

Plastic labeling needs 'sustainability scale,' says new report

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Labeling of plastic products needs a drastic overhaul, including a new "sustainability scale" to help consumers, researchers say.

Plastic pollution is a growing global problem, with an increasingly complex mix of plastics found everywhere from the Arctic to Mount Everest.

Simplistic, unhelpful labeling and low recycling rates even in the best-equipped countries are major barriers to tackling this issue.

In a new paper, experts from the University of Exeter and the University of Queensland suggest a new internationally applicable labeling system that moves focus from recyclability to sustainability, is specific to the country and region of purchase, and informs the public about plastic additive content.

"We need to empower consumers to make more sustainable choices," said first author Stephen Burrows.

"Instead of 'yes-no' recycling labels, which are often misleading, a 'sustainability scale' could take account of recyclability but also other factors such as the environmental cost of production and potential human health risks from additives.

"Requiring packaging to carry region-specific directions for disposal would shift responsibility away from consumers and towards regulators and plastic producers.

"This is vital because the mix of plastic products is so complex and confusing, industry must be responsible for clear, accurate and accessible instructions on how best to dispose of plastic items.

"The same is true for the chemical additives found in many plastics. These chemicals are added to plastics to give them certain properties such as color, flexibility and fire resistance.

"Requiring producers to list all additives would be a major step towards informing the public and helping them make decisions regarding environmental impact and human health."

The researchers stress that their recommendations should not detract from the urgent need to use less plastic—especially single-use items.

At present, about 368 million tons of plastic is produced worldwide each year.

Estimates of recycling rates vary dramatically. For example, Germany recycles 62% of its plastic waste—well above the European average of 30%.

Meanwhile, China recycles an estimated 25%, while the figure in the USA is just 8%.

Professor Tamara Galloway, from the University of Exeter, said, "Our recommendations for a sustainability scale are designed to reduce some of the confusion around plastic disposal.

"The ultimate aim is to protect the environment and human health from the harmful effects of plastic waste."

Professor Kevin Thomas, from The University of Queensland's Queensland Alliance for Environmental Health Sciences and Minderoo Centre for Plastics and Human Health, said, "We hope that our recommendations initiate a reassessment of plastics labeling and that implementation of a sustainability scale will allow individuals to make informed decisions in how they use plastics.

"This is just one small necessary step towards helping people help the environment."

Coffee cup conundrum

Speaking about consumer confusion, Burrows gave the example of PLA (polylactic acid) bioplastic single-use coffee cups.

Many such cups are now labeled as recyclable and compostable—but these are separate processes.

Depending on the composition of the cup, it might be recyclable, but it depends on whether local facilities are equipped to process PLA. So it may not be suitable for your recycling bin.

It might also be compostable—although many such cups can only be broken down in an industrial composter (not in a garden compost heap). So if thrown in general waste, it will end up as more [plastic](#) in landfill.

"If someone uses one of these cups then sees a green recycling bin and a 'general waste' bin, where should they put it?" said Burrows.

"Most people don't know, and in fact the answer may depend on several factors not usually indicated.

"Our suggestions for a new [labeling](#) system based around a [sustainability](#) scale are designed to tackle this confusion."

The research team included the University of Bath.

More information: Stephen D. Burrows et al, The message on the bottle: Rethinking plastic labelling to better encourage sustainable use, *Environmental Science & Policy* (2022). [DOI: 10.1016/j.envsci.2022.02.015](#)

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