

# Regulatory Impact Statement

## Agency Disclosure Statement

### Reducing the impact of microbeads in personal care products on the environment

The Regulatory Impact Statement has been prepared by the Ministry for the Environment. It provides an analysis of options to manage the impacts from microbeads contained in personal care products.

Analysis in this Regulatory Impact Statement focused only on identifying the impacts from, and options to manage, microbeads contained in personal care products, such as bath products, facial cleaners and toothpastes.

The analysis was limited to microbeads in personal care products because:

- Personal care products are designed to be washed “down the drain” and therefore directly enter the freshwater and marine environment through effluent from wastewater treatment plants; and
- Microbeads are determined to be an unnecessary ingredient in personal care products with natural alternatives available such as particles derived from apricot kernels.

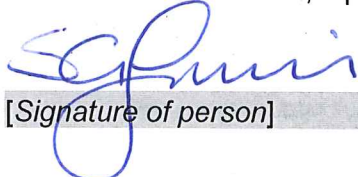
The scale and magnitude of impacts from microbeads used in industrial products and processes beyond personal care products is not known. However, we consider that there are systems and processes in place to prevent the direct release of these microbeads into the environment.

This Regulatory Impact Statement supports public consultation on the proposal to prohibit or control the manufacture and sale of personal care products under the Waste Minimisation Act 2008. The types of costs and benefits from options to reduce the impact of microbeads can be readily identified. However, there is uncertainty about the magnitude of these impacts and many of the costs and benefits have not been fully quantified at this stage.

Given more time further analysis would have been completed to determine; the full costs and benefits of the proposals, and the impacts from the use of microbeads in other industrial products and processes. Following consultation, an updated Regulatory Impact Statement will be produced.

The proposals in this Regulatory Impact Statement may impair market competition, and the incentive for business to innovate and invest. We consider this risk to be small as there is a global trend within cosmetic markets to remove microbeads from personal care products.

Shaun Lewis – Director, Operations



[Signature of person]

16/11/2016  
[Date]

## Status quo and problem definition

1. Microbeads are plastic beads (generally polyethylene) less than 5mm in size, manufactured for specific purposes, including for use in personal care products (such as bath products, facial cleaners and toothpastes). They are added to products to give texture, act as an abrasive, or provide visual interest.
2. Microbeads are also used in other industrial products and processes such as airblast cleaning products, oil and gas exploration, textile printing, automotive moulding and medical applications.
3. This Regulatory Impact Statement focuses only on identifying the impacts from, and options to manage, microbeads contained in personal care products, such as bath products, facial cleaners and toothpastes, because:
  - a. Personal care products are designed to be washed “down the drain” and therefore directly enter the freshwater and marine environment through effluent from wastewater treatment plants; and
  - b. Microbeads are determined to be an unnecessary ingredient in personal care products with natural alternatives available such as particles derived from apricot kernels.
4. The scale and magnitude of impacts from microbeads used in industrial products and processes beyond personal care products is not known.
5. Research suggests<sup>1</sup> that over 90 percent of microbeads are removed or captured from wastewater effluent before it is discharged. However, a considerable number of microbeads still enter the environment. Personal care products have been found to contain between 137,000 and 2,800,000 microbeads per 150mls. Products that are used on a daily basis can release around 94,500 microbeads per application<sup>2</sup>.

### *Impacts of microbeads on ecosystems and human health*

6. Microbeads that enter marine environment are expected to be present in both the water column and sediment. They can be mistaken for food and ingested by aquatic organisms or ingested passively during filter feeding, with adverse impacts such as internal damage and starvation. There is limited research on the impacts of microbeads in fresh water; however they are also discharged to this environment.
7. Microbeads may bio-accumulate toxic substances and persistent organic pollutants<sup>3</sup>. This accumulation poses a risk to any aquatic life that consumes microbeads as well other life higher on the food chain including humans.

