



SINGLE-USE PLASTICS

A Roadmap for Sustainability Copyright © United Nations Environment Programme, 2018

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Foreword



Plastic is a miracle material. Thanks to plastics, countless lives have been saved in the health sector, the growth of clean energy from wind turbines and solar panels has been greatly facilitated, and safe food storage has been revolutionized.

But what makes plastic so convenient in our day-to-day lives – it's cheap – also makes it ubiquitous, resulting in one of our planet's greatest environmental challenges. Our oceans have been used as a dumping ground, choking marine life and transforming some marine areas into a plastic soup. In cities around the world, plastic waste clogs drains, causing floods and breeding disease. Consumed by livestock, it also finds its way into the food chain.

Plastic packaging accounts for nearly half of all plastic waste globally, and much of it is thrown away within just a few minutes of its first use. Much plastic may be single-use, but that does not mean it is easily disposable. When discarded in landfills or in the environment, plastic can take up to a thousand years to decompose.

The good news is that a growing number of governments are taking action and demonstrating that all nations, whether rich or poor, can become global environmental leaders. Rwanda, a pioneer in banning single-use plastic bags, is now one of the cleanest nations on earth. Kenya has followed suit, helping clear its iconic national parks and save its cows from an unhealthy diet.

Learning from the experience of countries that have introduced bans and regulations on single-use plastics, this assessment analyses what has worked well, what hasn't, and why. The report is therefore a tool for policymakers who intend to introduce measures to regulate the production and use of disposable plastics.

The assessment shows that action can be painless and profitable – with huge gains for people and the planet that help avert the costly downstream costs of pollution. In addition, action will drive the kind of innovation that will underpin the future global economy we need.

Plastic isn't the problem. It's what we do with it. And that means the onus is on us to be far smarter in how we use this miracle material.

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Acronyms

- CO, Carbon Dioxide
- **EPS** Expanded Polystyrene
 - EU European Union
- **GDP** Gross Domestic Product
- HDPE High-Density Polyethylene
- LDPE Low-Density Polyethylene
- MSW Municipal Solid Waste
 - Mt Metric ton
- **NEMA** National Environmental Management Authority
 - NGO Non-Governmental Organization
 - **PE** Polyethylene or polythene
 - **PET** Polyethylene Terephthalate
 - PHA Polyhydroxyalkanoates
 - PLA Polylactic Acid
 - PP Polypropylene
 - **PS** Polystyrene
 - PVC Polyvinylchloride
 - **SIDS** Small Island Developing States
- **UNDP** United Nations Development Programme
- **UNEP** United Nations Environment Programme
- **WTP** Willingness to Pay

Executive summary

The benefits of plastic are undeniable. The material is cheap, lightweight and easy to make. These qualities have led to a boom in the production of plastic over the past century. This trend will continue as global plastic production skyrockets over the next 10 to 15 years. We are already unable to cope with the amount of plastic waste we generate, unless we rethink the way we manufacture, use and manage plastics. Ultimately, tackling one of the biggest environmental scourges of our time will require governments to regulate, businesses to innovate and individuals to act.

This paper sets out the latest thinking on how we can achieve this. It looks at what governments, businesses and individuals have achieved at national and sub-national levels to curb the consumption of single-use plastics. It offers lessons that may be useful for policymakers who are considering regulating the production and use of single-use plastics.

The Age of Plastic - why we need to change

Since the 1950s, the production of plastic has outpaced that of almost every other material. Much of the plastic we produce is designed to be thrown away after being used only once. As a result, plastic packaging accounts for about half of the plastic waste in the world. Most of this waste is generated in Asia, while America, Japan and the European Union are the world's largest producers of plastic packaging waste per capita.

Our ability to cope with plastic waste is already overwhelmed. Only nine per cent of the plastic waste the world has ever produced has been recycled. Most ends up in landfills, dumps or in the environment. If current consumption patterns and waste management practices continue, then by 2050 there will be around 12 billion tonnes of plastic litter in landfills and the environment. By this time, if the

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