Beyond plastic waste

With more than 8 million tons of plastic entering the ocean each year, humanity must urgently rethink the way we make and use plastics, so that they do not become waste in the first place.

Cheap, light, and versatile, plastics are the dominant materials of our modern economy. Their production is expected to double over the next two decades. Yet, only 14% of all plastic packaging is collected for recycling after use, and vast quantities escape into the environment. This not only results in a loss of $80 billion to $120 billion per year to the global economy, but if the current trend continues, there could be more plastic than fish by weight in the oceans by 2050.

Some companies have started changing their habits. Unilever, for example, has promised that by 2025, all its plastic packaging will be fully reusable, recyclable, or compostable in a commercially viable manner. Given that up to a third of all plastic packaging items are too small (such as straws and sachets) or too complex (such as multilayer films and take-away coffee cups) to be economically recycled, achieving these commitments will require a great degree of redesign and innovation.

Such company commitments and innovations are a step in the right direction. But creating a plastics system that works will require collaboration among all participants in the plastics sector. The New Plastics Economy, an initiative led by the Ellen MacArthur Foundation, presents a vision for a system in which all plastic materials are reused, recycled, or safely composted in a controlled way. Public-private dialogue around policy design must be at the heart of any serious system shift, and policy-makers have important roles to play in setting a direction for the industry and putting in place mechanisms to help it get there faster.

Policy-makers may, for example, regulate the use of certain polymers, other chemicals, or particular applications of plastic. Such action can be effective, cost little, and garner public support. Bans on or charges for single-use shopping bags have, for example, led to rapid reductions in their use in France, Rwanda, and the United Kingdom. A few uncommon types of plastic used in packaging are too expensive to recycle and should be phased out. A science-based approach is needed to replace chemicals such as endocrine disruptors that are found in some plastics and pose a risk to human health.

Such restrictions need to be complemented by mechanisms that foster innovation. Policy-makers can connect the design of plastic packaging with its collection, sorting, and subsequent reuse, recycling, or composting by supporting deposit-refund schemes for drinks bottles, as in Germany and Denmark, or by requiring producers to consider what happens to their packaging products after use. A useful policy approach is extended producer responsibility (EPR), which makes producers responsible for the entire product life cycle. EPR policies have been introduced in European Union legislation and at the national level for packaging, batteries, vehicles, and electronics. Such policies can support good design and improve the economics of after-use options for packaging materials.

However, the most potent tool for policy-makers remains the setting of a clear common vision and credible high-level ambitions that drive investment decisions. In the case of plastics, a crucial pillar of such a policy ambition must be stimulating scientific breakthroughs in the development of materials that can be economically reused, recycled, or composted.

Public- and private-sector financial commitments to combat ocean pollution totaled 7.2 billion euros at the Our Ocean conference this year alone. The task now is to harness this goodwill to make sure that plastics stay in the economy and out of the oceans.

―Dame Ellen MacArthur

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