Department for Environment Food & Rural Affairs

# Proposals to ban the use of plastic microbeads in cosmetics and personal care products in the UK and call for evidence on other sources of microplastics entering the marine environment

**December 2016**

Llywodraeth Cymru
Welsh Government

Scottish Government
Riaghaltas na h-Alba
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Department of
Agriculture, Environment and Rural Affairs
www.daera-ni.gov.uk

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Any enquiries regarding this publication should be sent to us at marinelitter@defra.gsi.gov.uk

www.gov.uk/defra

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# Summary

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| **Topic of this consultation** | Proposals to ban the manufacture and sale of cosmetics and personal care products containing microbeads which may cause harm to the marine environment.<br><br>The consultation also seeks to gather evidence on the extent of the environmental impacts of microbeads found in other products, to inform future UK actions to protect the marine environment. |
| **Scope of this consultation** | This consultation aims to address microplastic particles which may cause harm to the marine environment.<br><br>We are not seeking comments on wider forms of marine litter such as micro-sized particles of non-plastic litter. |
| **Geographical scope** | The proposals would extend and apply to the UK including Scotland, Wales and Northern Ireland. They do not apply to overseas territories. |
| **To** | This consultation has particular relevance to:<br><br>• groups or individuals who use the sea for any purpose, or have an interest in it, including business users of the sea<br><br>• people that use products containing microbeads and those businesses responsible for manufacturing and selling those products<br><br>• businesses using primary microplastics or creating secondary microplastics<br><br>• producers, manufacturers, re-processors and retailers of plastic packaging<br><br>• national and local interest groups such as environmental and recreational non-governmental organisations and industry federations<br><br>• governments in other states who may be considering their own bans on microbeads in cosmetics and personal care products<br><br>• academic research institutions |
| **Body responsible for the consultation** | This consultation is being carried out by Defra's Marine Division on behalf of the UK Government and the Devolved Administrations. |
| **Duration** | Consultation starts: 22nd December 2016<br><br>Consultation ends: 28th February 2017 |
| **Enquiries** | During the consultation, if you have any enquiries or wish to |

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| | receive hard copies of the documents, please contact:<br><br>marinelitter@defra.gsi.gov.uk<br><br>Information on the measures the UK Government is already taking to address marine litter can be found in the Marine Strategy Part Three: UK Programme of Measures, at:<br><br>https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/486623/marine-strategy-part3-programme-of-measures.pdf |
| **How to respond** | Written responses can be submitted to:<br><br>Marine Litter Policy Team<br>Defra<br>Area 8B Millbank<br>c/o<br>Nobel House<br>17 Smith Square<br>London<br>SW1P 3JR<br><br>Emailed to: marinelitter@defra.gsi.gov.uk<br><br>Or completed online via<br>https://consult.defra.gov.uk/marine/microbead-ban-proposals<br><br>Responses must be submitted by 28th February 2017. |
| **After the consultation** | At the end of the consultation period we will summarise the responses and place this summary on our website at www.gov.uk/government/publications?publication_filter_option=consultations.<br><br>Copies of responses will be made available to the public on request. If you do not want your response – including your name, contact details and any other personal information – to be publicly available, please say so clearly in writing when you send your response to the consultation. Please explain why you need to keep details confidential. We will take your reasons into account if someone asks for this information under freedom of information legislation. But, because of the law, we cannot promise that we will always be able to keep those details confidential. Please note, if your computer automatically includes a confidentiality disclaimer, this will not count as a confidentiality request. |
| **Compliance with Consultation Principles** | This consultation is in line with the government's Consultation Principles. This can be found at www.cabinetoffice.gov.uk/resource-library/consultation-principles-guidance. |

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| **Getting to this stage** | The UK Government takes a wide range of actions to protect the marine environment from marine litter, as set out in the UK Marine Strategy Part Three: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/486623/marine-strategy-part3-programme-of-measures.pdf.<br><br>A recent Defra study on the potential for microplastics to cause harm in the marine environment has provided evidence to support the need for the UK Government to propose further measures to address microplastics, including microbeads: http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=17683&FromSearch=Y&Publisher=1&SearchText=5416&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description |
| **Previous engagement** | Under the Oslo and Paris Convention for the Protection of the North-East Atlantic (OSPAR) Regional Action Plan (RAP) on Marine Litter, the UK and other Contracting Parties have engaged with the cosmetics industry, led by the industry body Cosmetics Europe, on a voluntary agreement to phase out the use of microplastics as a component in cosmetics and personal care products.<br><br>In recent months the UK has engaged with the UK cosmetics industry body, the Cosmetic, Toiletry and Perfumery Association (CTPA); and with environmental non-governmental organisations (eNGOs) and academia, to understand the case for and options for a ban on microbeads in cosmetics and personal care products and the potential to address other products containing microbeads. |

