

Microbead Ban: No Longer Optional

Plastics pose serious threats to the health of our oceans worldwide. Microbeads, a form of microplastic commonly used as synthetic exfoliants in Personal Care and Cosmetic Products (PCCPs), are notoriously culpable for their lack of detection. They are entering aquatic environments with an alarming rate and with devastating effect on aquatic life across the globe. Developed countries, such as Canada and the United States have responded to this urgency, and have implemented or are in the process of implementing bans regarding the manufacture and sale of products containing microbeads within their countries. Australia however, has yet to do so. It is essential for all developed countries to lead this call to action, to safeguard the health of our shared oceans. It is unacceptable that Australia, a coastal nation remains exempt. **This policy brief advocates for a global ban regarding the sale, manufacture, and import of all PCCPs containing synthetic and biodegradable microbeads, including Australia.**

Microbeads as Microplastic Pollution

“If nothing is done to address plastic pollution, the ocean is expected to contain 1 tonne of plastic for every 3 tonnes of fish by 2025, and by 2050, more plastics than fish by weight.”¹

Microplastics

Microplastics have been found in every major open ocean, and many freshwater lakes and rivers around the world.² Due to their small size, less than 5mm in length, microplastics are bioavailable to thousands of aquatic and marine species at all trophic levels.²

Microbeads

Microbeads made from synthetic polymers such as polyethylene, polylactic acid (PLA), polypropylene, polystyrene, or polyethylene terephthalate range in size from ~1µm-1mm.² Used as synthetic exfoliants, they are commonly added into Personal Care and Cosmetic Products (PCCPs) as replacements for natural exfoliating materials.³

What is the Problem?

Microbeads, similar to all forms of microplastic, have the potential to contaminate all aquatic trophic levels as they enter the aquatic environment through final effluent or biosolids from wastewater treatment plants (WWTPs), and are ingested by many forms of marine fauna, including zooplankton, mussels, fish, and larger megafauna.^{2,4} Microbeads accumulate toxic and persistent organic contaminants which leach out into the surrounding environment and threaten the health of aquatic and terrestrial organisms through bioaccumulation.⁴ Microbeads cannot be effectively removed once they've entered the waterways, Addressing their source is the only effective approach.

Policy Recommendations

1. State and Federal legislation should ban the sale and manufacture of all personal care and cosmetic products (PCCPs) containing synthetic and biodegradable microbeads.
2. Federal legislation should ban the import of all PCCPs containing synthetic and biodegradable microbeads.

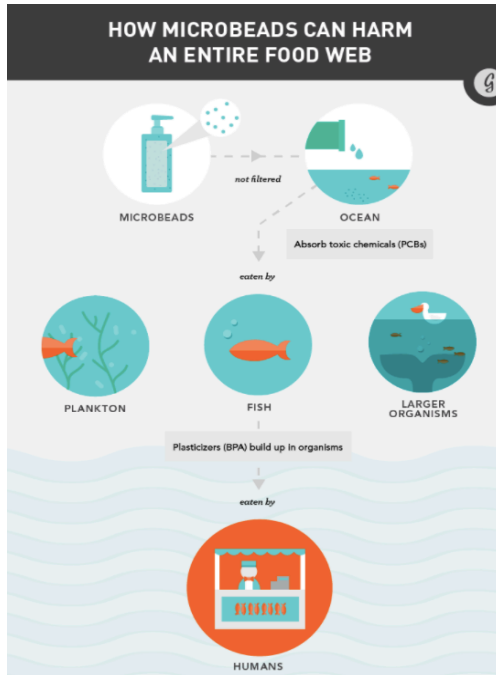


Levels of Microbead Contamination

Microbeads have been found ingested by hundreds of species globally, including invertebrates, fish, and larger aquatic mega-fauna such as marine mammals, turtles, and seabirds.⁵ Microbeads cause physical and chemical harm to land animals as well.⁶ Physically, microbeads have been found to cause cellular necrosis, inflammation, and lacerations in the digestive tracts when ingested.⁶ Chemically, microbeads have resulted in detrimental health effects such as liver toxicity and disruptions to the endocrine system.⁷ And although biodegradable microbeads have been suggested as an alternative to synthetic microbeads, they have not been proven to be less harmful.²



Credit: Greenpeace



Credit: 'Greatist'

Australia's Voluntary Ban of Microbeads is Insufficient⁸

Precedence for a Ban in Australia

Several developed countries have implemented or are in the process of implementing bans regarding the manufacture and sale of products containing microbeads within their countries, however, Australia has yet to do so. In order for localized microbead bans to be effective on a large scale, uniform bans must be implemented globally.

Canada⁸

- **Nov 2016** – Final draft of microbead regulations.
- **Summer 2017** – Microbead Ban
 - * Bans sale of toiletries or cleansers containing microbeads by July 1 2018.
 - * Bans sale of natural health products, non-prescriptive drugs, and toothpaste containing microbeads by July 1 2019.

United States⁸

- **2015** - 'Microbead-Free Waters Act'
 - * Bans the sale of **rinse-off cosmetics** that contain intentionally added plastic microbeads by Jan 1 2018.
 - * Bans the manufacturing of rinse-off cosmetics

Conclusion: In order to aid in reducing the prevalence of microbeads in oceans worldwide, Australia must join other developed nations in implementing a mandatory ban regarding the use, sale, manufacture, and import of PCCPs containing synthetic and biodegradable microbeads.

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