



# PSA-029-Waste Plastic-Worlds Oceans

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Vic Ferguson

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*The World Federation for Coral Reef Conservation 281.971.7703 P.O. Box 311117 Houston Texas 77231*  
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\$80bn to \$120bn of Plastic Packaging Wasted Each Year Yesterday, 11:47

## Report: Oceans to Contain More Waste Plastic than Fish by 2050

There will be more plastic by weight in the ocean than fish by 2050, a new report from the World Economic Forum and the Ellen MacArthur Foundation has warned today.

By [Ben Messenger](#)

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According to the report, The New Plastics Economy: Rethinking the future of plastics, between \$80 and \$120 billion of plastic packaging enters the waste stream each year, with significant environmental implications.

The report was produced, with McKinsey & Company as a knowledge partner, as part of Project MainStream - a collaboration between the Ellen MacArthur Foundation and the World Economic Forum, with analytical support from McKinsey & Company.

According to the authors it provides for the first time a vision of a global economy in which plastics never become waste and outlines concrete steps towards achieving the systemic shift needed.

Assessing global plastic packaging flows the report found that most plastic packaging is used only once; 95% of the value of plastic packaging material, worth \$80 billion-\$120 billion annually, is lost to the economy after a short first use.

The 'New Plastics Economy' outlined in the report envisages a fundamental rethink for plastic packaging and plastics in general – a new model based on creating effective after-use pathways for plastics; drastically reducing leakage of



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plastics into natural systems, in particular oceans; and finding alternatives to crude oil and natural gas as the raw material of plastic production.

“This report demonstrates the importance of triggering a revolution in the plastics industrial ecosystem and is a first step to showing how to transform the way plastics move through our economy,” commented said Dominic Waughray, Head or Public-Private Partnership, World Economic Forum .

“To move from insight to large-scale action, it is clear that no one actor can work on this alone. The public, private sector and civil society all need to mobilise to capture the opportunity of the new circular plastics economy,” he continued.

### **Seeing double**

The report found that the use of plastics has increased twentyfold in the past half-century and is expected to double again in the next 20 years. While plastics and plastic packaging are an integral part of the global economy and deliver many benefits, the report said that their value chains currently entail significant drawbacks.

“Linear models of production and consumption are increasingly challenged by the context within which they operate – and this is particularly true for high-volume, low-value materials such as plastic packaging,” said said Dame Ellen MacArthur, Ellen MacArthur Foundation.

“By demonstrating how circular economy principles can be applied to global plastic flows, this report provides a model for achieving the systemic shift our economy needs to make in order to work in the long term.”

The authors said that achieving the systemic change needed to shift the global plastic value chain will require major collaboration efforts between all stakeholders across the global plastics value chain – consumer goods companies,



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plastic packaging producers and plastics manufacturers, businesses involved in collection, sorting and reprocessing, cities, policy-makers and NGOs.

The report also proposed the creation of an independent coordinating vehicle to set direction, establish common standards and systems, overcome fragmentation, and foster innovation opportunities at scale

### **New Plastics Economy**

In line with the report's recommendations, the Ellen MacArthur Foundation said that it will establish an initiative to act as a cross-value-chain global dialogue mechanism and drive the shift towards a New Plastics Economy.

"Plastics are the workhorse material of the modern economy – with unbeaten properties," said Martin R. Stuchtey, McKinsey Center for Business and Environment. "However, they are also the ultimate single-use material."

"Growing volumes of end-of-use plastics are generating costs and destroying value to the industry. After-use plastics could – with circular economy thinking – be turned into valuable feedstock. Our research confirms that applying those circular principles could spark a major wave of innovation with benefits for the entire supply chain," he added.

According to the authors, the report's findings are timely: knowledge and understanding of the circular economy among business leaders and policy-makers is growing, as demonstrated by the European Commission's recent circular economy package and associated funding announcements; new technologies are unlocking opportunities in material design, reprocessing and renewable sourcing; developing countries are investing in after-use infrastructure; and governments are increasingly considering – and implementing – policies around plastic packaging.

### **Advanced Recycling**



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One of the 40 participants that collaborated on the report was Swindon, UK based Recycling Technologies. The company has developed technology which enables unrecyclable mixed plastics to be [recycled](#) into a hydrocarbon product it calls Plaxx™.

According to the company the product, which is solid at room temperature and easily transported for multiple uses, can be used as a feedstock for more plastic and is also a Slack Wax equivalent and can be sold globally for this purpose.

Alternatively the company said that it can be used as a low sulphur Heavy Fuel Oil, which can be used for heating, power generation or marine propulsion.

“Our approach utilises a series of scaled chemical processes to convert residual plastic waste into Plaxx™ - an ultra-low Sulphur hydrocarbon product,” commented Adrian Griffiths, CEO, Recycling Technologies. “We hope that this will help the UK and other nations achieve the new European circulatory targets and reduce the need to import virgin oil feedstock.”

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### [First-of-Kind Study into 20 Different Waste Streams Entering the Oceans](#)

A study looking at the impact of 20 different waste streams on marine life has been published by Washington D.C. based non-profit environmental advocacy group, Ocean Conservancy and the Commonwealth Scientific and Industrial Research Organization.

### [Waste Management Key to Cleaning up Oceans](#)

Discarded plastic, industrial waste and unwanted fishing nets are still a growing problem for the world's oceans,



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despite decades of efforts to reduce such marine debris. However, a new set of commitments - set out during the recent Fifth international Marine Debris Conference - hope to encourage the sharing of technical, legal and market-based solutions to reduce marine debris.

### Waste Plastic Particles Putting Great Lakes Food Chain at Risk

The North American Great Lakes have become polluted with a huge amount of microscopic waste plastic debris, according to scientists reporting at the 245th National Meeting & Exposition of the American Chemical Society

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*The only thing necessary for the triumph of evil is that good men do nothing" ....**Edmund Burke***