



House of Commons
Environmental Audit Committee

**Environmental impact
of microplastics:
Government Response
to the Committee's
Fourth Report of
Session 2016–17**

**Fifth Special Report of Session
2016–17**

*Ordered by the House of Commons to be printed
8 November 2016*

Environmental Audit Committee

The Environmental Audit Committee is appointed by the House of Commons to consider to what extent the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and sustainable development; to audit their performance against such targets as may be set for them by Her Majesty's Ministers; and to report thereon to the House.

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The constitution and powers are set out in House of Commons Standing Orders, principally in SO No 152A. These are available on the internet via www.parliament.uk.

Publication

Committee reports are published on the Committee's website at www.parliament.uk/eacom and in print by Order of the House.

Evidence relating to this report is published on the [inquiry publications page](#) of the Committee's website.

Committee staff

The current staff of the Committee are David Slater (Clerk), Lauren Boyer (Second Clerk), Tom Leveridge (Senior Committee Specialist), Tom Glithero (Committee Specialist), Emily Purssell (Committee Researcher), Ameet Chudasama (Senior Committee Assistant), Baris Tufekci (Committee Assistant), and Nicholas Davies (Media Officer).

Contacts

All correspondence should be addressed to the Clerk of the Environmental Audit Committee, House of Commons, London SW1A 0AA. The telephone number for general enquiries is 020 7219 5776; the Committee's email address is eacom@parliament.uk.

Fifth Special Report

The Environmental Audit Committee published its Fourth Report of Session 2016–17, [Environmental impact of microplastics](#) (HC 179), on 24 August 2016. The Government's response was received on 26 October 2016 and is appended to this report.

Appendix: Government response

Introduction

The Government welcomes the Environmental Audit Committee's (EAC) report on '*The Environmental Impact of Microplastics*'. The UK's vision, set out in the Marine Policy Statement, is for clean, healthy, safe, productive and biologically diverse seas and oceans. Tackling marine litter, in all its guises, is a key aspect of achieving this vision and meeting our promise to be the first generation ever to leave the environment in a better state than it inherited.

The UK's Marine Strategy Part Three: UK programme of measures, published in December 2015, sets out a comprehensive set of measures to address marine litter. Some of these measures address microplastics directly while others contribute indirectly by removing, or avoiding the release of, larger plastic particles, preventing their degradation into microplastics. The Strategy also recognised that there are gaps in our knowledge and that further work was needed to better understand marine litter and its impacts.

One of these gaps related to the harm caused by microplastics in the marine environment. We will shortly be publishing a Defra-funded report which adds to the body of evidence demonstrating the potential harm that microplastics, such as microbeads, can cause. Laboratory experiments showed:

- Microplastics can cause physical harm to marine worms, but only at concentrations comparable to heavily contaminated shorelines. They remain in the gut and are subjected to extensive digestion with no nutritional benefit, resulting in energetic cost.
- Microplastics can transfer along a simple food chain from a mussel to a crab. The crabs then release the microplastics back into the environment via defecation.
- Chemical additives in plastic may be of greater harm than the pollutants from seawater that stick to microplastics.
- Microplastics accumulate pollutants from seawater but this is dependent on the plastic involved and the pollutant. These pollutants can desorb (be released) from microplastics into the guts of marine organisms. However this is unlikely to make an important contribution to the overall burden of the pollutant compared to the amount of chemical transferred to the organism via normal ingestion of contaminated food or directly from contaminated seawater.

Defra's Chief Scientist has stated that "it would be extraordinarily difficult to directly measure the effect of microbeads on the marine environment as a whole. Since microbeads

are a form of microplastic, evidence concerning microplastics can be used to provide information about the potential environmental impacts of microbeads. We also know that microplastics do not biodegrade significantly and therefore accumulate in the marine environment. Once released into the environment it is impossible to recover microbeads or remediate the effects that could subsequently emerge. In spite of scientific uncertainty the risk of effects is high. This risk also needs to be considered in the context of other stresses experienced by marine organisms including other forms of historical pollution and ocean acidification. Adding stresses from microbeads increases the overall risk. It is therefore sensible to minimise the disposal of microbeads to the marine environment by, whenever possible, using less harmful alternatives.”

This is why on 3 September 2016 the Government announced plans to ban the sale and manufacture of cosmetics and personal care products containing microbeads which may cause harm to the marine environment. At the same time evidence will be gathered on the extent of the environmental impacts of microbeads found in other products, such as domestic and industrial cleaning products, before considering what more can be done in future to tackle these and other plastics which enter the marine environment.

Below we set out the 11 recommendations of the EAC report in bold, followed by our response to each point.

