

# **Cook Islands**

## **Single-Use Plastic Ban Policy**

### **2018-2023**

**Compiled by:**  
**Infrastructure Cook Islands**  
**in collaboration with the Solid Waste Management Committee**

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## Abbreviations

The following abbreviations are used in this document:

ICI	(Ministry of) Infrastructure Cook Islands
MFEM	Ministry of Finance and Economic Management
MOH	Ministry of Health
NES	National Environment Service
NGO	Non-Governmental Organisation
NSDP	National Sustainable Development Plan
ODS	Ozone Depleting Substances
WATSAN	Water, Waste and Sanitation Division (of ICI)

# 1 Introduction

The importation of non-biodegradable consumer goods is becoming a mounting burden for the economy, human health and the environment of the Cook Islands. This burden is evidenced by the growing amount of non-biodegradable waste increasing at waste facilities, in dumps, littering roadsides and streams, being burnt and being washed into the ocean where it threatens oceanic life.

The vision of the Cook Islands Solid Waste Management Policy is a Zero Waste Cook Islands through a systematic reduction of the amount of solid waste both generated and disposed of. This policy establishes the process to ban the importation of specific single-use plastic products into the Cook Islands.

Items included in this policy include plastic products that are single-use, not able to be recycled in the Cook Islands, and which have reasonable alternatives able to be used. Additional items to be considered for importation bans for in the near future are also noted in this policy.

This policy identifies the vision, purpose, scope and timeframe for implementation of the ban. It then outlines the context, setting out the issues and challenges faced by the Cook Islands, and identifying how this policy links to the National Sustainable Development Plan 2016-2020.

This policy supersedes the draft Cook Islands Single Use Polystyrene Policy 2017-2027 FINAL V4.0 210318 tabled for discussion with the then Deputy Prime Minister, Teariki Heather, in March 2018. Polystyrene is a type of plastic and all aspects of the superseded policy are included in this policy.

## 2 Vision

The vision for this policy is:

**'A single-use plastic free Cook Islands'**

The Cook Islands Solid Waste Management Policy vision is:

**'An informed and proactive community taking responsibility for sustainable solid waste management, aspiring towards Zero Waste Cook Islands'**

The Zero Waste Cook Islands envisioned is one based on the 4Rs (Refuse, Reduce, Reuse and Recycle) of waste minimisation where:

### *Refuse*

- The necessity, alternatives and ease of disposal of a product are considered before importation and/or purchase.

### *Reduce*

- The amount of potential waste to landfill is minimised through responsible supplier and consumer behaviour, supported by legal instruments, and enforced by government.

### *Reuse*

- Waste resulting from consumer products are first reused for other purposes.

### *Recycle*

- Waste products that are recyclable are exported for recycling.

This policy focuses on Refuse and Reduce.

### 3 Purpose

The purpose of this policy is to make a significant step towards reducing the generation of non-biodegradable products that become waste and litter by banning the importation of specific single-use plastic products that have biodegradable and non-toxic alternatives.

Items included in this policy include single-use plastic products, such as:

- Lightweight plastic bags including shopping bags
- Plastic straws and cocktail stirrers
- Plastic cutlery
- Plastic containers with no PET number or with numbers 3, 4, 5, and 7, including plastic plates and seal-able food containers
- Plastic and polystyrene cups, including plastic-lined coffee cups
- Polystyrene containers and meat trays
- Single-serve butter and spreads
- Products containing microbeads

All these products have reasonable alternatives which are able to be procured and used instead. Details on the alternatives are discussed below. The restriction of importing these items is proposed to have immediate effect, with a complete ban of the import of items within six months.

Items included in this policy of which the ban will not have immediate effect will include:

- Plastic bread bags
- Polystyrene chilly bins
- Plastic water bottles, manufactured in-country
- All plastic beverage bottles including PET

Further consultation will be required with key stakeholders and alternatives identified before a ban of these products is imposed.

The policy provides the higher level framework within which legislation will be developed and operate.

## 4 Scope and timeframe

The scope of this policy covers the whole of the Cook Islands. The policy will be written into the Solid and Hazardous Waste Bill due for submission in March 2018, under a Schedule of banned products.

The timeframe for this policy is five years, 2018 to 2023. For the initial eight items, the proposed ban is intended to take effect within six months. Retailers and vendors will still be able to sell and use these items if they are on island, but no new items will be able to be imported.

The final four items will be phased out over the next 5 years.

This Policy is intended to be 'live' so that other items can be added as alternatives are available. The process for adding to the ban Schedule will be outlined in the Bill.

## 5 Context

### 5.1 Background

Single use, non-recyclable plastic containers are prevalent across the Cook Islands. Plastic containers and products are widely available and convenient for retailers and consumers.

