving existing technology to recycle mixed plastic wastes.

- Developing cost-effective processes to reduce contamination during the collection and recycling process.
- **Markets, education and awareness**
 - Developing business models and approaches to establishing new markets and value for used and recycled plastics to achieve environmental, social and economic benefits, including supporting local entrepreneurs in major marine plastics source countries.
 - Supporting the development of markets for recycled plastics through greater use of secondary plastics into finished products.
 - Creating innovative partnerships along the plastic value-chain to reduce plastic waste and plastic pellets losses.
 - Supporting community-based approaches to changing behaviours towards reducing, reusing plastics, or recycling plastic wastes.
 - Supporting plastic waste mitigation approaches through socially innovative solutions (e.g. education, innovative alliances, relationships, connectors, enabling conditions, etc.).
 - Supporting local and indigenous solutions and initiatives of women and youth, that can be leveraged to support plastic waste mitigation approaches.
 - Forging public-private partnerships to improve plastic waste management in major marine plastics source countries.
 - Developing, harmonizing, and sharing methodologies for monitoring and assessing marine litter and microplastics, including their amount and distribution, as well as related environmental and human health impacts.

Examples of Implementation Mechanisms

- Public-private partnerships (domestic and international).
- Domestic mechanisms within each G7 member.
- Multilateral organizations efforts such as World Bank Problue – new umbrella multi-donor trust fund in support of the Bank’s Global Blue Economy Strategy through consultations with their governing bodies.
- Third party organizations –external private organizations who leads leveraged, incentivized prize competitions with ambitious goals, that target market failures, that can be won by small groups and ultimately that is achievable.

Source: <https://g7.gc.ca/en/g7-presidency/themes/working-together-climate-change-oceans-clean-energy/g7-ministerial-meeting/joint-chairs-summary/g7-innovation-challenge-address-marine-plastic-litter/>