# Part 1: Explanation of the consultation

Marine litter is defined as any solid material which has been deliberately discarded or unintentionally lost on beaches, on shores or at sea, including materials transported into the marine environment from land by rivers, draining or sewage systems or winds[1]. It includes any persistent, manufactured or processed solid material. Marine litter originates from a variety of sea- and land-based sources.

The 2012 initial assessment for the UK Marine Strategy Part One[2] indicated some problems from marine litter in all regions of UK seas where there are systematic surveys of beach litter density. In addition to this, there is growing evidence that the accumulating quantities of litter in our aquatic environments can harm marine ecosystems and affect coastal communities. Smaller items such as microplastic particles can be consumed by marine animals, damaging their health. Larger items can entangle animals, smother habitats, damage tourism and pose a serious risk to life and livelihood by causing breakdown of vessels at sea.

Tackling aquatic litter requires governments, businesses and communities to work together, both to reduce the amount of litter entering the marine environment from land-based and sea-based sources and to remove litter that is already there. The UK Marine Strategy Part Three (2015)[3] sets out a comprehensive set of existing and planned measures to address marine litter. Defra and the Devolved Administrations also fund litter monitoring, play an active role in advising and influencing marine litter and microplastics research and education, and are members of the Marine Litter Action Network, which works with stakeholders from various sectors to raise awareness of the sources and problems associated with marine litter. For example the Welsh Government provides funding to Keep Wales Tidy, who work with partners in the public and private sectors to support community groups, residents, individuals, schools and businesses in raising awareness of marine litter and conducting beach cleans. The UK Government and the Devolved Administrations are also working with water companies to reduce the severity of sewage-related debris and untreated overflows.

As marine litter is a transboundary problem, international collaboration is important to effectively address this issue. The UK is an active participant in OSPAR through which we collaborate with neighbouring countries to address marine litter. Through OSPAR we have developed, and are implementing, a Regional Action Plan (RAP) on Marine Litter[4], which includes actions to address key sources of litter and industries producing litter. The UK

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[1] http://www.ospar.org/documents?v=34422

[2] www.gov.uk/government/publications/marine-strategy-part-one-uk-initial-assessment-and-good-environmental-status

[3] https://www.gov.uk/government/publications/marine-strategy-part-three-uk-programme-of-measures

[4] http://www.ospar.org/documents?v=34422

also actively participates in other international marine litter fora, including G7 and the United Nations Environment Programme.

We continue to support research, and to implement additional measures to protect the marine environment. All parts of the UK now have a levy on single use plastic carrier bags. These levies have succeeded in significantly reducing the number of plastic bags being issued and have raised millions of pounds for good causes. Marine litter strategies are already available such as the Marine Litter Strategy for Scotland[5] and the Northern Ireland Marine Litter Strategy[6]. Defra are developing a National Litter Strategy for England, covering marine and aquatic litter as well as terrestrial litter. The National Litter Strategy will promote affordable, scalable and replicable ways to influence littering behaviour.

There is growing concern about microplastics in the marine environment. Microplastics are plastic pieces less than 5mm in size and are a widespread ocean pollutant. Sources of microplastic include fibres from synthetic textiles, wear and tear of plastic products such as tyres, fishing nets, rope and carpets, plastics in paints and varnishes, microbeads used as exfoliants in cosmetics and personal care products, preproduction pellets (nurdles) and large items of plastic debris that fragment and degrade into smaller pieces[7]. Once released in to the environment it is impossible to recover them.