In Rarotonga, masses of lightweight plastic shopping bags are used at the markets, supermarkets and shops every day. Even when consumers use their own reusable bags, it is difficult to shop for fruit, vegetables and bread without accumulating small plastic bags. Plastic straws, cocktail stirrers and plastic-lined coffee cups are commonly given out at most restaurants, bars and eateries, and plastic cutlery, containers and cups, and polystyrene containers and cups are regularly used by market vendors to serve food.

The findings of a five year International Visitor Survey for the Cook Islands in February 2018<sup>1</sup> indicate tourists to Rarotonga are becoming increasingly aware of the shortfalls with current waste management practices. The proposed products to be banned are products that tourists will regularly consume while they are here, and the prevalence of biodegradable alternatives and commitment by retailers to use and promote waste-free options will be easily visible, assisting with the message that the Cook Islands is an environmentally aware destination.

Several factors have led to this situation including the changing lifestyle of Cook Islanders, wide availability of the products, lack of awareness for disposal methods, expensive shipping, low priority consideration for end of life items and insufficient infrastructure. These issues are prevalent across the world, not limited to the Cook Islands.

The amount of single-use, non-recyclable plastic now being disposed within the Cook Islands has increased exponentially over the past several years, unnecessarily adding to landfill waste, dumps and litter. Earlier in 2018, the world's largest recyclable plastic receiving country, China, reduced the number of types of plastic they will accept.

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<sup>1</sup> tourists sighting "rubbish and natural environment care" as the least appealing aspect has risen by 5% during the study period (8.25% - 13.25%).

## 5.2 Case Studies

Single-use plastic products have already been banned in several countries including Pacific island countries, around the world for environmental reasons. For plastic bags, over 60 countries have introduced bans. Fees to cut single-use plastic and similar bans are coming into effect for straws and other items. In May 2018, the EU has announced a ban entitled “reduction of the impact of certain plastic products on the environment”. In addition to lightweight plastic carrier bags, this ban targets 18 other items such as food containers and cups, cotton bud sticks, cutlery, plates, stirrers, straws, balloons, and tobacco product filters.

Other Pacific nations are also implementing plastic bans. At the 48<sup>th</sup> Pacific Island Forum Leaders Communiqué in September 2017<sup>2</sup>, Pacific Leaders committed to fast track the development of policies to ban single use plastic bags, plastic and Styrofoam packaging:

*Leaders committed to fast track the development of policies to ban the use of single-use plastic bags, plastic and styrofoam packaging and called on Pacific Rim partners to join and commit to action on addressing marine pollution and marine debris, to maintain the environmental integrity of the Pacific Ocean for people, planet and prosperity.*

Pacific nations who have commenced single use plastic bans or have announced their intention to phase in bans or other restrictions on single use plastic include:

- Papua New Guinea, 2014 - ban on importing or manufacturing non-biodegradable plastic bags. Full ban on importing or manufacturing all plastic shopping bags announced in 2018.
- Fiji, 2017 - levy on plastic bags
- Vanuatu, 2018 - ban on single-use plastic bags, plastic straws and polystyrene containers
- Niue, 2018 - phase in ban on plastic bags, substitute reusable bags provided to each household
- Samoa, 2018 - ban single use plastic bags and straws from January 2019. Ban on styrofoam food containers and cups will follow
- Hawaii, 2018 – all stores are banned from providing plastic bags from 2020
- New Zealand, 2018 - Single-use plastic bags phased out
- Plus American Samoa, the Marshall Islands, Northern Marianas, and the Micronesian state of Yap - implemented bans or other restrictions.

It is therefore apparent that the movement to ban products from entering countries is gaining momentum and are supported by governments and communities. It is recommended that the timing is now appropriate for the Cook Islands to announce the ban as proposed by this policy. If it is left too late, the Cook Islands could get left behind.

Moreover, as shown above, while other countries have implemented policy to ban certain products, namely plastic bags and straws, no other country is known to have banned the importation of a number of single use plastic products as this one proposes. This policy could receive global interest and become a point of difference for the Cook Islands.

## 5.3 Issues and challenges

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<sup>2</sup> <https://cropict.usp.ac.fj/images/papers/ForumCommunique/2017-48th-Pacific-Islands-Forum-Communique.pdf>



Plastics present several issues and challenges that this policy aims to mitigate against. Polystyrene is a type of plastic with additional specific issues and so is addressed separately in this section.

## **Plastic**

### **Production**

Plastics are typically made from by-products of oil, natural gas or coal. After they are designed, additives such as flame retardants, bisphenols and phthalates are combined with the base material to give it the properties required for whatever it will be used to manufacture – i.e., make plastics which are heat resistant, chemical resistant, or fade resistant etc.

### **Effects**

The fossil fuels and additives in plastic are toxic chemicals and can leach out when plastic is disposed incorrectly or in unlined dumps (as in the Pa Enea, except Aitutaki). When exposed to the elements, toxic chemicals can drain out of plastic and seep into soil or groundwater, potentially contaminating drinking water sources, taro patches, lagoons and the ocean.