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<sup>1</sup> Microbeads – A Science Summary , Canadian Government, July 2015

<sup>2</sup> Napper, I. E., Bakir, A., Rowland, S. J., & Thompson, R. C. (2015). Characterisation, quantity and sorptive properties of microplastics extracted from cosmetics. *Marine pollution bulletin*, 99(1), 178-185.

<sup>3</sup> UNEP. (2015) *Plastics in Cosmetics: Are We Polluting the Environment through our Personal Care?* Retrieved from <http://unep.org/gpa/documents/publications/PlasticinCosmetics2015Factsheet.pdf>

8. Microbeads do not biodegrade and are very difficult to remove. Once in the environment, they have a cumulative impact on ecosystems, as their quantity builds up.

*Framework for managing microbeads in New Zealand*

9. New Zealand has legislation available to manage personal care products containing microbeads, such as:
  - a) the Waste Minimisation Act 2008 (WMA) which allows regulations to be developed for controlling or prohibiting the manufacture and/or sale of products that contain specific materials; and
  - b) the Imports and Exports (Restrictions) Act 1988 which allows restrictions to be placed on importation of goods into New Zealand.
10. There is currently no Government policy or regulation specifically aimed at reducing the risk of impacts from microbeads on the marine environment.

*Industry efforts to phase out microbeads – impacts on the New Zealand market*

11. Anecdotal evidence suggests that as at September 2015 there were around 100 personal care products for sale in New Zealand that contained microbeads. These products are imported into New Zealand and sold by domestic retailers. Advice from the New Zealand Cosmetic, Toiletry and Fragrance Association is that New Zealand industry does not manufacture personal care products that contain microbeads.
12. The Food and Grocery Council of New Zealand have advised that many brands either have no personal care products containing microbeads or will phase microbeads out of the market in the next few months. Retail New Zealand has also confirmed products containing microbeads are being phased out internationally and that this will flow through to the New Zealand market. There is however a subsidiary market of smaller manufacturers that may not be on the same market trajectory.
13. Information from New Zealand business associations and international media suggests around 75 of the 100 products that were identified as containing microbeads in September 2015 either no longer contain microbeads, or international manufacturers have adopted timeframes for phasing out microbeads.

*International action by Government*

14. Both the United States of America (USA) and Canada have taken steps to ban microbeads in personal care products. The USA has introduced a ban which takes effect on 1 July 2017 for manufacturing and 1 July 2018 for interstate commerce. This approach is limited in that it only applies to plastic that is added for exfoliating or cleansing purposes rather than any plastic added to personal care products. It does not cover microbeads included in products for the purposes of texture or consistency. Canada has included microbeads in personal care products on the Canadian Environmental Protection Act's list of toxic substances and is developing regulations to prohibit the manufacture, import, and sale of personal care products containing microbeads.
15. The Australian government announced the introduction of a voluntary agreement to phase-out of microbeads in personal care products by July 2018. If this does not prove effective, the government has stated it will regulate the use of microbeads. This voluntary agreement is not yet operational. Recent discussions between the New Zealand and

Australian Environment Ministers indicate that Australia and New Zealand will seek to align the policy intent of approaches to the regulation of microbeads.

16. A Europe wide ban on microbeads is also being considered. Media reports indicate that the Netherlands, Sweden, Austria, Belgium, Italy, and Luxembourg have lobbied the European Union to ban microbeads across all European Union countries.
17. The government of the United Kingdom recently announced a plan to ban microbeads. A consultation process and further policy work is planned, through which the details of a ban are expected to be developed.

### **Problem definition**

18. Personal care products are designed to be washed off or rinsed down waste water treatment systems. New Zealand's waste water treatment systems are unable to capture all microbeads therefore a certain quantity enters the environment.
19. There is currently no Government policy or regulation specifically aimed at reducing the risk of impacts from microbeads on the marine environment.
20. Microbeads cause damage to marine ecosystems and may impact on human health through the consumption of contaminated seafood. There is an accompanying risk of devaluing New Zealand's fishing industry/exports both through the reduced safety and quality of seafood products.
21. While the status quo is addressing the issue, there is uncertainty around how long this will take. Under a precautionary approach there may be merit in taking action now rather than waiting for a market based solution.