There is an increasing evidence base which shows that microplastics have a negative impact on the environment. They do not biodegrade, they accumulate in the marine environment, they can absorb toxic chemicals and pathogens, and have the potential to be ingested by marine organisms, therefore entering the food chain. In particular, in a recent Defra-funded project undertaken by the University of Plymouth to study the effects of microplastics in the marine environment, laboratory experiments showed:

- marine organisms can ingest plastic particles and can pass them along the food chain;
- ingestion of microplastics could cause ‘harm’, reducing the ability of a marine organism to process food, but only at concentrations comparable to heavily contaminated shorelines;
- in addition, chemical pollutants can stick to plastic particles, be transported into marine organisms and could potentially cause harm, but this route is unlikely to make a major contribution to overall body burdens, compared to pollutants transferred via contaminated food or seawater; and
- the concentrations of chemical additives incorporated into plastics during manufacture can be higher than the concentrations of chemical pollutants that stick to the plastic in the marine environment, and can potentially be ingested.

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[5] http://www.gov.scot/Resource/0045/00457889.pdf

[6] https://www.daera-ni.gov.uk/sites/default/files/publications/doe/marine-policy-ni-marine-litter-strategy-2014_0.pdf

[7] http://www.eunomia.co.uk/report-tag/microplastics

In addition, the Environmental Audit Committee recently undertook an inquiry on the environmental impact of microplastics in the marine environment. Its report[8] included a number of recommendations for the UK Government to address key sources of microplastic pollution.

For the past 2 years we have been working with OSPAR and industry to address a variety of sources of marine microplastic pollution.

The cosmetics industry in particular has already made some important steps to reducing their contribution to marine litter. Cosmetics and personal care products sometimes contain plastic microbeads for exfoliating purposes. Working with OSPAR the cosmetics industry has voluntarily taken steps to discontinue their use of microbeads and to research suitable alternatives. More than 72% of major cosmetics companies will have ceased to sell cosmetic products containing microbeads by 2017[9].

We now want to strengthen this important commitment, ensure a level playing field for the industry and build consumer confidence by introducing legislation to ban the sale and manufacture of cosmetics and personal care products containing microbeads which may harm the marine environment. At the same time we want to gather evidence on the extent of the environmental impacts of microbeads found in other products, to inform future UK actions to protect the marine environment.

**What is the purpose of this consultation?**

The purpose of this consultation is to seek views on our proposals to ban the sale and manufacture of cosmetics and personal care products containing microbeads which may harm the marine environment. The consultation also seeks to gather evidence on the extent of the environmental impacts of microbeads found in other products, to inform future UK actions to protect the marine environment.

**Who will be interested in responding?**

This is a public consultation and it is open to anyone with an interest to provide comments. The consultation should be of particular interest to users of the products, businesses involved in the sale and manufacture of cosmetics and personal care products containing microbeads, their trade associations/bodies and non-governmental organisations (NGOs) concerned about the status of the marine environment.

**Having your say**

Responses or queries should be submitted no later than 28th February 2017 either in writing to the Marine Litter Policy Team, Area 8B Millbank, c/o Nobel House, 17 Smith Square, London, SW1P 3JR; by email to marinelitter@defra.gsi.gov.uk; or online via https://consult.defra.gov.uk/marine/microbead-ban-proposals. Copies of responses will be made available to the public on request. If you do not want your response – including your

[8] http://www.publications.parliament.uk/pa/cm201617/cmselect/cmenvaud/179/17902.htm?utm_source=179&utm_medium=fullbullet&utm_campaign=modulereports

[9] The Cosmetic, Toiletry & Perfumery Association Limited (CTPA): Personal Communication

name, contact details and any other personal information – to be publicly available, please say so clearly in writing when you send your response to the consultation. Please explain why you need to keep details confidential. We will take your reasons into account if someone asks for this information under freedom of information legislation. But, because of the law, we cannot promise that we will always be able to keep those details confidential. Please note, if your computer automatically includes a confidentiality disclaimer, this will not count as a confidentiality request.

# Part 2: Proposals for a ban on microbeads in cosmetics and personal care products

## Background

Microbeads (small particles of plastic) are a common ingredient in many cosmetics and personal care products such as face scrubs and toothpastes, as well as washing powders, household cleaners and in industrial blasting where abrasive materials including microbeads are propelled under high pressure to remove surface deposits such as paint. They are washed down the drain but are too small to be completely filtered out in sewage treatment systems so a proportion is washed out into the aquatic environment. It is suggested that as many as 100,000 microbeads per shower are washed into our seas[10]. There is growing evidence that microplastics cause harm to marine animals and can get into the food chain[11].