Plastic does not biodegrade, but breaks into smaller pieces and can be ingested by both marine and terrestrial life which then absorb the chemicals into body fat, thereby entering the food chain. Ingestion can also cause death to the animal due to not being able to pass the plastic through its digestive system. Upon death and decomposition of the animal, the plastic is released back into the environment.

Burning of plastic is potentially a more serious health concern. The most dangerous health effect of burning plastic is the release of dioxin into the atmosphere, but other chemicals are also released such as sulphur dioxide, volatile organic chemicals, polycyclic organic matter (POMs - a solid residue leftover) and heavy metals. Dioxins are extremely toxic to humans and animals, potentially causing cancer, hormonal birth defects and respiratory problems. The dioxin also ends up in the soil potentially poisoning food and crops.

### **Disposal**

Globally, plastics are difficult to recycle. Plastic products are not consistent in their composition (colour, transparency, weight and size) and are therefore unable to be recycled together, require stringent sorting at recycling facilities. Due to the number of varieties of plastic received by recycling facilities, the requirement for stringent sorting increases costs of plastic recycling and raises potential for contamination. As a result, the use of recycled plastic is uneconomic for manufacturers when compared to the low cost of making plastic from virgin polymers.

Plastics showing numbers 1, 2 and 4 are the most commonly-recycled plastics. But even within this category, the additives and colourants used to create the wide array of plastic products further diminish the recyclability of the material. Plastics with numbers 3, 5, 6 and 7 are hard to recycle and do not have much value to the plastics industry the second time around. Because there is not a market for these plastics, they often end up in a landfill.

Plastic cannot biodegrade; they will just break down into smaller and smaller pieces. Some plastics are labelled 'degradable' and referred to as 'green' or 'eco-friendly' simply contain an additive which makes them break down faster into smaller fragments. But these bags are made from normal plastic, so when they degrade they do not disappear into harmless residues, but instead fragment into tiny pieces of plastic and contribute to microplastic pollution, posing a risk to the ocean and other ecosystems as mentioned above.

Worldwide problems with recycling of plastic are compounded in the Cook Islands due to the great distance to plastic recycling facilities (China). As much plastic sorting as possible occurs at the Rarotonga Resource Recovery Centre, but due to the current global market for used plastic products, the only plastic with any recycle potential is clear and blue plastics PET 1 and 2. Even with stringent sorting, the price received for this plastic is extremely uneconomical once shipping and transport costs from the recycle facilities are taken into account. All remaining plastic is disposed of into the Rarotonga landfill, burnt or littered along roadsides, streams and the beach. In the Pa Enea, all plastic is disposed in unlined dumps (with the exception of Aitutaki which has an engineered landfill), burnt or littered. China will not accept plastic other than PET 1 and 2 and only if it is very clean and shredded.

## **Polystyrene**

### **Production**

Historically, the production of polystyrene involved the use of substances classified as ozone depleting substances (ODS) under the Environment Act (Ozone Layer Protection) Regulations 2008. Chlorofluorocarbons (CFC's), then hydrochlorofluorocarbons (HCFC's) were used as a blowing agent to form the container shapes. Following a worldwide reduction in the use of HCFCs, it is expected that hydrofluorocarbons (HFC's) have replaced these in most cases. However, these are greenhouse gases.

Styrene and Benzene, petroleum based substances are used to produce the polystyrene. Both ingredients have been considered by the United States Environmental Protection Agency (EPA) to be possible carcinogens.

### **Effects**

When polystyrene containers come into contact with hot, greasy or acidic food or beverages, styrene and benzene can be released into the food and beverage and pose a threat to the consumers' health.

The burning of polystyrene releases dioxins, carbon monoxide and polycyclic aromatic hydrocarbons which are toxic gases, harmful to human health when inhaled.

### **Disposal**

Polystyrene is a number 6 for recycling and while it can be recycled in some countries when it has food contamination, this is not possible in the Cook Islands as it does not have much value the second time around. Polystyrene containers are therefore disposed in the Rarotonga and Aitutaki landfills, dumps, burnt at homes and/or public places or littered along roadsides and beaches.

### **Cost**

The Ipukarea Society (TIS) and Cook Islands Trading Corporation (CITC) have promoted the use of biodegradable single use food and beverage containers in place of polystyrene containers. However resistance has been met due to takeaway food vendors perceiving that the biodegradable containers presents a significant cost increase to them. The difference in price is in the order of 13 to 20 cents difference depending on the suppliers' prices. A table displaying the prices of biodegradable and polystyrene containers on Rarotonga is in Appendix 1.