### **Objectives**

22. The primary objective is to ensure that there is certainty that the impacts of microbeads, from personal care products, on New Zealand's environment and human health are minimised.
23. In achieving this objective it is also desirable to ensure that costs for New Zealand businesses and consumers are also minimised.

#### *Criteria for option assessment*

24. The following criteria were used to assess each option against the policy objectives.
  - a) The effectiveness of the option in ensuring that there is certainty that the impacts of microbeads on New Zealand's environment and human health are managed;
  - b) The effectiveness of the option in minimising compliance costs to industry and consumers.

## Options and impact analysis

25. The following four options have been considered to reduce the impact of microbeads:

- a) Status Quo - not implementing any government intervention;
- b) Voluntary action - Government initiated measure to support the voluntary action already being undertaken by industry to phase out import, sale and use of personal care products containing microbeads
- c) Regulatory action (Waste Minimisation Act 2008) – introduction of regulations to control or prohibit the manufacture and sale of personal care products containing microbeads; and
- d) Regulatory action (Imports and Exports (Restrictions) Act 1988) – introduction of restrictions on the importation of personal care products containing microbeads into New Zealand.

	<b>Description</b>	<b>Criteria 1: Management of impacts</b>  <b>Primary criteria</b>	<b>Criteria 2: Cost to business and consumers</b>  <b>Secondary criteria</b>
Status Quo	No Government intervention	~  May reduce impacts of microbeads are managed	✓  Imposes no additional cost on industry
Voluntary action	Government initiated voluntary action supporting current industry efforts	~  May reduce impacts of microbeads	✓  Imposes minimal additional cost on industry
Regulatory action (Waste Minimisation Act 2008)	Control or prohibition of the manufacture and sale of personal care products containing microbeads	✓  Provides certainty that the impacts of microbeads are managed	~  Imposes additional cost on industry
Regulatory action (Imports and Exports (Restrictions) Act 1988)	Regulation that prohibits the import of personal care products that contain microbeads	✓  Provides certainty that the impacts of microbeads from personal care products are managed	~  Imposes additional cost on industry

**Key:** ✓ meets criteria

~ partially meets criteria

\* does not meet criteria

#### *Option one: status quo*

26. Retaining the status quo would mean that personal care products containing microbeads could still be legally manufactured and sold in New Zealand. The removal of microbeads from personal care products in New Zealand would be dependent on international manufacturers and consumer choice.

#### *Arguments for retaining the status quo*

27. The international trend is seeing personal care product manufacturers switching to safe alternatives to microbeads or setting self-imposed timeframes to remove microbeads from their products. As consumer awareness on the environmental effects of microbeads matures, the market will continue to move away from importing and selling personal care products that contain microbeads.
28. Retaining the status quo does not impose additional costs on businesses and consumers above those associated with voluntary and market based phase out of microbeads in personal care products.
29. There is currently no administrative cost to Government associated with the management of microbeads in New Zealand.

#### *Limitations of the status quo*

30. There is not full certainty that this option would ensure the primary objective that the impacts of microbeads on the environment and human health would be managed. The current market trajectory may not continue and personal care products containing microbeads could reappear in future. There is also a possibility that excess product that will be banned from sale in countries that have imposed a ban may find a market in New Zealand.
31. There is uncertainty around the scope of industry led action. There is a possibility that industry action may focus on a narrow definition of the type of product to be phased out similar to the definition used in US regulation. This could mean that microbeads used for texture or consistency in products may not be phased out, or phased out as quickly.

#### *Option two: voluntary action*

32. This intervention would involve supporting current voluntary action from the main business and industry associations that import personal care products into New Zealand, to phase out the manufacture, import and sale of personal care products containing microbeads by a certain date.

#### *Arguments for voluntary action*

33. There would be no or minimal cost to businesses in implementing a voluntary commitment, and minimal cost to government in monitoring progress and reporting to Ministers.

#### *Limitations of voluntary action*

34. There is less certainty that this option will ensure that the environment is protected from the impacts of microbeads when compared to regulatory options.

