

# Investigating options for reducing releases in the environment of microplastics.

Fields marked with \* are mandatory.

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### Introduction

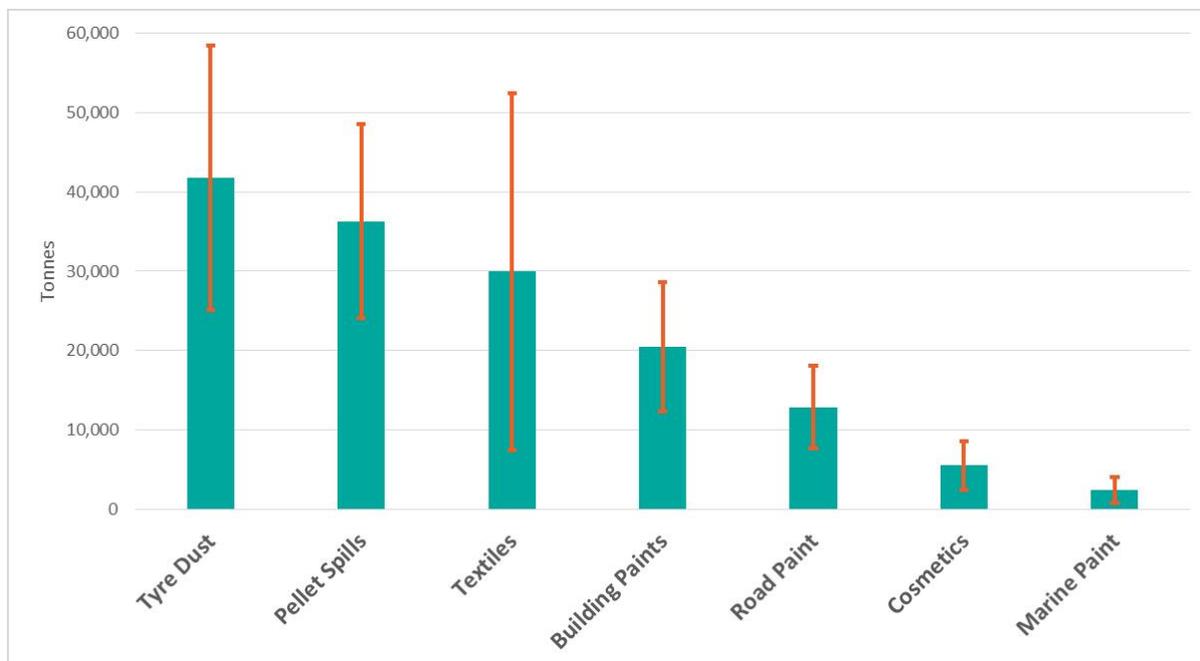
Marine litter, much of which is plastic, is found in marine and coastal habitats throughout the world, washed ashore, floating or accumulating on the seafloor.

Microplastics (Sized below 5 mm) are of particular concern.

The small size of microplastics and their material characteristics facilitate adsorption of toxic substances from the natural environment and increase their potential bioavailability to organisms throughout the food-chain. Their impacts can therefore be disproportionately high relative to the overall tonnage. They are used either intentionally in products (such as exfoliating components in cosmetics, in detergents, or as industrial blasting abrasives) or generated during the life cycle of products (for example during production of plastic products, through tyre wear or the washing of clothes). Microplastics can be partially treated in some waste water treatment plants or dispersed by the wind or via waste water effluents, rain drainage systems and/or rivers to reach the coastal and marine environment.

This internet-based consultation is part of the European Commission's efforts to understand the citizens' and stakeholders' views on the need for and possible range of measures which could be undertaken in order to reduce microplastics entering the marine environment under the basis of the precautionary principle.

Some of the main sources of microplastics were identified in a previous Commission study (see below graph). As part of the study that this consultation is supporting these sources and estimates are being investigated and fine-tuned.