## **5.4 Links to National Sustainable Development Plan 2016-2020**

The National Vision, as set out in the National Sustainable Development Plan 2016-2020 (NSDP) is:

“To enjoy the highest quality of life consistent with the aspirations of our people, and in harmony with our culture and environment”

The NSDP sets sixteen national development goals. Goal 3 is of most direct relevance to this policy. It states as follows:

"3. Promote sustainable practices and effectively manage solid and hazardous waste"

Other NSDP goals of particular relevance are:

"4. Sustainable management of water and sanitation"

"11. Promote sustainable land use, management of terrestrial ecosystems, and protect biodiversity"

"12. Sustainable management of the oceans, lagoons and marine resources"

These goals are of particular relevance because of the adverse effects that the burning and littering of plastic can have on the natural environment.

## 6 Proposal

This policy proposes the banning of the importation of specific single-use plastic products into the Cook Islands.



As discussed above, the products selected for this ban were chosen as they are single-use plastic products, which are non-recyclable in the Cook Islands, pose environmental, health and economic risks, and for which reasonable alternatives are immediately available.



The following table summarises the selected items, providing information of the risk each item poses to the country and of the opportunities that banning them will achieve. Examples of alternative products able to replace each of the items proposed to be banned are also provided.



Note: the alternatives featured are not intended to be a conclusive list, just a brief summary of products readily available from suppliers in Rarotonga and in New Zealand. It is also noted that bioplastics, while “compostable”, are only compostable in an industrial compost facility, and that the Cook Islands does not yet have such a facility.

**Table 1, Items proposed to be banned, risks, opportunities and examples of alternatives**



Risk	Opportunity	Alternatives
<b>Items proposed to be banned, immediate effect</b>		
<u>Lightweight plastic bags including shopping bags (supermarket bags)</u>		
Plastic bags are mostly made from PE-LD (low density polyethylene). They are generally unrecyclable	In many countries there has been a phase-out of lightweight plastic bags. Governments all over	<u>Preferred alternative:</u> <ul style="list-style-type: none"> <li>- Natural fibre based reusable bags.</li> <li>- Boxes</li> </ul>

<p>throughout the world. Plastic bags used in the Cook Islands are generally “degradable”. As discussed above, these bags are still plastic and will simply fragment into tiny pieces of plastic and contribute to microplastic pollution.</p> <p>The most common issue with plastic bags is the sheer number of bags used by consumers and the frequency they end up in the environment. Many plastic bags end up on streets and subsequently pollute the ocean and water sources affecting the habitat of animals and marine creatures.</p> <p>Even when disposed of properly, plastic bags do not break down in landfills, generating large amounts of waste over long periods of time.</p>	<p>the world have taken action to ban the sale of lightweight bags or charge customers heavily for their use.</p> <p>Globally, awareness of the harm of single-use plastic bags is gaining momentum and consumers are willing to sacrifice their convenience for a more environmental alternative.</p> <p>This awareness and willingness to change is also expected to be widespread within the Cook Islands community and visitors.</p>	<ul style="list-style-type: none"> <li>- Consumers to ‘pack your own’ at markets</li> </ul> <p><u>Single-use alternative:</u></p> <ul style="list-style-type: none"> <li>- <a href="#">Paper bags</a></li> </ul> 
<b><u>Plastic straws and cocktail stirrers</u></b>		
<p>Straws and stirrers are most commonly made from type 5 plastic, or polypropylene.</p> <p>Although type 5 plastic can be recycled in some countries, they cannot be in the Cook Islands and the recycle value is so low shipping to a recycle facility is uneconomic.</p> <p>Straws are a very common item to find on beach clean ups in Rarotonga. As they are so light, they are easily blown into the ocean by the wind or to drains and other waterways which ultimately end up in the ocean.</p> <p>Straws pose a large threat to marine species and the ocean.</p>	<p>Many major cities and states around the world have implemented plastic straw bans.</p> <p>Many restaurants in Rarotonga have already switched to paper, bamboo and metal straws.</p> <p>As with plastic bags, the Cook Islands community and visitors are becoming aware of the need to provide an alternative to straws and the ban of this product is expected to be well received.</p>	<p><u>Preferred alternative:</u></p> <ul style="list-style-type: none"> <li>- No straws or stirrers provided by restaurants</li> <li>- Reusable metal straws</li> </ul> <p><u>Single-use alternatives:</u></p> <ul style="list-style-type: none"> <li>- <a href="#">Paper straws</a></li> <li>- <a href="#">Bamboo straws (can be used several times before disposal)</a></li> </ul> 
<b><u>Plastic cutlery</u></b>		
<p>Most plastic cutlery is made from polystyrene/styrofoam. This product is very difficult to recycle globally, and impossible in the Cook Islands.</p>	<p>Customers at the Muri night market have embraced the rent-a-plate initiative which also includes cutlery.</p>	<p><u>Preferred alternative:</u></p> <ul style="list-style-type: none"> <li>- Support expansion of initiatives such as rent-a-plate with cutlery at markets</li> </ul>

