

We need to fix the plastic problem

adapted from an article by **John Vidal**

- 1 Environment secretary Michael Gove has pledged to stem the tide of plastic debris by announcing a consultation on a plastic bottle return scheme for England, which aims to get people to recycle more. Gove's initiative is welcome, but minimal, and will have zero impact on the vast and growing scale of the plastic problem.



- 2 Plastic may have profound societal benefits, but this most successful of all manmade materials 33. When exposed to sunlight, oxygen or the action of waves, it doesn't biodegrade but simply fragments into smaller and smaller bits, until microscopic or nano-sized particles enter the food chain, the air, the soil and the water we drink. We cannot get rid of it. Plastic is in what we eat, drink and breathe.
- 3 If we can breathe in these micro- and nano-sized particles and fibres, the scientists conjecture, they are likely to get into the human bloodstream, lung tissue and breast milk, or become lodged in the gut and respiratory systems. Some microparticles may pass through the body without causing harm, others may lodge there dangerously. Many are suspected to be carcinogenic or to have hormone-disrupting properties.
- 4 We don't know the concentrations that are safe for adults, let alone infants. Although we have known for years that some of the additives used to make plastics flexible, transparent or durable are chemically dangerous, few have been tested on humans.
- 5 It is not enough to single out plastic bottles, coffee cups, or the microbeads found in cosmetics. Banning all plastic bags and single-use packaging would be a good start, but we need to go way beyond that. Plastic production has to be reduced, just as alternatives should be encouraged. Regulators must think about phasing out whole groups of chemicals of concern, rather than slowly restricting individual chemicals one at a time, and consumers must be helped to understand what they are being exposed to, and to navigate the difficulty of what can be recycled, composted or burned.
- 6 In the 1950s the world made about 2m tonnes of plastic a year. Now that figure is 330m tonnes a year – and it is set to treble again by 2050.

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The Guardian, 2018