Microbeads from personal care products are believed to make up a very small percentage of the total of microplastics entering the marine environment, with estimates ranging from 0.01% to 4.1%. A ban only on microbeads within personal care products in the UK would therefore be expected to have only a small impact on the environmental situation around microplastics. However this is an important move as microbeads, like other microplastics, do not biodegrade and therefore accumulate in the environment. There are also suitable less harmful alternatives.

Government action will create a level playing field for industry, tackle inconsistency, support consumer confidence and stop new products containing tiny pieces of plastic ending up in the marine environment.

In response to this the UK Government announced plans to ban the sale and manufacture of cosmetics and personal care products containing microbeads which may

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[10] Napper, I.E., et al. Characterisation, quantity and sorptive properties of microplastics extracted from cosmetics. Mar. Pollut. Bull. (2015), http://dx.doi.org/10.1016/j.marpolbul.2015.07.029

[11] http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=17683&FromSearch=Y&Publisher=1&SearchText=5416&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description

harm the marine environment. This consultation seeks views on our proposals for a UK-wide ban.

At the same time, we recognise that there might be other sources of microbeads and microfibres that end up in the marine environment. We are therefore taking this opportunity to ask for evidence on the extent of the environmental impacts of microbeads found in other products, to inform future UK actions to protect the marine environment.

## Proposals for a ban

### Scope of proposed ban

The current evidence shows that microplastics, including microbeads, cause harm in the marine environment. We also know that microbeads used in rinse-off products (e.g. shower gels, face scrubs and toothpastes) are washed down the drain, enter the sewer system and a proportion end up in the marine environment where they contribute to the overall microplastic pollution load. There are also suitable alternatives readily available.

We do not currently have similar evidence on microplastic particles from other cosmetics and personal care products (such as make-up and suncreams) or from other products containing microbeads such as household and industrial cleaning products. The second part of this consultation asks for further evidence on the extent of the environmental impacts of microplastics found in other such products.

**Our current proposals are that:**

a. **we ban the manufacture and sale of cosmetics and personal care products containing microbeads in the UK (including all devolved territories) .**
b. **the ban would apply to solid microplastic ingredients <5mm in size in every dimension that are used as an ingredients in rinse-off cosmetics and personal care products including but not limited to exfoliating scrubs, shower gels and toothpastes.**
c. **in England, the legislation is expected to come into force by 1st October 2017, the latest common commencement date in 2017 for regulation bearing on business. We will aim to coordinate our approach with Devolved Administrations who will introduce legislation according to their own legislative processes and timetables.**
d. **in England, the ban on manufacture is expected to apply from 1 January 2018 and the ban on sale expected from 30 June 2018. We will aim to coordinate our approach with Devolved Administrations who will introduce legislation according to their own legislative processes and timetables.**
e. **the legislation will be developed collaboratively with the Devolved Administrations and secondary legislation introduced to implement the proposed ban across the whole of the UK. It is expected that such legislation**

**will be made by each Administration as a result of the devolution settlements. It is expected that the implementing legislation will be published prior to it being made and therefore those with an interest will be able to make representations on it.**

f. **in England, it is proposed that the policy will in practice be enforced through civil sanctions set out in part 3 of the Regulatory Enforcement and Sanctions Act 2008 (though this would require the creation of an offence punishable by a fine, to facilitate the use of the 2008 Act). As part of the consultation, we are seeking views on how such civil enforcement can most effectively and proportionately be carried out. The Devolved Administrations will establish appropriate enforcement mechanisms and would welcome views on this issue.**

## Explanation

This ban protects the marine environment and reduces the risk and severity of impacts of microplastics; supports the cosmetics industry by providing a level playing field, ensuring that all companies meet the same standards; and increases consumer confidence that products will not cause marine pollution or harm to the animals and plants found there.

A ban on manufacture affects export and a ban on sale affects import for commercial purposes.

The phased introduction of the ban is designed to provide sufficient time for small- and medium-sized enterprises to comply with requirements as outlined.

## Similar bans in other countries

Several other countries have already implemented or are planning to implement bans on microbeads, including the USA.

The USA Microbead-Free Waters Act of 2015 defines a plastic microbead as “any solid plastic particle that is less than five millimetres in size and is intended to be used to exfoliate or cleanse the human body or any part thereof” as these are the products which enter the marine environment. The definitions included in the legislative measures in several US states including California, New York and Illinois specify plastic microbeads that are used to exfoliate or cleanse in rinse-off products.