<p>As with straws, plastic cutlery is very common to find on beach clean ups in Rarotonga.</p>		<p><u>Single-use alternative:</u></p> <ul style="list-style-type: none"> <li>- <a href="#">Wooden cutlery</a></li> <li>- <a href="#">Bio-plastics cutlery</a></li> </ul> 
<p><u>Plastic containers with no PET number or with numbers 3, 4, 5, and 7, including plastic plates and seal-able food containers</u></p>		
<p>As discussed, plastics are difficult to recycle globally due to market values. This problem is exacerbated in the Cook Islands due to the cost of transporting.</p> <p>Plastic with numbers 3, 4, 5, and 7 are even more difficult, both globally and in the Cook Islands. There is simply not a market for these plastics.</p> <p>Unaware importers, market vendors, food suppliers and manufactures in the Cook Islands are importing plastic containers with PET numbers 3-5 and 7 to package their produce (i.e., containers of rukau and poke etc to sell at the market).</p> <p>They are uninformed that the PET 1 and 2 plastic (which have 'some' recycle value) options would be equivalent for their operations – similar cost and performance.</p>	<p>PET 1 and 2 alternatives are available and suppliers and consumers would not notice the difference in price performance.</p> <p>Alternatively, starch, cane and other compostable containers are available and are expected to be embraced by consumers.</p> <p>As with cutlery above, customers at the Muri night market have embraced the rent-a-plate initiative which could be expanded as a result of this proposal.</p>	<p><u>Preferred alternative:</u></p> <ul style="list-style-type: none"> <li>- Support expansion of initiatives such as rent-a-plate</li> <li>- Other re-useable/refillable options – i.e., vendors making rukau 'buy back' containers, reusing glass jars, etc.</li> </ul> <p><u>Single-use alternatives:</u></p> <ul style="list-style-type: none"> <li>- Compostable options with vegetable oil waterproofing, examples: <ul style="list-style-type: none"> <li>- <a href="#">Eco bowl</a></li> <li>- <a href="#">Bamboo plate</a></li> <li>- <a href="#">BetaKraft</a></li> <li>- <a href="#">Kraft Noodle Box</a></li> </ul> </li> </ul> 
<p><u>Plastic and polystyrene cups, including plastic-lined coffee cups</u></p>		
<p>Though they are made largely of paper, disposable coffee cups are commonly lined with plastic polyethylene, which is tightly bonded to the paper making the cups waterproof and therefore able to contain liquid.</p> <p>This plastic, as with other plastic and polystyrene cups, can cause harm to the environment and human health, as discussed above.</p>	<p>As with plastic bags and straws, the Cook Islands community and visitors are becoming aware of the need to provide an alternatives to items like single use coffee cups, this ban is expected to be welcomed.</p>	<p><u>Preferred alternative:</u></p> <ul style="list-style-type: none"> <li>- Promote the use of reusable coffee cups and encourage cafes and restaurant to not supply single-use cups and/or offer an incentive to customers who bring their own cup (i.e., 50c discount).</li> </ul> <p><u>Single-use alternatives:</u></p> <ul style="list-style-type: none"> <li>- Compostable options with vegetable oil waterproofing (i.e., PLA is a 100%</li> </ul>

<p>Globally, less than 1 per cent of coffee cups are recycled. The number is less in the Cook Islands: no disposable coffee cups are able to be recycled or composted.</p>		<p>biodegradable indigo resin made using corn. Examples:</p> <ul style="list-style-type: none"> <li>- <a href="#">Green Cup</a></li> <li>- <a href="#">PLA Green choice</a></li> </ul> 
<b><u>Polystyrene containers, meat trays and cups</u></b>		
<p>Polystyrene/Styrofoam, also known as PET number 6 cannot be recycled.</p> <p>As stated above, these containers can release chemicals which pose a threat to human health, can be ingested by both marine and terrestrial life and thereby enter the food chain, and are very toxic to human health if burnt.</p>	<p>Bio cane and starch based are alternatives already widely used in Rarotonga and have been embraced by consumers. CITC and many market vendors only supplies compostable varieties.</p>	<p><u>Preferred alternative:</u></p> <p>Support expansion of initiatives such as rent-a-plate and other re-useable/refillable options.</p> <p><u>Single-use alternatives:</u></p> <ul style="list-style-type: none"> <li>- Compostable options (listed above)</li> </ul> 
<b><u>Single-serve butter and spreads</u></b>		
<p>Single serve butter and spreads are common items in restaurants and hotels, along with single serve tomato sauce and soy sauce etc at take-away food vendors. These containers have no recycle potential, ending up in the landfill and are commonly seen littered in public places.</p>		<p><u>Preferred alternative:</u></p> <p>Restaurants and hotels purchase butter and sauce etc in large containers and decant into washable/reusable dishes or compostable containers.</p>
<b><u>Products containing microbeads</u></b>		
<p>Microbeads are manufactured solid plastic particles of less than one millimetre. They are most frequently made of polyethylene but can be of other petrochemical plastics such as polypropylene and polystyrene. They are used in exfoliating personal care products, sunscreen, and toothpastes.</p> <p>Microbeads are washed down the drain, can pass unfiltered through sewage treatment plants and make their way into</p>	<p>There are many natural and biodegradable alternatives to microbeads that have no environmental impact, as they will either decompose or get filtered out before being released into the natural environment.</p> <p>Consumers are becoming aware of the impact of microplastic and the transition to non-microbead</p>	<p><u>Preferred alternative:</u></p> <p>No cosmetic products containing microplastic ingredients, for example Polyethylene (PE), Polypropylene (PP), Polyethylene terephthalate (PET), Polymethyl methacrylate (PMMA) and Nylon (PA).</p> <p>More details of microbead containing products and alternatives can be found at this link:</p> <ul style="list-style-type: none"> <li>- <a href="http://www.beatthemicrobead.org/product-lists/">http://www.beatthemicrobead.org/product-lists/</a></li> </ul>