## Questionnaire

Please note that the first questions are of general nature, and replies from question 3 onwards may require some prior knowledge about EU policy measures. The option of 'don't know' is available for all questions if you believe you are not in a position to answer. Questions marked with an asterisk (\*) require an answer to be given. In general several answers are possible. Completing this questionnaire could take up to 30 minutes of your time. Once you start filling in this questionnaire, the maximum time allowed by the system to complete is 90 minutes. Partial responses will not be saved. It is therefore recommended to download the full questionnaire as a PDF and prepare your answers in advance.

Thank you very much for taking the time to contribute to this consultation.

## Consultation Questions

Fields marked with \* are mandatory.

### 1. Information about you

\* 1.1a Your full name

Ninja Reineke

\* 1.1b Your email address

ninja.reineke@chemtrust.org

\* **Important** notice on the publication of contributions

Replies to this public consultation will be published on the European Commission's website (for further information, please consult the privacy statement).

Please note: regardless of the option chosen below, your contribution may be subject to a request for access to documents under Regulation 1049/2001 on public access to European Parliament, Council and Commission documents. In such cases, the request will be assessed against the conditions set out in the Regulation and in accordance with applicable data protection rules.

**Respondents should not include personal data in documents submitted in the context of consultation if they opt for anonymous publication.**

\* **Please indicate whether your reply:**

- Can be published, including your name or that of your organisation (I consent to publication of all information in my contribution and I declare that none of it is under copyright restrictions that prevent publication)
- Can be published in an anonymous way (I consent to publication of all information in my contribution except my name/the name of my organisation, and I declare that none of it is under copyright restrictions that prevent publication)
- Cannot be published but only used for statistical and analytical purposes

\* \* 1.2 I'm replying as a(n):

- Interested individual/citizen/consumer
- Stakeholder/expert

\* \* 1.2 a If you are replying as stakeholder/expert you represent:

- Private company
- Non-governmental organisation (NGO)
- Academic/scientist/research
- National authority
- Local/regional authority
- European Institution
- International body
- Industrial or trade association
- Consumer association
- Other associations
- Other

1.2 c If you represent a private company, what size is it?

- Micro enterprises: fewer than 10 persons employed
- Small enterprises: 10 to 49 persons employed
- Medium-sized enterprises: 50 to 249 persons employed
- Large enterprises: 250 or more persons employed

1.2 d If responding on behalf of a(n) organisation/association/authority/company/body, please provide the name:

CHEM Trust

\* 1.2 e Is your organisation registered in the Transparency Register of the European Commission and the European Parliament?

In the interests of transparency, organisations, networks, platforms or self-employed individuals engaged in activities aimed at influencing the EU decision making process have been invited to provide the public with relevant information about themselves, by registering in Transparency Register and subscribing to its Code of Conduct.

Please note: If the organisation is not registered, the submission is published separately from the registered organisations. During the analysis of replies to a consultation, contributions from respondents who choose not to register will be treated as individual contributions (unless the contributors are recognised as representative stakeholders through Treaty provisions, European Social Dialogue, Art. 154-155 TFEU). If your organisation is not registered, you have the opportunity to register [register now](#)

- yes  
 no

\* 1.3 Your country/ies:

- AT - Austria  
 BE - Belgium  
 BG - Bulgaria  
 CY - Cyprus  
 CZ - Czech Republic  
 DE - Germany  
 DK - Denmark  
 EE - Estonia  
 EL - Greece  
 ES - Spain  
 FI - Finland  
 FR - France  
 HR - Croatia  
 HU - Hungary  
 IE - Ireland  
 IT - Italy  
 LT - Lithuania  
 LU - Luxembourg  
 LV - Latvia  
 MT - Malta  
 NL - Netherlands  
 PL - Poland  
 PT - Portugal

- RO - Romania
- SE - Sweden
- SI - Slovenia
- SK - Slovakia
- UK - United Kingdom
- EU
- Other

## 2. Gauging Your Awareness and Concern for Microplastic Pollution

The following section looks at how aware you are of the different sources of microplastics pollution and how concerned you are about it.

\*2.1 On a scale of (1) HIGH awareness to (3) NO awareness, what was your awareness level of the following possible sources of microplastic emissions to the environment before starting this survey?

