

American Chemistry Council

Plastics

# Study from Trucost Finds Plastics Reduce Environmental Costs by Nearly 4 Times Compared to Alternatives

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A new study by Trucost finds the environmental cost of using plastics in consumer goods and packaging is nearly four times less than it would be if plastics were replaced with alternative materials. The study is based on natural capital accounting methods, which measure and value environmental impacts—such as consumption of natural water and emissions to air, land and water—which are not typically factored into traditional financial accounting.

Previous reports, such as “Valuing Plastics” (2014) by Trucost and “The New Plastics Economy: Rethinking the Future of Plastics” (2016) by the World Economic Forum, only examined the

environmental costs of using plastics.

Trucost's latest study, "Plastics and Sustainability: A Valuation of Environmental Benefits, Costs, and Opportunities for Continuous Improvement," builds on earlier research by comparing the environmental costs of using plastics to alternative materials and identifying opportunities to help lower the environmental costs of using plastics in consumer goods and packaging.

These significant results disrupt a common misperception around plastics. Trucost found that replacing plastics in consumer products and packaging with a mix of alternative materials that provide the same function would increase environmental costs from \$139 billion to \$533 billion annually. That's because strong, lightweight plastics help us do more with less material, which provides environmental benefits throughout the lifecycle of plastic products and packaging.

The study also concluded that the environmental costs of alternative materials can be lower per ton of production but are greater in aggregate due to the much larger quantities of material needed to fulfill the same purposes as plastics.

In addition, the report's authors recommend steps to help further reduce plastics' overall environmental costs, such as by increasing the use of lower-carbon electricity in plastics production, adopting lower-emission transport modes, developing even more efficient plastic packaging, and increasing recycling and energy conversion of post-use plastics to help curb ocean litter and conserve resources.

#### **To learn more, visit the following resources:**

- Full Report
- Executive Summary
- Infographic: Will Replacing Plastic with Alternative Materials Reduce the Environmental Cost of Consumer Goods
- Infographic: How Can the Lifecycle Impacts of Plastic Use Be Further Reduced
- Infographic: Examples of How Plastics Are Helping Reduce the Environmental Footprint of Consumer Goods
- Data Visualization: Estimated Environmental Cost Savings Due to Avoided Food Waste Through the Use of Improved Packaging for Sirloin Steak in the USA
- Data Visualization: Environmental Costs and Substitution Quantities for Plastic and Alternatives
- Data Visualization: Environmental Costs of Plastics vs Alternatives in Consumer Goods Sector
- ACC News Release