<p>rivers and canals, resulting in plastic particle water pollution and pose an environmental hazard for marine animals.</p> <p>In reticulated sewerage systems overseas, microbeads are clogging up filters, causing increasing costs and maintenance to the wastewater treatment facility.</p>	<p>cosmetics is expected to be smooth.</p> <p>In the US, the Microbead-Free Waters Act 2015 phases out microbeads in rinse off cosmetics by July 2017.</p>	<p>Potentially include the oxybenzone as a banned chemical on this list due to damage to coral.</p>
<p><b>Items proposed to be banned, not immediate effect</b></p>		
<p><u>Plastic bread bags</u></p>		
<p>As discussed above, lightweight plastic bags are mostly made from PE-LD (low density polyethylene) and are generally unrecyclable. Even when disposed of properly, plastic bags do not break down in landfills, generating large amounts of waste over long periods of time.</p>	<p>With the awareness of the harm of single-use plastic bags and willingness for consumers to change, bakeries and supermarkets around the world are gradually been seen to revert back to the use of paper bags to pack bread.</p> <p>A change to paper bread bags is not expected to be significant for consumers but further consultations with bakeries in the Cook Islands will be undertaken and alternatives identified before plastic bread bags are banned.</p>	<p><u>Single-use alternative:</u></p> <ul style="list-style-type: none"> <li>- <a href="#">Paper bags</a></li> </ul> 
<p><u>Polystyrene chilly bins</u></p>		
<p>Large polystyrene chilly bins are commonly seen in the Pa Enea carrying food and medical supplies.</p> <p>As discussed above, polystyrene/styrofoam cannot be recycled, and can be toxic to human health. Researchers claim that it may take anywhere between 500 and one million years for styrofoam to naturally decompose.</p>	<p>Further consultation with key stakeholders will be undertaken and alternatives identified before this product is banned in the Cook Islands.</p>	<p>No suitable alternative yet known. Possible options for future include:</p> <ul style="list-style-type: none"> <li>- Reusable strong plastic chilly bins</li> <li>- <a href="#">Lined cooler bags</a></li> <li>- <a href="#">WooBox</a></li> </ul> 
<p><u>Plastic water bottles – manufactured in-country</u></p>		
<p>While it is not currently feasible to completely eliminate all plastic from entering the Cook Islands, an</p>	<p>With increased awareness on the harms of plastic products in the Cook Islands, this ban</p>	<p><u>Preferred alternative:</u></p> <ul style="list-style-type: none"> <li>- Support initiatives to have large water dispensers at every restaurant</li> </ul>

<p>opportunity exists for the reduction of the amount of plastic manufactured on island.</p>	<p>can be the catalyst for companies in the Cook Island that are making single-use plastics to instead manufacture their products using a nontoxic alternative. As with chilly bins, above, this ban would not take effect until key stakeholders have been consulted and suitable alternatives found.</p>	<p>and hotel in the Cook Islands for consumers to refill their own bottles.</p> <p>Water potentially bottled into:</p> <ul style="list-style-type: none"> <li>- Refillable glass bottles</li> <li>- <a href="#">Resealable aluminium cans</a></li> </ul> 
<p><u>All plastic beverage bottles including PET</u></p>		
<p>Continuing beyond the above reduction of plastic bottles manufactured on island, is the elimination of all plastic beverage bottles from entering the Cook Islands.</p>	<p>Single-use plastic beverage bottles are a large portion of the plastic waste received at the Rarotonga Recycle Centre. A future opportunity exists to restrict the import of these products, and to instead focus on importing beverages in nontoxic alternative (glass and aluminium).</p> <p>As above, this ban would not take effect until key stakeholders have been consulted and suitable alternatives agreed upon.</p>	<p><u>Preferred alternative:</u></p> <p>Beverages imported in glass and aluminium:</p> 

## 7 Consultation

A consultation draft of the original polystyrene policy was circulated to key stakeholders for comment. The consulted parties are listed in Appendix 2. Consultation will take place in conjunction with the Solid and Hazardous Waste Bill consultations.

