

Preventing plastic debris from entering the oceans

Increasingly there are applications that don't use plastics in the first place

The first thing to be kept in mind is to reduce the use of single-use plastics. Recyclable materials (paper, potato starch) are increasingly used as packing material, magazine wrappers etc.

Several developments are taking place, some of which were shown on the TV programme "Drowning in plastic", like small sachets made from algae in Indonesia

Using no plastics at all: some further developments:

- The Clean Kilo shop, which does not wrap anything in plastic, but let customers weigh products and put these in containers
- Carlsberg now bring 6 pack on the market held together with glue instead of plastic rings
- For re-usable Bees Wrap sandwich wrap go to <https://beegreenwraps.co.uk/>
- The University of Warwick has developed a mouldable bioplastic from lignin (a waste product of papermaking)
- The plastic bag levy has reduced the average per capita annual usage of plastic bags from 140 to 19! Bringing your own bag to the supermarket is working! Keep it going.
- Plastic-free teabags – so far very few: PG-Tips, the Coop's Fairtrade 99, Clipper teabags intended to be plastic-free from January 2019. Check the packets!

Collection of plastic from water:

Australia – Seabin, a floating rubbish bin that is located in the water at marinas, docks, yacht clubs and commercial ports. The **Seabin** moves up and down with the range of tide collecting all floating rubbish.

Netherlands – the Great Bubble Barrier. Used on the river IJssel at Kampen: Both ships and fish can pass through a curtain of air, but plastic will be stopped: this is the principle of the Great Bubble Barrier. We create a bubble screen by pumping air through a tube with holes located on the bottom of the waterway. Current solutions catch floating debris, but a huge part of debris travels lower in the rivers. The bubble curtain forces debris upwards

USA – Trash Wheel used in Baltimore harbour

UK – Holy Turtle (SodaStream/American Boom & Barrier Corporation)

Netherlands – The Ocean Cleanup. Deployment of 1st system in North Pacific Gyre (Great Pacific Garbage Patch between Hawaii and California). Boyan Slat, a 24-year old's project