### Main sources

	(1) High awareness	(2) Somewhat aware	(3) No awareness
* Agricultural Mulch Films	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Artificial Sports Turf	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Building Paints	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Clothing and textiles	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Cosmetics	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Detergents/cleaning products	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Fishing nets and related equipment	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Industrial Abrasives	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Marine Paints	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Pre-production Plastic Pellets	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Road Paint	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Road Tyres	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*2.2 On a scale of (1) MOST concern to (5) LEAST concern, which sources of microplastics emission sources are of most ENVIRONMENTAL concern to you?

Click [here](#) here for definitions/explanations of the sources and base your judgement on your current understanding.

### Main Sources

	(1) High Environmental Concern	(2)	(3)	(4)	(5)Not At All Concerned	Don't Know
* Agricultural Mulch Films	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Artificial Sports Turf	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Building Paints	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Clothing and textiles	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Cosmetics	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Detergents/cleaning products	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Fishing Nets and related equipment	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Industrial Abrasives	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Marine Paints	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Pre-production Plastic Pellets	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Road Paint	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Road Tyres	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2.3 Are there any other sources of microplastics emissions to the environment, not already listed above about which you are particularly concerned? Please state and explain why.

CHEM Trust is very concerned about the increasing use and presence of microplastics in the environment and advocates for urgent regulatory responses at national and EU level. In April 2016 CHEM Trust submitted a response to the UK House of Commons Environmental Audit Committee inquiry on the Environmental Impacts of Microplastics. We highlighted in particular the following reports on the many sources of microplastics from the Swedish and Danish authorities:

- "Microplastics: Occurrence, effects and sources of releases to the environment in Denmark", Danish Environmental Protection Agency 2015  
<http://www2.mst.dk/Udgiv/publications/2015/10/978-87-93352-80-3.pdf>
- "Swedish sources and pathways for microplastics to the marine environment", IVL Swedish Environmental Research Institute for Swedish EPA, March 2016  
<https://naturvardsverket.se/upload/miljoarbete-i-samhallet/miljoarbete-isverige/regeringsuppdrag/2016/mikroplaster/swedish-sources-and-pathwaysfor->

microplastics-to-marine%20environment-ivl-c183.pdf

Both of these reports emphasise the very diverse sources of microplastics in the environment. It is clear from studies that microplastics are a problem, though more research is needed in order to understand the issue in more depth. However, this need for more research should not delay the development and implementation of regulatory measures to reduce microplastic emissions. Regulatory measures can bring rapid change, ensure consistency and a level playing field and limit dramatic consequences for our environment and health.

<http://www.chemtrust.org/chemical-pollution-and-microplastics-a-present-danger-to-marine-life/>

\*2.4 On a scale of (1) MOST concern to (5) LEAST concern, which are the potential impacts of microplastic emissions that are of most concern to you?

	(1) High Concern	(2)	(3)	(4)	(5)Not At All Concerned /No impact	Don' t Know
* Harm to human health	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Harm to marine life	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Costs and associated reduction in attractiveness for tourism	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Reduction in aesthetic value of marine environments (sea surface, beaches etc.)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 3. Reducing Microplastics Pollution

The following section seeks your views on some of the potential policy options and mitigation strategies that could be employed to reduce microplastic emissions and who should potentially be responsible.

#### **Microplastics generated from wear and tear and/or lost during product use**

The following questions focus on individual sources of microplastics that are generated during the use of a product and your answers should relate to these.

##### \*3.1 a Road Tyres

Please express your opinion on whether you believe that the following possible approaches to reduce road tyre microplastic emissions to the marine environment would be effective. If you do not have a firm view or understanding of the particular measure select 'don't know'.