## 8 Principles

The following principles are integral to the development of this policy and need to be taken into account in its implementation. These principles are also included in the Solid Waste Management Policy 2016 – 2026.

### 1. Waste hierarchy principle

The 'Waste Hierarchy' is a strategic tool which prioritises actions for solid waste management. The general hierarchical model used under this policy consists of 4 'Rs' – Refuse, Reduce, Reuse and Recycle. This model prioritises waste avoidance and reduction methods, before reuse, recycling, and final disposal. In the Cook Islands, the



first R, (Refuse) encourages stakeholders to reject the purchase of products that produce inorganic waste and waste that is difficult and expensive to dispose of in an environmentally sound manner. In addition to this, the subject of this policy identifies a threat to human health.

## **2. Precautionary principle**

When an activity may lead to unacceptable but scientifically uncertain harm to human health or the environment, actions will be taken to avoid or diminish that harm without having to await the completion of further scientific research.

## **3. Consultation principle**

All levels of government, communities and organisations should be consulted throughout the development and implementation of solid waste management strategies and action plans. Such strategies or plans should be openly accessible to those in the community who are interested. In the case of this policy, the subject is specific and is expected to affect a small portion of the community therefore consultation will be targeted to importers and food vendors.

# **9 Objectives and policies**

## **9.1 Institutional and legislative framework**

### **Objective 1**

1. A clear and robust institutional and legislative framework developed.

### **Policies**

- 1.1 Establish a regulatory framework that:
  - a. Prohibits the importation of specific single use plastic products.
  - b. Articulates the roles and responsibilities of agencies responsible for the coordination of the prohibition.

### **Explanation of Objective 1 and Policies**

The outcome sought by Objective 1 is an institutional and legislative framework that can support the policy vision of a single-use plastic free Cook Islands.

## **9.2 Waste minimisation**

### **Objective 2**

2. Minimise the generation of solid waste.

### **Policies**

- 2.1 Follow the waste hierarchy model prioritising waste avoidance and reduction – Refuse and Reduce.
- 2.2 Promote responsible supplier and consumer behaviour using advocacy, education, incentives and regulation.

### **Explanation of Objective 2 and Policies**

The outcome sought by Objective 2 is minimising the generation of solid waste. This outcome is essential to achieving the Solid Waste Management Policy vision of sustainable solid waste management, aspiring towards Zero Waste Cook Islands. The policies

recognise that minimisation of waste is the shared responsibility of a range of stakeholders including suppliers, consumers, government, businesses and industry. The policies also recognise that advocacy, education, incentives and regulation are all important tools that need to work together to minimise the generation of solid waste.

Under the Product Stewardship principle, manufacturers of non-recyclable plastic would be required to ensure disposal of such containers in an environmentally sound manner. The Cook Islands are far from the original source of production therefore, it is not possible for producers to internalize costs and carry the burden of proper disposal.

Therefore, a ban on importation appears to be the best solution to avoid the government carrying this unquantifiable cost of damage to ecosystems and human health from plastic and polystyrene.

## 10 Roles and responsibilities

The following table summarises the roles of the key agencies responsible for implementing and reviewing the policy.

Agency	Roles in waste management
Infrastructure Cook Islands	Responsible for the administration of the landfill and recycling centre and the collection of rubbish and recyclables on Rarotonga. Provides waste management advice to the Island Governments. Leads policy development in waste management and carries out education and awareness.
National Environment Service (NES)	Involved in policy development, education and awareness, monitoring and evaluation as well as enforcement. Under the Environment Act 2003, NES functions include preventing, correcting and controlling pollution; and ensuring the environmentally safe disposal of toxic chemicals and wastes.
Te Ipukarea Society (TIS)	Non-government environmental organization that conducts awareness and practical activities on environmental issues including waste management.
Ministry of Health (MOH)	Involved in policy development and implementation in relation to public health under the Public Health Act 2004 and the Ministry of Health Act 2013. Under the Ministry of Health Act 2013, the functions of the Ministry include implementing laws, requirements, programs and initiatives relating to public health issues affecting the health of the community and the environment. This includes waste management, and hazardous and harmful substances and practices. Part 6 of the Public Health Act seeks to ensure that waste is safely stored, collected, treated, removed, transported, disposed of, and otherwise dealt with.
Ministry of Finance and Economic Management/Cook Islands Customs	Responsible for the collection of taxes and tariffs on imported goods and also monitoring for the entry of prohibited or restricted goods.

Agency	Roles in waste management
Island Governments	Responsible for waste management on their respective islands.

## 11 Implementation arrangements

As stated earlier, the ban is set to be written into an upcoming Solid and Hazardous Waste Bill. Implementation of the policy and subsequent Act at the national level will be coordinated by ICI. If a single agency is subsequently established to manage solid waste in the Cook Islands, then it is anticipated that responsibility for implementation will be transferred to that agency.

