

Tackling plastic pollution: Top tips from marine scientists

August 5 2021, by Bryony A. Caswell, Cath Waller, Clare E. Collins



Plastic pollution is one of the defining problems of our century. Credit: [Darkmoon Art/Pixabay](#)

Do you ever find yourself staring at the supermarket shelf in turmoil, trying to make the most environmentally sustainable choices from an overwhelming array of available products? You've brought your reusable shopping bags, you've searched for produce that isn't wrapped in plastic and you've carefully scanned the labels for evidence of fair labor rights and sustainably sourced palm oil—but it's still really hard to work out

which items are the most environmentally friendly.

Research has brought to light the scale of the challenge posed by [plastic pollution](#). Pieces of [plastic](#) used by humans for mere minutes can take [hundreds of years](#) to break down in nature.

While we're seeing [reduced use](#)—and more recycling—of single-use plastic in some areas, overall plastic production is [still increasing](#), and [single-use plastics](#) used in everyday packaging remain the [biggest culprit](#). Changing human behavior is vital if we are to reduce our collective plastic footprint.

Suggested policy changes, like [extended producer responsibility](#)—which require manufacturers to include the environmental costs of products in their pricing—also aims to reduce disposable waste, but progress is slow.

So is it better to buy milk in glass, plastic or a Tetra Pak? Does using a hand dryer involve a smaller carbon footprint than using paper towels? Should you drive to the farmer's market, or get your shopping delivered from a supermarket where produce is less likely to be locally sourced?

Pointers to shrink your plastic footprint



31 #PlasticFreeJuly swaps

We all want to do our bit for the environment, so for #PlasticFreeJuly our team of researchers put our heads together to gather some inspiring ideas to reduce plastics waste & make better choices.

These swaps can help you reduce plastic waste and make more environmentally conscious choices: designed by Clare Collins and the Plastics in the Environment Research Group at the University of Hull. Credit: Clare Collins

Here are some key insights to help make these daily decisions easier—and friendlier to our planet.

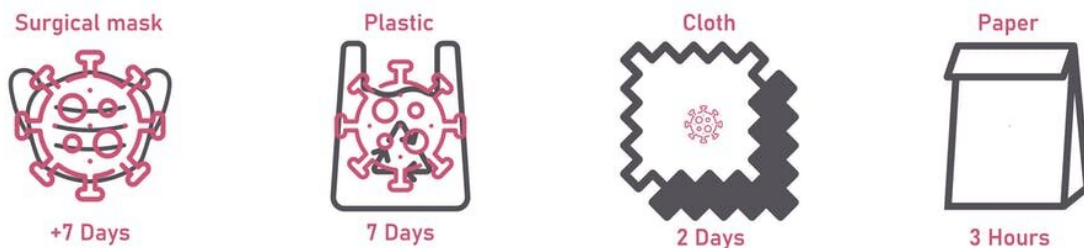
1. Produce less waste. Since the [second world war](#), most societies have witnessed the consequences of the inexorable rise in consumerism: such as a demand for fast fashion—mass-produced, low cost garments whose poor quality limits their lifespan—and single-use disposable products. For decades, these trends have gone largely unquestioned. Equivalent widespread behavioral change is needed today to ensure the Earth's

resources are used more efficiently.

These 31 suggestions for more sustainable choices you can start making today, from crafting materials to cling film, can help reduce waste production.

2. Share, borrow or buy used. Save space, money and the environment by sharing among friends, or find your local [Library of Things](#), a physical repository for borrowing useful household tools instead of buying them. Donate items you only use occasionally and borrow back from the library when you need them, to give each item a longer lifespan—and declutter your home in the process.

3. Lengthen the life of your possessions. Ask yourself whether you need a new kitchen or bathroom, or whether cleaning the floor, washing the walls and reorganizing the furniture could give it the new lease of life it needs.



The time elapsed until no infectious viral material could be recovered from different surfaces, based on data from Chin et al. (2020) DOI: 10.1016/S2666-5247(20)30003-3. Credit: Clare Collins

4. Dispose of your waste responsibly. Waste deposited in public bins

can fall out if the bins are overfilled—or be removed by scavenging animals. Take recyclable items home to be more certain of their fate.

5. Pick up litter while contributing to science. Any litter picking or beach cleaning can be recorded using citizen science applications such as [Open Litter Map](#). Such data have helped identify the most [littered items](#), leading to the [banning](#) of single-use plastic items such as [microbeads](#) in cosmetics, straws, stirrers and cotton buds in some countries.

6. Know your plastics. Knowing what [plastic codes](#) mean can help you to make choices that support a [circular economy](#). Tools such as the [Recycling Locator](#) tell you where to send materials that aren't collected at the side of the road. Avoid plastics with resin code seven, which aren't recyclable.

7. Beware of greenwashing. Sustainability sells—and indiscriminate use of images of nature and the terms "natural," "eco-friendly," "biodegradable" or "compostable" is commonplace, regardless of their accuracy. [Ecolabelling](#)—where products are certified against standards of sustainability—is key to helping us [understand](#) exactly what we're purchasing.

8. Don't assume plastics = cleanliness. You don't need to buy plastic-wrapped items to protect yourself from disease and infection. Although [public confidence](#) in buying loose fruits and vegetables has [fallen](#) during the pandemic, the COVID-19 virus actually lives for [much longer](#) on plastics than on more porous materials such as paper and cotton. Buying unpackaged items and placing them in washable produce bags is both safer and more sustainable.



The number of times different kinds of bags should be used for equivalent environmental impacts (relative to a single-use plastic bag). Credit: [The United Nations Environment Programme](#)

Adjust your thinking to support sustainability

Consider the bigger picture—making eco-conscious decisions is [complex](#) and should always include social and environmental considerations. For example, although it may not seem intuitive, a single-use paper bag is not necessarily [more sustainable](#) than a single-use plastic bag, depending on what resources are used to produce it.

To help make the best possible choices, consider using tools such as a carbon footprint [calculator](#), or check the latest advice on how to minimize the climate impacts of your [food](#).

And try to be a good ancestor. Thinking about "[intergenerational equity](#)"—taking responsibility for decisions that will affect future generations—helps us to make decisions that can reduce future environmental degradation. By including [young people](#) in environmental decision-making, we can empower them to make responsible living second nature: just like wearing a seatbelt in a car.

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