Measures to reduce the wear rate of tyres

	Very Effective	Effective	Not Effective	Don't know
* Inclusion of a durability rating on the <a href="#">EU tyre label</a> to enable consumers to make a more informed choice when purchasing tyres	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Information campaign to raise awareness of the role of eco-driving in reducing tyre wear (e.g. avoid excessive speed, ensure correct tyre inflation etc.)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* A voluntary commitment by industry to increase the durability of tyres	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Legislation requiring producers to increase the durability of their tyres (including phasing out the least durable tyres over time)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Financial incentives for producers to increase the durability of vehicle tyres	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Measures to increase the capture of tyre particles

	Very Effective	Effective	Not Effective	Don't know
* Increasing the use of porous asphalt which allows particulates (and rainwater) to pass through the road surface and the particulates can be captured	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increasing the use of natural buffers e.g. SuDS (sustainable drainage) to capture surface water from roads in vegetated strips adjacent to the asphalt surface	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increasing the rate of road sweeping in order to remove dust (including vehicle tyre particles)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Develop and install technologies that are proven to capture microplastics in a municipal waste water treatment plant and prevent them from entering effluents (and subsequently surface waters)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* \*3.1 b Are there any other approaches to reducing tyre microplastics emissions to the marine environment that you believe would be effective? Please state and explain why.

In all cases where improved technologies, e.g. for waste and water treatment plants, are installed it will be important to develop financial schemes based on the 'polluter pays' principle and link it with extended producer responsibility to avoid handing over the clean-up-bill solely to society.

\*3.1 c On a scale of (1) GREATEST responsibility (5) LEAST responsibility, who do you think should take action for reducing tyre microplastics emissions to the marine environment?

	(1) GREATEST responsibility	(2)	(3)	(4)	(5) LEAST responsibility	Don't Know
* European Commission	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Member states (countries)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Individuals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Tyre Industry	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*3.2 a Pre-production Plastic Pellets, Powders and Flakes**

Please express your opinion on whether you believe that the following possible approaches to reduce pre-production plastic pellets emissions to the marine environment would be effective. If you do not have a firm view or understanding of the particular measure select 'don't know'.

Preventing supply chain loss through implementation of industry recognised best practice

	Very Effective	Effective	Not Effective	Don't know
* Continue current industry-led activities to encourage the voluntary uptake of best practice measures highlighted in <a href="#">Operation Clean Sweep</a> guidance	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* An 'enhanced' business-led approach using retailer procurement standards to require suppliers (and those who supply them) to demonstrate (including an audit process) that they are adhering to Operation Clean Sweep guidance	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Legislation at the EU level requiring all companies placing plastics on the EU market to demonstrate that their supply chain adheres to best practice as outlined in Operation Clean Sweep guidance	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Measures to increase the capture of plastic pellets

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	Very Effective	Effective	Not Effective	Don't know
* Develop and install technologies that are proven to capture microplastics in a municipal waste water treatment plant and prevent them from entering effluents (and subsequently surface waters).	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Mandate the installation of technologies that are proven to capture microplastics on manufacturing locations or sites handling pellets e.g. drain traps or onsite waste and waste water treatment.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 3.2 b Are there any other approaches to reducing pre-production plastic pellets emissions to the marine environment that you believe would be effective? Please state and explain why.

It would be important to finally include registration requirements for polymers in the EU chemicals law REACH. Even if not all problems will be solved by this measure it would help close knowledge gaps regarding hazard and exposure data of polymers in general and also increase the information in the supply chain. Based on the information provided by the manufacturers during registration, subsequent evaluations and risk management measures could be taken where needed.

The Commission has already carried out several reports on the topic of polymers and REACH and should revisit the policy options proposed, see e.g. 'Technical assistance related to the review of REACH with regard to the registration requirements on polymer' (2015). <http://ec.europa.eu/environment/chemicals/reach/pdf/FINAL%20REPORT%20POLYMER%20SI671025.pdf>

\*3.2 c On a scale of (1) GREATEST responsibility (5) LEAST responsibility, who do you think should take action for reducing pre-production plastic pellets emissions to the marine environment?

