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From oil use to ocean pollution: five facts about the plastics industry

A new report released at Davos highlights some startling facts about the huge environmental and resource impacts of a fast growing plastics industry



Global use of plastics has increased 20 times in the last 50 years. Photograph: Beawiharta/REUTERS

The world of plastics is in drastic need of reform. This is the conclusion of a new report released at Davos by the World Economics Forum, the Ellen MacArthur Foundation and consultancy firm McKinsey. Here are five of its most startling facts:

The plastics industry uses as much oil as the aviation sector

Plastic waste is a resource issue as much as an environmental one. “At the moment the plastics industry takes up roughly 8% of oil production, and [given projected growth in consumption] it’s forecast to rise to 20% by 2050,” explains Joss Blériot, executive lead for editorial and policy at the Ellen MacArthur Foundation. “That means we end up with an explosion of the weight of plastic within the system and if it doesn’t get captured it’s a massive economic loss.”

One truck of plastic waste is dumped into the ocean every minute

At least 8m tonnes of plastics leak into the ocean every year, the equivalent of dumping the contents of one garbage truck every minute into the ocean. At present this adds up to more than 150m tonnes of plastics in the ocean, and by 2050 the weight of plastic is likely to outweigh that of fish.

Plastic waste is already having a profound impact on oceans and marine life. It is found inside animals throughout the ocean food chain, from mussels to sea turtles to whales, and is likely to end up in the human food chain.

Plastics use is expected to quadruple by 2050

Plastic production has increased 20 times in the last 50 years from 15m tonnes to 311m tonnes and, according to the report, is predicted to reach 1,124m tonnes by 2050. But much of the value is lost to the economy. The report estimates that 95% of the material value of plastic packaging - worth as much as \$120bn (£84bn) annually - is lost to the economy after a short first use.

Just 5% of plastic packaging is recycled

Despite the launch of the first universal recycling symbol more than 40 years ago, only 14% of plastic packaging is collected for recycling. After losses in sorting and reprocessing, only 5% of total material value is retained for second use.

Due to its low value, high volume nature there is little economic incentive to capture plastic and little investment is put towards building the infrastructure to do so. An estimated 40% of global packaging material is sent to landfill, 32% is leaked into the environment and 14% is used in energy recovery.

Simple solutions may stifle innovation

Currently consumer goods are mostly made from mixed plastics which are only suitable for downcycling (conversion into less valuable or less useful products). It should therefore be simple: create one single recyclable material that can be used worldwide to make everything from peanut butter tubs to shampoo bottles.

However, Joe Murphy, a network manager at the Ellen MacArthur Foundation who worked on analysis for the report, warns there is a tension between encouraging simplification and inhibiting innovation. The function of high performing mixed plastic which extends the shelf life of food, for example, would not be something on which to compromise.

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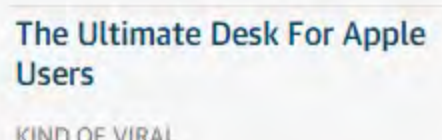
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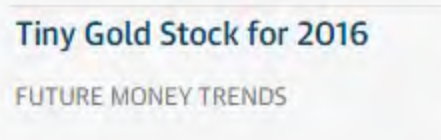
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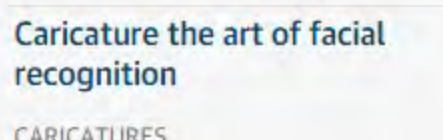
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