35. According to retail interests, the main market for personal care products would be captured by voluntary action. However, there is a “subsidiary market” which includes individuals and smaller businesses importing products for sale that may not be captured.
36. There is a possibility that voluntary action may focus on a narrow definition of the type of product to be phased out similar to the definition used in US regulation. This could mean that microbeads used for texture or consistency in products may not be phased out, or phased out as quickly.

*Option three: regulatory action (WMA) – introduction of regulations to control or prohibit the manufacture and sale of personal care products containing microbeads*

37. Section 23(1)(b) of the WMA allows regulations to be developed for controlling or prohibiting the manufacture or sale of products that contain specified materials, for example personal care products that contain microbeads. Officials’ preference is that the scope of the proposed regulation covers all personal care products that contain microbeads, rather than only those products that contain microbeads for exfoliation purposes, as is the case in the USA.

*Arguments for regulatory action under the WMA*

38. This option will provide certainty that the impacts of microbeads on the environment and human health from these products are eliminated over time.
39. The New Zealand market reflects international trends and retail interests have advised they are moving away from importing and selling personal care products containing microbeads. Therefore, regulation would have a minimal or no cost on businesses in the primary market. We do not know the potential costs to the subsidiary market. However, costs will be dependent on the scope of the definition of product type to be captured by regulation.
40. Regulation would provide both businesses and consumers with certainty by providing a precise date after which personal care products containing microbeads cannot be manufactured or sold in New Zealand.

*Limitations to regulatory action under the WMA*

41. Regulations made under the WMA would not prohibit the import or personal use of products containing microbeads into New Zealand. The extent to which products containing microbeads would continue to be imported and used by consumers in New Zealand is unclear.
42. Under the Trans-Tasman Mutual Recognition Arrangement (TTMRA), any goods produced in or imported into Australia that may be lawfully sold in Australia may also be sold in New Zealand, and vice versa. This principle operates regardless of different standards, or other sale-related regulatory requirements between New Zealand and Australia. In 2015 approximately 23 percent of New Zealand’s total imports of cosmetics and toiletries entered New Zealand from Australia. The TTMRA does allow for permanent or temporary exemptions for health, safety or environmental reasons. For a sale ban under the WMA to apply to goods produced in or imported into Australia, Australia would need to develop regulations in parallel with New Zealand, or a permanent or temporary exemption for personal care products containing microbeads would be required under the TTMRA.

43. Under the World Trade Organisation (WTO) framework, a ban on the sale of products containing microbeads could be seen to be a *de facto* quantitative restriction on imports, which would be inconsistent with New Zealand's obligations under the General Agreement on Tariffs and Trade (GATT). However, certain exceptions to this rule exist. A country may adopt restrictive measures "necessary to protect human, animal or plant life or health" or "relating to the conservation of exhaustible natural resources".

#### *Costs to Government*

44. The WMA provides offences for contravening a regulation and allows an enforcement officer to be appointed for the purposes of ensuring compliance with regulations. The Environmental Protection Authority (EPA) has been identified as best placed to undertake enforcement for any regulations. The EPA has estimated it would require additional set up costs of \$50,000 and on-going costs of \$170,000 annually to cover the additional enforcement role.
45. A 2011 study found on average the cost of making and promulgating a regulation in New Zealand was \$530,000 between 1990 and 2010<sup>4</sup>.
46. Costs to government may be dependent on the scope of the definition of product type to be captured by regulation.

#### *Option four: regulatory action (Imports and Exports (Restrictions) Act 1988) – introduction of restrictions for the importation of goods containing microbeads into New Zealand.*

47. Regulations that provide for either an absolute or conditional prohibition on the import of personal care products containing microbeads could be progressed via an order in council under the Imports and Exports (Restrictions) Act 1988. Such a measure would need to be progressed in addition to regulation of manufacture and sale under the WMA to avoid discriminating against imported products, as required by our international trade obligations.