	(1) GREATEST responsibility	(2)	(3)	(4)	(5) LEAST responsibility	Don't Know
* European Commission	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Member states (countries)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Individuals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Plastic pellet producers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Plastic pellet converters	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Logistics Companies	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*3.3 a Clothing and Textiles**

Please express your opinion on whether you believe that the following possible approaches to reduce microplastic (synthetic fibre) emissions from clothing and textiles to the marine environment would be effective. If you do not have a firm view or understanding of the particular measure select 'don't know'.

Research on the relative importance of attributes of synthetic clothing (such as the type of fibre, fibre length, type of weave used) that may affect the rate of microfibre loss, is still at an early stage. It is therefore not clear at present what manufacturers or users can do to reduce the loss of microfibres from synthetic clothing. Research also suggests that the rate of loss of synthetic microfibres from clothing is highest during the first few washes, and then declines.

Measures to reduce the propensity of synthetic textiles to be shed from clothing

	Very Effective	Effective	Not Effective	Don't know
* Require all synthetic clothing to be pre-washed by the manufacturer, with fibres collected and managed appropriately, prior to the items being placed on the market	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Awareness raising campaign among consumers to alert them to actions they can take to reduce fibre loss, including washing less, washing full loads, washing at low temperatures, and using liquid detergents rather than powder	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Promote further research on the relative importance of attributes of synthetic clothing affecting the rate of microfiber (e.g. the type of fibre, fibre length, type of weave used) and widely disseminate its results	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Require all clothing placed on the EU market to indicate whether the item is likely to lead to high /medium/low or no loss of synthetic microfibres	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Develop EU Ecolabel criteria that manufacturers can choose to adopt.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Develop a mandatory requirement for the progressive reduction of microfiber release that must be adopted by manufacturers of clothing sold in the EU.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Apply an economic instrument to financially incentivise a shift towards clothing that releases fewer or no synthetic microfibers.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Measures to capture synthetic textiles shed from clothing

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	Very Effective	Effective	Not Effective	Don't know
* A requirement for all new washing machines to be fitted with filters to trap microfibres. These would need to be manually emptied periodically with the contents discarded with residual solid waste.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* A voluntary measure whereby manufacturers are encouraged to provide a microfibre capture bag with each washing machine placed on the market. The user places clothing inside this bag before placing it in the washing machine, and it captures microfibres. It then needs to be manually emptied.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Develop and install technologies that are proven to capture microfibres in a municipal waste water treatment plant and prevent them from entering effluents (and subsequently surface waters).	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* \*3.3 b Are there any other approaches to reducing microplastics (synthetic fibre) emissions to the marine environment from clothing and textiles that you believe would be effective? Please state and explain why.

The recently published Greenpeace report 'Fashion at the crossroads' presents a range of interesting proposals and solutions.  
<http://www.greenpeace.org/international/en/publications/Campaign-reports/Toxics-reports/Fashion-at-the-Crossroads/>

\*3.3 c On a scale of (1) GREATEST responsibility (5) LEAST responsibility, who do you think should take action for reducing microplastics (synthetic fibre) emissions to the marine environment from clothing and textiles?

	(1) GREATEST responsibility	(2)	(3)	(4)	(5) LEAST responsibility	Don't Know
* European Commission	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Member states (countries)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Individuals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Textiles/fibres Manufacturers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Clothing Manufacturers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Clothing Retailers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Washing machine manufacturers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**\*3.4 a Artificial Sports Turf**

Please express your opinion on whether you believe that the following possible approaches to reduce microplastic emissions from artificial sports turf to the environment would be effective. If you do not have a firm view or understanding of the particular measure select 'don't know'.

Changes to handling and management of infill

	Very Effective	Effective	Not Effective	Don't know
* Develop and disseminate best practice guidance for the management of infill associated with artificial sports turf in order to increase awareness and encourage improvements	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Include best practice management techniques as requirements for pitches that wish to be certified by FIFA (or the relevant accreditation body for the pitch in question).	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Develop and install technologies that are proven to capture microplastics in a municipal waste water treatment plant and prevent them from entering effluents (and subsequently surface waters).	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Mandate the installation of technologies that are proven to capture microplastics on sports turf sites e.g. drain traps or onsite waste water treatment.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Changes to the nature of the infill

	Very Effective	Effective	Not Effective	Don't know
* Awareness raising of the possible use of alternative non-polymer based infill material such as cork	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Voluntary, industry led, commitment to increase the use of non-polymer based infill	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Financial incentives to move towards non-polymer based infill	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* A ban on the use of polymer based infill as an infill material for artificial sports turf	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\*3.4 b Are there any other approaches to reducing microplastics emissions to the marine environment from artificial sports turf that you believe would be effective? Please state and explain why.