The move to prohibit the seven initial plastic products is intended to take place within the short term.

Additional products discussed such as polystyrene chilly bins and plastic water bottles which are manufactured here will require further consultation with key stakeholders. For example, polystyrene chilly bins will not be banned until the Department of Health and importers in the Pa Enua have been specifically consulted with and alternatives identified.

## 12 Monitoring, evaluation and reporting

Should this policy be approved, no additional monitoring, evaluation and reporting will be necessary. The normal process of monitoring imports by Customs is sufficient, though increased vigilance in the early stages of a ban would be needed.

## Definitions

This section defines some key terms as used in this document.

<b>Compostable</b>	Compostable means a product is capable of disintegrating into natural elements in a compost environment, leaving no toxicity in the soil.
<b>Degradable</b>	“Degradable plastic” is where traditional plastics are treated with additives, usually consisting of calcium carbonate and heavy metals, which causes the material to disintegrate over a short time. Degradable bags do not 'compost' or disappear into harmless residues, but instead fragment into tiny pieces of plastic and contribute to microplastic pollution.
<b>Microbeads</b>	Microbeads are manufactured solid plastic particles of less than one millimeter in their largest dimension. They are most frequently made of polyethylene but can be of other petrochemical plastics such as polypropylene and polystyrene. Plastic microbeads are in some sunblocks, face soaps, body washes, toothpastes, etc.
<b>Non-Recyclable</b>	Products incapable of being recycled
<b>Polystyrene</b>	A synthetic resin which is a polymer of styrene, used chiefly as lightweight rigid foams and films.
<b>Plastic</b>	A synthetic material produced from byproducts of oil, natural gas or coal and a wide range of organic polymers such as polyethylene, PVC, nylon, etc. Plastic can be made into objects, films, or filaments.
<b>Single-Use</b>	Product designed to be used once and then disposed of or destroyed.
<b>Solid Waste</b>	<p>Includes the following:</p> <ol style="list-style-type: none"> <li>a. Garbage, refuse, or litter</li> <li>b. Hazardous waste including             <ol style="list-style-type: none"> <li>i. medical waste</li> <li>ii. liquid or gaseous waste that contains persistent organic pollutants, ozone depleting substances or heavy metals</li> </ol> </li> <li>c. Used cooking oil</li> <li>d. Biowaste (but not wastewater, sewage or sludge)</li> <li>e. Building and demolition waste</li> <li>f. Other discarded or superfluous things from industrial, commercial, mining, agricultural, community, or other activities.</li> </ol> <p>It does not include:</p> <ol style="list-style-type: none"> <li>g. Wastewater, sewage or sludge</li> <li>h. Waste (other than hazardous waste as defined in (b) or (c) above) that is liquid or gaseous in its raw form.</li> </ol>

## References

Cook Islands Government (2013) *National Solid Waste Management Strategy 2013-2016*, Rarotonga

Pacific Whale Foundation 2017 Foam Products FAQ

Directive of the European Parliament and of the Council on the Reduction of the Impact of Certain Plastic Products on the Environment (2018)

<https://ec.europa.eu/transparency/regdoc/rep/1/2018/EN/COM-2018-340-F1-EN-MAIN-PART-1.PDF>

## Appendix 1: Price Comparison - Biodegradable and Polystyrene Containers

These prices are displayed during September 2017 and the suppliers' names are omitted for privacy.

Product	Product image	Price	Quantity	Price per unit
BioPak 750ml container 50's		\$12.85	50	\$0.26
Bio Cane Clamshell 9'6'3		\$46.00	125	\$0.37
Bio Cane Clamshell 9'6'3 (2comp)		\$47.50	125	\$0.38
Bamboo lunch box 850ml 25's		\$8.80	25	\$0.35
Polystyrene 9'6'3		\$12.00	50	\$0.24
Polystyrene 9'6'3		\$17.00	100	\$0.17
Polystyrene 9'6'3		\$21.50	100	\$0.22

## Appendix 2: Stakeholders Consulted

- Punanga Nui vendors
- Importers/Supermarkets
  - Vonnia's Warehouse
  - Convenience Store
  - Bounty Bookshop
  - Tex Mart
  - Prime Foods
  - CITC
  - Foodland
  - Manea Foods
  - Wigmores Superstore
- Cook Islands Government employees
- Chamber of Commerce
- Solid Waste Management Committee
  - Infrastructure Cook Islands
  - Ministry Of Health
  - National Environment Service
  - General Transport
  - Cook Islands Trading Corporation
  - Te Ipukarea Society
  - Ministry of Finance and Economic Management
  - Te Aponga Uira
  - OPM (Pa Enea Division, and the Central Policy and Planning Office)
  - Aitutaki Executive Officer
  - Atiu Executive Officer