Microplastic Pollution

1. There is significant public concern around microbeads, however, they make up a small proportion of total microplastic pollution. The wider issue of microplastic pollution cannot be set aside once microbeads have been dealt with. We recognise the research is still relatively new and subject to uncertainties. We recommend that the Government work towards a systematic strategy for researching and mitigating sources of microplastic pollution. We suggest that synthetic fibres and tyres are two sources that should be examined at an early stage. (Paragraph 13)

We agree researching and addressing sources of microplastic pollution is a priority. Defra has long recognised the importance of this issue and funded some of the earliest research into the harmful effects of microplastics on the marine environment. This area of research is also highlighted in our forthcoming Evidence Action Plan, which sets out key evidence gaps and priorities for the Defra group and how it will seek to address them. It is important to note that, as mentioned in the EAC inquiry, the greatest source of microplastics is from the fragmentation of larger plastic debris. That is why Government has already put in place a wide range of measures to tackle plastic litter in our oceans. These are set out in our [Marine Strategy Part Three: UK Programme of Measures](#). Recent actions include the introduction of the 5p carrier bag charge last year. Early indications are that this will lead to 6 billion fewer single-use plastic carrier bags being issued by the seven largest supermarkets, for which we have comparable data, in the first year of the charge. We are also currently developing a National Litter Strategy for England, with the aim of achieving a substantial reduction in litter and littering. This will help to reduce the amount of plastic reaching our rivers and seas.

Our plans to ban microbeads in cosmetics and personal care products will be informed by a formal consultation later this year. At the same time, evidence will be gathered on the extent of the environmental impacts of microbeads found in other products, such as domestic and industrial cleaning products, before considering what more can be done in future to tackle other plastics which enter the marine environment.

2. There is little evidence on potential human health impacts of microplastic pollution. What evidence there is suggests that dietary exposure is likely to be low. Further research in this area is underway and is clearly required. The Government should set out a timescale within which it will publish an assessment of the potential health impacts and any measures it intends as a response. (Paragraph 26)

As the EAC has stated, there is little evidence on the impact to human health of microplastic pollution. Although some marine animals may swallow microplastics, in the case of fish the digestive tracts are usually removed before human consumption. Over the next year the Chief Medical Officer of the Department of Health will be reviewing the effects on health of pollution of several kinds including microplastics.

3. The Committee heard that studies estimating the economic costs of microplastic pollution vary widely. As with the health impacts, the Government should set out a timescale in which it intends to produce a more accurate assessment. It should also ensure that microplastics are treated as an economic issue—within the scope of its food and farming strategy—as well as an environmental one. (Paragraph 29)

There has been little assessment of the potential economic consequences of increased microplastics in the ocean. However an economic analysis demonstrated that there are potential costs associated with microplastics, for example to the aquaculture sector in the UK. Government will consider any future evidence on the economic impact of microplastics. The best way to address this economic impact therefore is to stop microplastics entering the marine environment in the first place.

4. It is important to address microplastic pollution as a transnational problem and to understand that plastic in the ocean is in constant motion. The Government should continue international cooperation despite uncertainties arising from the EU referendum. It is clear that international action is needed. We recommend the Government maintain existing cooperation with international partners in tackling microplastic pollution. Up to now, NGOs have taken the lead role in addressing this issue. However, this is unsustainable given the increasing costs and demands relating to microplastic pollution. As more evidence emerges about the impact of microplastic pollution, the Government must take on that role. (Paragraph 33)

Marine litter, including microplastic pollution, is a transboundary problem and international cooperation is essential to address this. The UK is an active participant in the Oslo and Paris convention for the protection of the North-East Atlantic (OSPAR) through which we, with neighbouring countries, have developed and are implementing a [Regional Action Plan \(RAP\) on marine litter](#). The RAP sets out a wide range of actions which include the reduction of key sources of marine litter and the evaluation of all products and processes that include primary microplastics. The UK has also played a key role in developing the [G7 Nations Action Plan on marine litter](#) which is closely aligned to the OSPAR RAP.

Also at the United Nations Environment Assembly of the UN Environment Programme Second session in May 2016, the United Kingdom worked together with delegations from other EU Member States to secure an important resolution to address the issue of marine litter. This included microplastics.

We are also grateful for the role that NGOs play in addressing this issue. The UK Government works with, and will continue to work with, a wide range of NGOs and charities, as well as industry and OGDs, to tackle microplastic pollution.

Microbeads

5. We welcome the commitment by a section of the cosmetics industry to phase out microbeads. However, the commitment is not universal, and there are inconsistencies in approach. Some companies will not phase out until 2020 and, since this commitment is voluntary, some companies may not phase out at all. Voluntary action alone will not be adequate to tackle the challenges of microbeads, and believe that a legislative ban would be beneficial in bringing greater consistency in the industry. (Paragraph 45)

On 3 September 2016 the Government announced plans to ban the sale and manufacture of cosmetics and personal care products containing microbeads which may cause harm to the marine environment. Our plans will be informed by a formal consultation later this year. At the same time, evidence will be gathered on the extent of the environmental impacts of microbeads found in other products before considering what more can be done in future to tackle other plastics which enter the marine environment. This Government action will create a level playing field for industry, tackle inconsistency and stop new products containing tiny pieces of plastic from being sold in the UK.