Following the UK announcement to ban there have been similar announcements in several other countries. Italy has now approved a bill in parliament to ban the manufacture and sale of microbeads from the 1st of January 2019. Similarly, France has announced a ban on rinse-off cosmetic products for exfoliation or cleaning that contain solid plastic particles from January 2018.

Other countries now seeking to impose a ban include Ireland, South Korea, Taiwan, India and Australia.

## Consultation questions on the proposals for a ban

a. Are our proposals for a ban fit for purpose? If not, please explain why. What alternative wording in a ban would most effectively reduce the risk of microplastic particles from personal care and cosmetic products reaching the marine environment?

b. This proposed ban applies to rinse-off cosmetics and personal care products including but not limited to exfoliating scrubs, shower gels and toothpastes. Is this category appropriate? If not, what range of products should the ban apply to, bearing in mind that the purpose of the ban is to protect the marine environment? Please supply evidence to support your suggestions.

c. Should any products be exempt from the ban? If so, please supply evidence to support your suggestions.

d. If products are not designed to go down the drain, but may still be disposed of in this way, what interventions or warnings are appropriate to protect the marine environment?

e. How should compliance with the ban be monitored?

f. Our proposals for enforcement are set out at point (f) on page 9. We would welcome comments on our proposed approach, suggestions for alternative approaches and views on how enforcement of the ban can most effectively and proportionately be carried out? Details of the types of civil sanctions available are set out in the Regulatory Enforcement and Sanctions Act 2008 Part 3 Civil Sanctions sections in particular sections 39, 42 and 46[12].

g. What costs and/or constraints would industry, including in particular small and medium-sized enterprises (SMEs), incur in meeting a ban on microplastics in cosmetics and personal care products?

h. To what extent will imports be affected by the ban? Please supply evidence to support your suggestions.

i. What are the risks that alternatives to microbeads will themselves have significant environmental impacts? If so, how could these risks be avoided, minimised or mitigated? Please supply evidence to support your suggestions.

[12] http://www.legislation.gov.uk/ukpga/2008/13/notes/division/3/3

j. Is there anything else you would like to tell us?

# Part 3: Gathering evidence to inform future UK action on marine microplastic pollution

## Background

Microplastics are a common aquatic pollutant and come from a variety of sources[13]. They are intentionally used in some products and processes, such as cosmetics and personal care products, household and industrial cleaning products and industrial blast media. They may also be released by wear and tear of plastic products such as tyres, fishing nets, rope, carpets, paints and varnishes, by washing synthetic textiles, as well as by the degradation in the marine environment of large items of plastic debris, such as plastic bottles, that fragment and degrade into smaller pieces. In addition, they may be released through accidental loss or poor management of preproduction pellets (nurdles).

The UK Government and Devolved Administrations already have in place a wide range of measures to address marine litter, including microplastics, as summarised in Part 1. Some measures address microplastics directly; others contribute indirectly by removing, or avoiding the release of, larger plastic particles, preventing their degradation into microplastics.

The OSPAR RAP includes an action to evaluate all products and processes that include primary microplastics eg microbeads and act, if appropriate, to reduce their impact on the marine environment. This programme of work will help to inform the UK's approach to other sources of microbeads such as in washing powders, household cleaners or industrial blast media.

This consultation seeks to gather evidence on the extent of the environmental impacts of microbeads found in other products and other sources of microplastics, to inform future UK actions to protect the marine environment by identifying targeted, proportionate measures to address key avoidable sources of marine plastics pollution.

## Consultation questions on further sources of potential marine microplastic pollution including larger marine plastic debris that breaks down into microplastics, such as plastic bottles and other packaging

a. Key sources of microplastics are set out in Part 3: Background. Are any missing or inappropriate? Please provide evidence to support your response.

[13] http://www.eunomia.co.uk/report-tag/microplastics

b. Which sources of microplastic pose the greatest risks to the marine environment? Please provide evidence to support your response.

c. How should sources be prioritised for action? Please explain your response.

d. What possible interventions could be developed to reduce these risks and how might the cost of these interventions be minimised? What is the likely impact on industry of these interventions? Please explain your response.