

The curse of plastic at sea (and what you can do about it)



The 'great north Pacific garbage patch' is one of several ocean gyres collecting rubbish, which then washes ashore on Laysan Island, Hawaii

Cruising the world's oceans has shown Jess Lloyd-Mostyn just how much rubbish we produce, and what to do about it

Living afloat makes you more aware of your environmental impact. Quite aside from thinking about the wind that propels us, we have to consider everything we produce, consume and use. Solar panels and wind turbines are fairly commonplace on yachts now, but many still run generators to power their freezer, watermaker and power-hungry electronics.

We have a fridge, but no generator and a finite supply of fresh water, more out of a desire to keep things simple and inexpensive than out of ecological zeal. We muddle our way through how best to manage our life in this new environment, but it has been an education in the reality of our impact on the planet.

We live at anchor rather than in marinas; we use a windvane rather than an autopilot; we conserve power and water as much as we can and create as little waste as possible. This has inadvertently become our ethos on board. In the process, we faced many questions

about what is acceptable. Are there some types of packaging that are reasonable to throw overboard? Never plastic, but what about glass, cans and paper?

One of our challenges in terms of thinking greener was strategy on long passages at sea. Our Atlantic and Pacific crossings took 21 days and 26 respectively,

'With more people on board we produced more rubbish but had nowhere to store it'

and with more crew we produced a lot more rubbish. With nowhere to store non-biodegradable waste we had to reduce it. We separated out recycling and kept a 'chum' bucket for food scraps to be tossed overboard at sea or composted ashore.

Even then, responsibly disposing of refuse and recycling once you reach land can really be tricky. The tiny Pacific island of Niue has made glass bottles illegal as they rely on a boat from New Zealand to remove their cans but there's no provision

to take bottles. The ban means that visitors by boat must wait until Tonga to recycle their glass. Other places have no formal waste disposal services at all. Locals in some communities drop the trash in their own waters, only to watch the next high tide bring it all back. When packaging was biodegradable that wasn't a problem but now plastic is overwhelming the beaches.

We also had another issue: we were having a baby. What to do about her nappies? We had no plans to stop sailing, and we have since crossed oceans with her, and have a second child too. Disposable nappies would quickly build up after 20 or 30 days at sea, and washing cloth nappies might be too big a challenge at sea with limited water.

I started to research the problem. The core of the crisis is plastic. Glass, metal and paper can be easily recycled, but the throwaway nature of plastic packaging engenders carelessness. The vast majority of plastics are blown offshore or flow down rivers after rainfall. Single-use bottles, wrappers and containers are now strewn throughout our oceans.

Plastic rings from beer cans cause entanglement, leading to deformity, malnourishment or death in marine animals. Seabirds get tangled in fishing lines and nets. Bags, balloons and even condoms can be mistaken for jellyfish and are eaten by birds, fish and turtles.

Ocean currents and prevailing winds form slowly revolving whirlpools called 'gyres', which gradually collect vast swathes of litter. The most studied is the 'great north Pacific garbage patch' because of the sheer volume of tiny plastic particles amassed here creating a plastic soup.

Floating plastics do break down in sunlight, but simply get smaller and never

completely disappear. Tiny pieces are easily consumed by marine life, resulting in toxicity, blockages, dehydration, starvation and death. Plastic particles are found in animals throughout the food chain; from tiny shrimps, mussels and fish to birds, turtles, seals, dolphins and whales, and by extension, humans.

But how is this relevant to your average sailor? Ever seen someone toss a cigarette butt into the sea, or chuck a beer bottle overboard? If not eaten whole, a cigarette



Our 'chum' bucket, ready to throw overboard, compost or feed to pigs

butt takes around ten years to biodegrade. A glass bottle will be ground down to sand, but over 1,000 years. Carrier bags can be blown overboard or from a rubbish tip by the slightest breeze. Aside from their 50-year lifespan, what about a prop-wrap or a blocked engine strainer? Even cosmetics are guilty. Face wash and toothpaste often contain thousands of plastic

microbeads, rinsed straight into the water.