#### *Arguments for regulatory action under the Imports and Exports (Restrictions) Act 1988*

48. This option provides certainty that no personal care products containing microbeads would be allowed to enter New Zealand.
49. Due to existing industry led phase out of products containing microbeads and market movements, this option would impose minimal or no costs on business.

#### *Limitations to regulatory action under the Imports and Exports (Restrictions) Act 1988*

50. If regulations are to be pursued, they must align with New Zealand's international trade obligations. Under the WTO framework, import restrictions are not generally permitted under the GATT. Certain exceptions to this rule exist for environmental measures as previously described.
51. A manufacture and sale ban under the WMA would also be needed to meet international obligations not to discriminate against imported goods.

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<sup>4</sup> Wilson, N., Nghiem, N., Foster, R., Cobiac, L., & Blakely, T. (2012). Estimating the cost of new public health legislation. *Bulletin of the World Health Organization*, 90(7), 532-539.



52. This measure would meet the primary objective of ensuring that there is certainty that the impacts of microbeads are managed. However, progressing such regulation is complex and questions around effective enforcement would persist including difficulties with the identification of products containing exfoliating agents through customs classification systems, the possible need for physical inspection and testing of products, and the potential for false declaration and coding errors.

#### *Costs to Government*

53. This option would include the costs of development and enforcement for two sets of regulation. A 2011 study found on average the cost of making and promulgating a regulation in New Zealand was \$530,000 between 1990 and 2010<sup>5</sup>. We expect that enforcement costs would be significant for the New Zealand Customs Service due to the need to change product classification systems and possible physical inspection and testing.
54. There will also be a cost for government departments associated with meeting TTMRA requirements.
55. Costs to government may be dependent on the scope of the definition of product type to be captured by regulation.

## **Consultation**

56. Officials from the Ministry for the Environment carried out targeted consultation to acquire information on the manufacture and sale of personal care products containing microbeads with the Food and Grocery Council of New Zealand, Retail New Zealand, the Cosmetic, Toiletry and Fragrances Association of New Zealand, Progressive Enterprises, and the New Zealand Plastics Association. Consultation enabled officials to identify that:
- a) New Zealand industry does not manufacture personal care products that contain microbeads;
  - b) All personal care products that contain microbeads are manufactured overseas and imported into New Zealand;
  - c) Personal care products containing microbeads are being phased out internationally and this trend is likely to flow through to the New Zealand market.
57. The Food and Grocery Council of New Zealand was consulted on specific options to phase out microbeads.
58. The following agencies were consulted during preparation of advice on possible intervention options to address microbeads, the Ministry of Foreign Affairs and Trade, the Ministry of Business, Innovation and Employment, New Zealand Customs Services and the Environmental Protection Authority. Of these agencies only the Environmental Protection Authority had specific views on using the Waste Minimisation Act.

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<sup>5</sup> Wilson, N., Nghiem, N., Foster, R., Cobiac, L., & Blakely, T. (2012). Estimating the cost of new public health legislation. Bulletin of the World Health Organization, 90(7), 532-539.

59. The Ministry of Business, Innovation and Employment, and the Environmental Protection Authority considered if regulatory action was pursued it should be under the Imports and Exports (Restrictions) Act 1988.

#### *Public consultation*

60. In accordance with the statutory process for developing regulations, the Ministry for the Environment will carry out public consultation on the proposal to control or prohibit the manufacture, sale or disposal of personal care products that contain microbeads using the Waste Minimisation Act 2008. A consultation document has been prepared, and seeks to:
- Gauge public support for the proposed framework to ban the manufacture and sale of personal care products that contain microbeads;
  - Test the proposed scope of the proposed regulation, including the definition of types of products to be banned, and how effective it will be in protecting New Zealand's marine environment;
  - Identify a timeframe that allows importers and international manufacturers sufficient time to adjust to the proposed regulation whilst also providing timely protection for the marine environment; and
  - Identify any personal care products containing microbeads that serve an essential purpose and may require an exemption to the proposed regulation, for example medical products.
61. Following consultation with the general public, a Cabinet paper and updated Regulatory Impact Statement with further analysis incorporating consultation findings and final policy proposals will be submitted to Cabinet.

