

A PLASTIC PLANET

11 MYTH BUSTERS

1. PLASTIC IS BAD - NOT TRUE

Plastic is a miraculous material. Our hospitals, airplanes and communication systems depend on this astonishing material that is highly malleable, lightweight and inexpensive. But plastic does not belong in the food and drink packaging industry where it is used once, often for a few minutes, and then tossed away as a worthless by-product. Plastic should be respected for what it is: an astounding invention, an invaluable material, and one that deserves careful and restricted use.

2. PLANT-BASED MATERIALS MESS UP THE RECYCLING SYSTEM - TRUE AND MISLEADING

PLA stands for Polylactic Acid. Made from natural and renewable resources such as cornstarch or sugar cane, PLA was designed to substitute widely used petroleum-based plastics such as PET (polyethylene terephthalate). What makes PLA interesting is that it can be industrially composted. PLA is widely used in Europe for food packaging. In the UK it is largely rejected because it can look like conventional plastic, which means recycling facilities cannot differentiate and sort the two materials properly. But how much plastic are we actually recycling? According to the EU Commission, only 6% of the plastic thrown away in the EU is recycled. Since the 1950's only 9% of the 6.3 billion tonnes of conventional plastic made has been recycled. **So have we rejected a good alternative material for the wrong reasons?**

3. PLASTIC IS SAFE FOR OUR HEALTH - WE DON'T REALLY KNOW

Of all the chemicals in plastic, BPA (bisphenol-A) is probably the most well known. BPA is used widely across food and drink packaging, baby bottles and is in the epoxy resin used in can linings. A 2018 University of Exeter study found 86% of teenagers had traces of BPA in their body. This is concerning because BPA is an endocrine-disrupting chemical with similarities to oestrogen. BPA in baby bottles is banned by The European Union and Canada and its use is restricted in the EU, Canada, China and Malaysia. In the UK, BPA is not banned. Manufacturers tell us that packaging, cooking and boiling our food in plastic, has no health implications. What we know for sure is that none of us know enough. **Are we happy with that lack of knowledge, especially when there are plastic-free alternatives?**

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4. TEN RIVERS CARRY 90% OF THE PLASTIC INTO OUR OCEANS - TRUE, BUT WHOSE PLASTIC IS IT?

Multiple media channels carried this story in early 2018, which made us to think that the problem is far away and not one to which we contributed. But since 2012 alone, British companies have shipped more than 2.7m tonnes of plastic waste to China and Hong Kong – two thirds of the UK's waste plastic exports, according to data from Greenpeace. Then in 2017, China changed its policy in a campaign against yang laji or 'foreign garbage.' With the spectre of plastic mountains piling up at our ports and in landfills, the UK government pledged to tackle our plastic addiction. Over the next 25 years. **Is that soon enough for you?**

5 ONE PLASTIC BOTTLE IS RECYCLED INTO A WHOLE OTHER BOTTLE - NOT TRUE

Many of us think that our throw-away plastic water bottles are melted down to make new plastic bottles. Not true. Euromonitor estimates that 20,000 bottles are purchased every second; only 7% are recycled into new bottles. The reason being that plastic water bottles are predominantly made of polyethylene terephthalate (PET, sometimes PETE). PET is semi-porous and absorbs molecules of the beverage or food leaving a residue, which is difficult to remove. Heating the plastic enough for sterilization destroys it. Therefore, most recycled bottles are down-cycled into lower grade products, like carpets or landfill liners, or incinerated. **Bearing in mind that every piece of plastic ever made - unless burned – still exists on our planet today, just how much more plastic do we think we need? We already have over 6 billion tonnes of it.**

6. RECYCLING FOOD PACKAGING IS DIFFICULT - TRUE

Recycling plastic food packaging is confusing. Which bin do you throw the tray under your chicken or the 'clam shell' plastic box with ready-cut fruit? It is also challenging for local councils who are responsible for managing our waste streams, often on a tight budget. The truth is that the majority of food packaging has very little value in the recycling chain when it is contaminated by food, made with multiple polymers which are difficult to separate (eg a plastic tray with a film top), if it is coloured or printed on. Recycling plants capture the most valuable items (metal cans and glass, followed by paper) while the majority of plastic is down-cycled, used (inefficiently) for energy generation – or ends up in our oceans and landfill. **What about throwing food and compostable packaging waste in one bin?**