CHEM Trust believes the debate should focus on discussing measures to prevent the problem at source rather than managing downstream clean-up actions which are usually less effective and more costly. There is already an ongoing debate over the health concerns of artificial turfs in the context of REACH, mainly pertaining to the potential negative impacts from exposure to carcinogens and other harmful substances in recycled turf.

<https://echa.europa.eu/nl/-/recycled-rubber-infill-causes-a-very-low-level-of-concern>

The question policymakers should ask is whether this use is sensible at all given the negative effects and costs for society. Better solutions for turf materials should be investigated and encouraged with the aim of stopping pollution at source.

\*3.4 c On a scale of (1) GREATEST responsibility (5) LEAST responsibility, who do you think should take action for reducing microplastics emissions to the marine environment from artificial sports turf?

	(1) GREATEST responsibility	(2)	(3)	(4)	(5) LEAST responsibility	Don't Know
* European Commission	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Member states (countries)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Individuals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Artificial turf manufactures/ installers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Artificial turf pitch owners /managers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* National and regional sport Federations	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Intentionally added microplastics

The following question focuses on individual sources of microplastics that are intentionally added to a product. This is in support of a targeted stakeholder consultation which took place on this subject during April/May 2017.

\* 3.5 Which is for you, the most efficient and effective way to address individual sources of microplastics that are intentionally added into the following products?

	Voluntary Industry phase-out	Prominent, mandatory labelling to show the product contains microplastics	Tax on microplastic ingredients	Ban on microplastics ingredients	Strongly Oppose such measures	Don't Know
* Cosmetics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Detergents /Cleaning products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Building Paints	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Other - please specify	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 3.5 a If you have chosen Other please specify the product

The ban on microplastics ingredients should be as comprehensive as possible and address all products entering the drainage systems or are discharged directly or indirectly into the aquatic environment, either by design or reasonably foreseeable use (from present and future formulations). There should be no lower limit for the size of “biodegradable plastic ingredients as all these products are also contributing to microplastic pollution.

There is an increasing amount of research on the accumulation of chemicals by microplastics, and the transfer of these chemicals into organisms after ingestion of these microplastics. For example:

- Researchers have found that microplastics can concentrate various polluting chemicals (in this case PCBs, PAHs and brominated flame retardant PDBEs), and that ingestion of these plastics by fish then leads to contamination of their tissues.
- Research on amphipods and microplastics contaminated with PDBEs has found similar results, with the amphipods eating the contaminated microplastics.
- Microbeads have also been found to concentrate chemicals.

For references see:

<http://www.chemtrust.org/wp-content/uploads/chemtrust-response-eac-microplastics-apr16.pdf>

## Financial Responsibility

The following question looks at where the financial responsibility should lie for the implementation of any of the proposed measures.

\*3.6 On a scale of (1) GREATEST responsibility (5) LEAST responsibility, who do you think should bear the FINANCIAL responsibility for reducing microplastics emissions to the marine environment?

	(1) GREATEST responsibility	(2)	(3)	(4)	(5) LEAST responsibility	Don' t Know
* Manufacturers of the products concerned, through their own waste and waste water treatment facilities or through public facilities which should capture or be upgraded to capture microplastics before they are released in the environment with costs potentially included in the prices of those products	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* The (public or private) waste and waste water treatment companies (who may be able to capture microplastics) and potentially pass the costs in water price/taxes	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Government/ Tax payers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

## 4. Document Upload

You may upload here an additional document on the subject of this consultation (max. 3 pages/2000 words).

All additional documents provided will be published on the Commission website.

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