### **Conclusion and Recommendations**

62. Many personal care products no longer contain microbeads, and many international manufacturers have adopted timeframes for phasing microbeads out. However, the absence of any Government intervention presents a risk that New Zealand's marine environment will not be protected from the impacts of microbeads.
63. If the status quo is retained, it is possible that the import, manufacture and sale of personal care products containing microbeads will be phased out at some point. However, certainty is limited as to when or whether this would occur.
64. If the Government was to support voluntary action being taken by industry to remove microbeads from personal care products, the import, manufacture and sale of personal care products containing microbeads would be phased out. Again, certainty is limited as to when or to what extent this would occur.
65. Under the precautionary approach, regulation controlling or prohibiting the manufacture and sale of personal care products containing microbeads could be justified as a means to manage the impacts of microbeads on the environment and human health.
66. Regulation under the WMA would control or prohibit the manufacture and sale of personal care products containing microbeads increasing the likelihood that the impacts

of microbeads on the environment and human health would be reduced or eliminated. Regulation under the WMA would impose minimal costs on industry and consumers and less than significant costs on Government. However, the specific scale of these costs may be dependent on the scope of the definition of products to be banned.

67. Additional regulation under the Imports and Exports (Restrictions) Act would control or prohibit the import of personal care products containing microbeads, further increasing certainty that the impacts of microbeads on the environment and human health would be managed. Such regulation would impose minimal costs on industry and consumers. However costs to Government would be significant. Again, the specific scale of these costs may be dependent on the scope of the definition of products to be banned.

## Implementation

68. **Option one: status quo.** Ministry for the Environment officials would continue to monitor industry and consumer action to phase out microbeads both in New Zealand and internationally.
69. **Option two: voluntary action.** If it were decided that the Government should leverage off industry voluntary action, officials would work with industry and consumer groups to determine next steps.
70. **Option three: regulation under the WMA.** Regulations could be developed through an Order in Council under section 23 of the WMA that would establish controls and prohibitions on the manufacture and sale of personal care products containing microbeads. Unless Australia develops regulations to prohibit microbeads in personal care products in parallel to New Zealand, the regulations would not apply to products produced in or imported into Australia without a permanent or temporary exception under the TTMRA. It is anticipated that regulations could come into force in July 2018.
71. The Secretary for the Environment would appoint the Environmental Protection Authority as an enforcement officer under the WMA. Guidance on what the regulations are and how industry can comply will be developed, and made available before the regulations come into force. Enforcing compliance with the regulations would be carried out by the EPA.
72. **Option four: regulation under the Imports and Exports (Restrictions) Act.** Regulations could be developed through an order in Council under section 3 for either an absolute or conditional prohibition on importation of goods. The New Zealand Customs service would be responsible for enforcement. Further work would need to be done to determine implementation that would need to be carried out around trade agreements. It is anticipated that regulations could come into force in July 2018.

## Monitoring, Evaluation and Review

73. **Option one: status quo.** Ministry for the Environment officials would continue to monitor industry and consumer action to phase out microbeads both in New Zealand and internationally.
74. **Option two: voluntary action.** Ministry for the Environment officials would continue to monitor voluntary industry and consumer action to phase out microbeads both in New Zealand and internationally.

75. **Option three: regulation under the WMA.** The EPA will monitor the number of non-compliance incidents, and industry response on an on-going basis. This will ensure that any issues around the appropriateness of the regulations can be identified, for example if they appear to be too narrow or widely focused to achieve the policy goals. The Ministry for the Environment will also monitor the effectiveness of the regulations in supporting the broader outcome of sustainably managing marine ecosystems to support New Zealand's marine life, society, and the economy.
76. **Option four: regulation under the Imports and Exports (Restrictions) Act.** It is likely that there would be a role for Ministry for the Environment, New Zealand Customs and the Ministry of Foreign Affairs and Trade in monitoring and evaluation and review of import restrictions. Further work will need to be done to define roles.