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7. PLASTIC INCREASES SHELF LIFE - TRUE, BUT SO DO OTHER PACKAGING MATERIALS

Longer shelf life and lower food-wastage are the top two reasons consistently given to continue using plastic food and drink packaging. But should we keep defending plastic when we know the environmental damage it is causing and when we have plastic-free alternatives already available? The evidence is also growing that plant-based packaging may even extend the shelf life of certain foods for longer than plastic because it allows the product to breathe rather than sealing it in an air-tight tomb of condensation.

On a purely human level, plastic has also gradually disconnected us from our food. The sensory pleasure of food shopping where colours, smells and textures touch our senses makes the experience a happy one - has all but gone. We are separated from our food by a barrier of synthetic plastic wrapped around every product. At home this disconnection continues. How many of us pull a pack of sausages or a bag of salad from the fridge, check the best by date and bin it? One generation ago this would have been unthinkable wasteful. **Does plastic actually cause more food waste at the household level – food for thought?**

8. COFFEE CUPS, TINS AND TETRAPAKS ARE PLASTIC FREE - NOT ALWAYS TRUE.

Several products look plastic-free, but contain hidden plastics. Coffee cups appear to be 100% paper, especially when served with a sleeve saying 'Recyclable.' In fact the inside of a typical takeaway coffee cup is coated with plastic, making them almost impossible to recycle. Aluminum cans (typically used for drinks like beer) and steel cans with a thin tin lining (think of a tin of tomatoes) make exceptional packaging containers that are infinitely recyclable. Tins and cans have traditionally been made of one material, metal, and recycling mono-materials is significantly easier. Tetrapak contains plastic, cardboard and Aluminium, firmly putting it in the 'difficult/impossible to recycle' bucket. Today, tins are lined with a white liner of plastic BPA to stop acidic foods (like tomatoes) interacting with the metal and causing corrosion. **Are we using BPA-lined tins when we do not need to?**

9. I HEAR ABOUT SUSTAINABLE BIO-PLASTICS. ARE THESE THE ANSWER? - NO

We need absolute clarity here. 'Drop in' bio-plastics are called 'drop in' because they can be dropped in to replace fossil fuel plastics because they are chemically the same. The only difference between bio-plastics and petrol-based plastics is that bio-plastics come from a sustainable source, usually sugar cane. But they are chemically the same, which means they degrade into the same harmful micro and nano-plastics.

Both bio-plastics and petrol-based plastic are simply conventional plastic.

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We urge the makers of anything that is not conventional plastic to use different language so we, the public, are not confused. It is either conventional plastic, degrading to micro-plastics and existing on our planet for centuries ... or it isn't. Black and white. See our 'Language of Plastic' to read more on our plain-speaking approach. **If it looks like plastic, simply ask – 'does it compost down to something useful or not? Can Nature handle it – or not?**

10. RECYCLABLE = RECYCLED. NOT TRUE

Since the 1950's only 9% of the 6.3 billion tonnes of conventional plastic waste has been recycled. Compare this with over 90% of aluminium in Europe. Note also that plastic packaging can only be recycled a few times (at best) before it becomes unusable. This means landfills or incineration are where most plastic food packaging ends its life. Now that China does not want to take our plastic rubbish, where is the UK going to put 2/3 of our plastic waste? Unless we can pay another country to deal with our plastic rubbish, we will have to deal with ourselves. An exciting opportunity presents itself. **With serious investment in state-of-the-art industrial composting infrastructure, tax breaks for supermarkets to adopt compostable packaging and a sustained awareness campaign to change our own behaviors – could the UK lead the way by breaking our love affair with plastic food packaging?**

11. BIODEGRADABLE = GOOD. NOT TRUE

Everything eventually biodegrades. Into what should be our concern. Conventional plastics biodegrade down to harmful micro and nano-plastics. Biomaterials compost down into useful biomass – either at home or in industrial composting sites. **Instead of talking about whether a material biodegrades, APP believes it is clearer and more important to talk about whether a material composts or not.**