6. Legislative action would have several advantages for consumers and the industry over the current, voluntary, approach to microbeads. It would be universal, ensuring consumer confidence and preventing responsible companies being undercut. It would ensure consistent definitions were used by all industry participants. It would also send a message that Government was serious about addressing the wider issue of microplastic pollution. In working towards such legislation, the Government should consult widely on implementation to ensure that the main risk - smaller companies being disadvantaged - is mitigated. (Paragraph 52)

We will continue to engage with industry, environmental groups and other relevant parties to establish how and when a ban could be introduced. In addition, we will conduct a formal public consultation on our proposals to ensure the widest possible participation in the design and implementation of the ban.

7. Microbead pollution does not respect national borders. Legislative measures to prevent the sale or manufacture of microbeads will be more effective if undertaken on a transnational basis. The last Government recognised this, and had been working towards EU legislation by the middle of next year. The outcome of the Referendum on EU Membership means that work will now be taken forward by other countries and the new Government, and the UK will have much less influence over it. However, the benefits of cross-border consistency remain. (Paragraph 53)

We hope that our action to ban microbeads will encourage other countries to take similar measures to ban microbeads. The more countries that follow the UK's leadership on this issue, the more effective the action will be on reducing microplastic pollution. We are already aware that France and Italy have announced, or are considering, similar bans. As the EAC panel recognised, the UK and all other EU Member States have called for the European Commission to come up with proposals to ban microbeads in cosmetics at an EU level, as part of the EU Circular Economy Action Plan. Whilst we are part of the EU we will continue to have full rights and obligations. This means we will continue to constructively engage on the Circular Economy package, and we will use our approach to inform the development of these proposals. We expect these proposals to be developed as part of the 2017 Plastics Strategy. We will also continue to work with other international partners on marine litter issues (see item 4 above).

8. We recommend that the Government introduce a legislative ban on the use of plastic microbeads in cosmetics and other toiletries. The legislation should follow the principles set out by Fauna & Flora International around universality and consistency. The Government should ensure consistency with international legislation—particularly with whatever EU measures are introduced—wherever possible, though we regret that this means the UK will have less control over the specific design of the ban. (Paragraph 54)

As part of our consultation, we will engage with Fauna & Flora International and other relevant organisations to develop the terms of proposals on a ban. We will also aim to ensure that they are consistent with whatever EU measures are introduced. The European Commission is developing proposals for banning microbeads at an EU level and while we remain a member of the EU we will continue to play an important role in the development of these proposals.

9. Microbeads have been particularly controversial because of the existence of several viable alternatives which do not have the same environmental impacts. Where those alternatives are natural in origin, companies should ensure they are sustainably sourced. Where they are artificially produced, they should ensure that appropriate environmental impact assessments are undertaken. The Government should include these conditions in its legislation. (Paragraph 58)

Manufacturers are exploring natural alternatives, including nut shells, salt and sugar, which have the same exfoliating properties without posing a threat to the environment. Such alternatives will need to undergo appropriate safety and efficacy testing and environmental impact and risk assessments.

10. Consumers should be able to tell whether the products they are buying contain microbeads. The industry is failing to label products containing microbeads clearly, and the companies we heard from were reluctant to change their labelling practices. Regulations for labelling are also failing to provide consumers with the clarity they need. In the absence of meaningful action by companies to label their products more clearly, we recommend that the Government introduces a clear labelling scheme for microbeads so that consumers may choose whether they wish to buy products containing microbeads. The industry told us that transparent labelling of microbeads would amount to an invitation not to buy products with microbeads in. Transparency to date has been provided by initiatives by NGOs. We recognise that this is a transitional

issue and that there are costs associated with changing labels. Our preferred outcome would be a national ban on microbeads in cosmetics and toiletries by the end of next year. Failing that, we recommend that the Government introduce a clear labelling scheme for microbeads during the transitional period of a voluntary phase out to provide transparency for customers. (Paragraph 62)

As we intend to put in place legislation by next year, it is unnecessary at this stage to introduce any measures to change labelling practices.

Microplastic prevention and solutions

11. We heard that prevention at source by reducing the number of microplastics flushed into the oceans is most viable. However, there are also opportunities to capture microplastics through effective waste and water sewage treatment processes which currently do not require the monitoring of microplastics. We recognise the heavy investment needed in this area, and that there is difficulty in filtering microplastics. Therefore, we recommend that the Government and Environment Agency work with Water Companies to understand what feasible options there are to monitor and ultimately reduce microplastic pollution. (Paragraph 73)

In England, between 2015 and 2020 water companies are investing £2 billion to improve their sewage treatment infrastructure. This will further increase the proportion of sewage-related debris which is removed by treatment and reduce the occurrence and severity of untreated overflows. Through the 21st Century Drainage programme, water companies are looking at how they can further enhance the performance of their systems now and in the future with a view to reducing surface water entering sewers, improving capacity and minimising what escapes.

Although water companies are not the source of the problem, their infrastructure is an important pathway of contaminants including microplastics to the wider aquatic environment. Defra has therefore asked the Environment Agency to take action now to work with water companies and researchers, to understand in the first instance inputs from sewage treatment infrastructure. Subsequently, water companies should evaluate whether there are cost-effective options that could be deployed as a contribution to an overall solution to the issue.