

***Proposal regards to Mandatory Phase Out of Single-use
Plastic Shopping Bags***

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First of all, I would agree with the phase-out of the sale or distribution of single-use plastic shopping bags. My opinion is supported by 3 reasons. Firstly, plastics make up an estimated 80- 85 percent of marine litter (Ministry for the Environment, 2017). After plastics enter the ocean environment, they eventually break down into microplastics which is toxic for marine animals. Furthermore, overseas research has shown that microplastics in lakes and river sediments, and any plastics not captured in wastewater treatment, flow through fresh water on their way to the ocean (Ministry for the Environment, 2017). As one of the most famous tourist countries in the world, the marine environment of New Zealand should be strictly protected and free from any form of contamination.

Secondly, due to single-use plastic bags are often free to consumers, the public tends to use them excessively. Industry estimates of current consumption in New Zealand of standard supermarket single-use shopping bags are 154 bags per person per year. This is about 750 million bags per

year or about 0.01 percent by weight of total waste in levied landfills (Ministry for the Environment, 2018). However, due to the light weight of single-use plastic bags, a large number of plastic bags can escape from recycle bin easily then widely distributed in the environment (Ministry for the Environment, 2017).

Thirdly, unlike other waste, used plastic bags have a low market value. Thus, only a very limited portion of used plastic bags are collected. From statistics, only two percent of post-consumer plastic bags are collected and recycled (Ministry for the Environment, 2018). Because of these properties, plastic bags are not only high resource consumption but also difficult to recycle. Therefore, single-use plastic bags should be prohibited by legislation (Ministry for the Environment, 2017).

Furthermore, I reckon that all plastic bags less than 70 microns in thickness should be included in the phase-out scheme. Bags marked as “degradable, biodegradable and compostable” should not be excluded. Firstly, current evidence suggests that “compostable” or “biodegradable” plastics cannot be decomposed under natural environments, such as digestive system of animals (Ministry for the Environment, 2018). Another type of degradable plastics bags is known as “oxo-degradable”, These plastic bags are

designed to break down into smaller pieces when exposed to heat or light but are not biodegradable by living organisms. These plastics readily break down into microplastics and also present the risk of degraded strength if they are included in recycled plastics (Loughborough University, 2010). Secondly, New Zealand does not have the ability to provide suitable artificial environment for decomposition of “biodegradable” or “compostable” bags such as high-temperature composting (Ministry for the Environment, 2018). Furthermore, in landfills, most of biodegrading plastic bags would produce methane, which will contribute to climate change if directly discharged into the atmosphere. Since landfill does not have effective methane capture system, biodegrading bags are still not ideal. However, plastic bags with thickness more than 70 microns would be an ideal alternative choice. It allows multiple uses and made out of recycled fabric or cotton (Ministry for the Environment, 2018). Thus, I would propose to phase out all single-use plastic bags less than 70 microns in thickness.

For smaller retailers, they should be exempted from a mandatory phase-out of single-use plastic shopping bags, since smaller retailers tend to consume much fewer plastic bags than larger retailers like New World or Countdown. However, smaller retailers should not offer free plastic bags to customers.

Retailers will not only profit from not providing free plastic bags but also raise their costumers' attention about the impact of plastic bags on the environment. More importantly, the government should establish a mechanism that assures some profit made from selling plastic bags is used to counteract their impact on the environment.

The definition of "smaller retailers" should be considered carefully as well. I would not agree with using the number of full-time equivalent employees as standard. For example, Farmers at Dunedin City Centre has an approximately equal number of full-time employees with New World at Dunedin City Centre. However, based on my own observation, New World would consume single-use plastic bags with a much larger quantity than Farmers due to its high number of customers. Thus, I propose that "smaller retailers" should be defined by the number of transactions which can be easily acquired from the tax system and address the use of single-use plastic bags more accurately.

Regards to the time frame of mandatory phase-out, my proposal would be setting up two time frames, one for large retailers like New World and Countdown, which is nine months from when the phase-out come out. The nine months could be used as a grace period for enterprises to digest

inventory of plastic bags and prepare for alternative choices. Meanwhile, the time period allows enterprises to alter their management strategy to neutralize inconvenience caused by the phase-out. Another time frame is twelve months for local manufacturers. Although single-use plastic bags under 35 microns and degradable plastic bags are imported, some paper and heavier-weight bags (plastic bags between 35 and 70 microns) are still manufactured in New Zealand (Ministry for the Environment, 2018). Thus, I propose to give local manufacturers twelve months to finish their transformation and upgrading in order to coordinate with the mandatory phase-out.

Meanwhile, I would agree that agree that the benefits expected from implementing a mandatory phase out of single-use plastic shopping bags exceed the costs expected from implementing the phase out. Due to the special position in New Zealand, tourism and agriculture are two of the most important economic sources. They both require high standard and stable natural environment. In addition to this, as an island country, the ecosystem of New Zealand is highly fragile and needs to be strictly protected. Furthermore, as a form of resource, the acquisition of money is much simpler than rebuilding the ecosystem. Thus, I believe that the natural environment should be protected regardless of cost.

Finally, I would propose the government establish a foundation to assist the mandatory phase-out. A portion of profit made from selling single-use plastic bags could be diverted to this foundation in order to assist the transformation and upgrading of local manufacturers. Thus, the import of shopping bags would be reduced, and the economic impact of mandatory phase-out would be neutralized as much as possible.

In conclusion, my proposal is to establish a mandatory phase out sale or distribution of any single-use plastic shopping bags which less than 70 microns in thickness except for “small retailers”. The mandatory phase-out should be implemented nine months (for large retailers) and twelve months (for local manufacturers) after its establishment. A foundation is proposed to be set up in order to assists the mandatory phase-out financially.

Reference:

- Ministry for the Environment. 2018. *Proposed mandatory phase out of single-use plastic shopping bags: Consultation document*. Wellington: Ministry for the Environment.

- Ministry for the Environment. 2017a. *Managing Microbeads in Personal Care Products: Consultation Document*. Wellington: Ministry for the Environment.

- Loughborough University. 2010. *Assessing the Environmental Impacts of Oxo-degradable Plastics Across Their Life Cycle*. London: Department for Environment, Food and Rural Affairs.