I want to take care of the sea for my children and the generations to come. This means making adjustments to our lifestyle. These changes, however, can be small – really small. It could be limiting our use of single-use plastics like straws, coffee cups or plastic bottles. It might be having re-useable shopping bags, bamboo toothbrushes or non-disposable razors. And nappies? Fortunately we found a cloth nappy design that was easy to wash and had a 100 per cent biodegradable insert, and we use a good eco detergent.

Bans, fees, recycling and better product design are all vital, but nothing has the impact of stopping plastic litter before it reaches the sea. Plastic may be convenient, but it destroys what we love about the sea and the cost to our oceans is too high a price to pay. ▲



Reusable bags kept on board eliminate the need for single-use bags at the supermarket



Jess Lloyd-Mostyn

Jess and James left England in 2011 on their Crossbow 42 on a circumnavigation. Their daughter Rocket was born in Mexico and they then got married in Fiji. Their son Indigo was born a while later in New Zealand. In four years they have covered 18,000 miles and 32 countries. www.water-log.com

RIGHT: NOAA



Tiny styrofoam particles are one of the biggest problems of marine debris



A glorious, clean anchorage in Scilly, just as it should be

ALL PHOTOS: JESSICA LLOYD-MOSTYN UNLESS STATED OTHERWISE

Practical ways to tackle plastic at sea

PHOTO: JACKI CLARKE/MCS

Get stuck in with the Great British Beach Clean

The Marine Conservation Society's Great British Beach Clean (16-19 Sept 2016), is the UK's biggest beach clean up and survey. You'll help to get your local beach clean and the survey provides vital information on sources of marine litter in the UK.

Over 6,000 volunteers took part in 2015 and an average of 3,298 items of litter

were picked up for every kilometre of beach cleaned, including 100 plastic bottles, 120 cotton bud sticks, 197 food wrappers and 960 pieces of plastic and polystyrene.

■ Other events run throughout the year and around the country. Find a beach clean near you at www.mcsuk.org/beachwatch



Help out with your local beach clean, or even organise one

Plastic: a world-wide problem

Only 5 per cent of plastics produced world-wide are ever recycled. 50 per cent of plastics are buried in landfill and the other 45 per cent is lost in the environment. A lot of it washes out to sea; there are an estimated 18,000 pieces of plastic in every square kilometre of ocean. 20 per cent of this floats on the surface. The rest sinks to various depths, is trapped in polar ice, or eaten by animals.

In the UK we've got better at recycling, but plastic litter on UK beaches has increased by 180 per cent in the last 20 years.



To turtles, plastic bags often look like jellyfish, their favourite food

PHOTO: ALAMY

How long does litter last?

Paper 6-18 months

Cardboard 2-5 years

Plastic carrier bag 20-50+ years

Balloon 25 years

Crisp packet 75 years

Drinks can 450 years

Disposable nappy 500 years

Plastic drinks bottle 450-1000 years

A nappy can remain in the sea for as long as 500 years

PHOTO: ALAMY



PHOTO: MCS

All of these products contain plastic microbeads that can enter the food chain

12 tips for cleaner sailing

- 1 Don't throw any litter overboard
- 2 Sort your rubbish and recycle it ashore
- 3 Ask your marina to provide better waste recycling facilities
- 4 Only flush human waste and toilet paper down the loo
- 5 Use your holding tank and pump out ashore where possible
- 6 Use environmentally sensitive cleaning products
- 7 Avoid bathroom products that contain microbeads
- 8 Keep your freshwater tank fresh so you can drink from it. Avoid disposable bottles
- 9 Use long-life shopping bags, not plastic carrier bags
- 10 Clean your hull in a place where waste antifoul will be collected and not run back into the sea
- 11 Maintain your engine and clean up oil before emptying your bilges
- 12 For more ideas on how to clean up your sailing, visit: www.thegreenblue.org.uk

The plastic-free challenge

Could you give up single-use plastic for a month? The Marine Conservation Society is challenging people to avoid pre-packed food, ready meals and plastic-bottled drinks for a day, a week or a whole month in June 2016.

Dr. Sue Kinsey, waste specialist at MCS, was amazed at how hard it was to find products that didn't contain plastic of any kind: 'This is a tricky challenge. It highlights how reliant we have become on plastic.'

■ Find advice on how to go plastic free and register in the Plastic Challenge at www.mcsuk.org/plasticchallenge



PHOTO: GILL BELL/MCS

Could you go plastic free for a month?