

Cook Islands

**Advance Recovery and Disposal Fee Scheme
Policy
2022**

**Compiled by:
Infrastructure Cook Islands
in partnership with the Ministry of Finance and Economic Management**

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Abbreviations

The following abbreviations are used in this document:

ARDF	Advance Recovery and Disposal Fee
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
NSDA	National Sustainable Development Agenda
VAT	Value Added Tax

Definitions

Advanced Recovery and Disposal Fee (ARDF)	Means a fee added to the cost of a product when it enters a country to cover the costs of its safe recycling or disposal. It may include a refund sum, a handling fee sum and a third sum to cover waste management services. The refund component is paid back to a consumer upon return of the container or item.
Community	Individuals, organisations, private sector, government
Container deposit scheme	A scheme that adds a sum to a beverage bottle or can to refund back to a consumer upon return to an appropriate facility
Container	Means beverage bottles and cans
Depot operators	The person/s who operates a recycling depot.
General waste	Waste destined for landfill or other final treatment.
Hazardous waste	Means discarded material that poses substantial or potential threats to human health or the environment. It includes heavy metals and toxic chemicals as well as infectious medical wastes. It includes substances identified as hazardous waste for the purposes of the Basel Convention ¹ and the Waigani Convention ² .
Logistics contractor	An entity that packs, transports and processes recyclables and solid waste.
Mixed waste	Garbage, refuse that is mixed with recyclable items and/or hazardous items.
Refund depots	A facility or facilities where consumers may return specific products and packaging and be paid a refund.
Solid waste	<p>Includes the following:</p> <ul style="list-style-type: none"> a. Garbage, refuse, or litter b. Hazardous waste including <ul style="list-style-type: none"> i. medical waste ii. liquid or gaseous waste that contains persistent organic pollutants, ozone depleting substances or heavy metals c. Used cooking oil d. Bio-waste (but not wastewater, sewage or sludge) e. Building and demolition waste f. Other discarded or superfluous things from industrial, commercial, mining, agricultural, community, or other activities. <p>It does not include:</p> <ul style="list-style-type: none"> g. Wastewater, sewage or sludge h. Waste (other than hazardous waste as defined in (b) or (c) above) that is liquid or gaseous in its raw form.

¹ Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. Adopted 1989.

² Waigani Convention - The Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region, 1995.

1 Introduction

The management of solid waste is a matter that needs to be addressed because of the risk to human health, the economy, and the environment. The Cook Islands faces challenges in managing solid waste due to a lack of legislation, high transport costs, a lack of resourcing (people, facilities and funding), and asymmetrical trade balances.

This document outlines a proposal to establish sustainable financing to provide a robust and financially self-sustained waste management and litter reduction system for the Cook Islands. The proposed concept is titled the Advance Recovery and Disposal Fee (ARDF) Scheme.

This document describes the vision, purpose, scope and timeframe before outlining the context, setting out the issues and challenges faced by the Cook Islands, and identifying how this policy links to the National Sustainable Development Agenda 2020+ (NSDA). It then outlines three principles that need to be considered and sets out the objectives and tools which seek to achieve the policy vision. These address individual and collective responsibility for managing waste, the institutional and legislative framework to advance sustainable financing, and education and awareness. Lastly, it summarises how the scheme will work and the monitoring, evaluation and reporting mechanisms.

2 Vision

The vision for this policy is:

‘A community taking responsibility for sustainable management of solid waste’

The vision highlights how a sustainable financing mechanism can make every person, the private sector and Government responsible for managing waste. Every person and entity for paying for the waste they generate, the private sector supporting the scheme as an importer and seller of commodities that end up as waste; and Government to establish management mechanisms.

3 Purpose

The purpose of this document is to outline the sustainable financing concept, describing the scope, context, principles, and objectives.

The operational detail of the proposed scheme is provided in a separate supplementary document that covers the roles and responsibilities of organisations involved and the implementation arrangements.

4 Scope and timeframe

The policy applies across the whole of the Cook Islands and covers solid waste as defined in the Solid Waste Management Policy 2016 - 2026.

A Solid and Hazardous Waste Bill (the Bill) has been drafted. The Bill:

- draws together pre-existing legislation for managing waste under the Environment Act 2003 and the Public Health Act 2004
- establishes a relationship with the Prevention of Marine Pollution Act 1998
- creates new legislation not currently covered
- creates the ability to ban products from import
- establishes the ARDF Scheme (Part 6 of the Bill).

5 Context

5.1 Solid waste in the Cook Islands

The Cook Islands has no consistent funding mechanism to export recyclable and hazardous packaging and products for recycling and safe disposal. Households are not charged for collection and disposal of any recycling or general waste under the roadside collection service. The single private sector recycling exporter on Rarotonga faces financial challenges in operations, meaning that recycling is sometimes not exported or recycled. This can reduce households' trust in collections.

The landfill in Rarotonga and Aitutaki, and uncontrolled dumps across the Cook Islands, are becoming filled with recyclable and potentially hazardous waste. Electronic waste and vehicle bodies are stockpiled on private land. The Rarotonga landfill was scheduled to be closed in 2020 but operation has continued due to unsuccessful attempts to find another solution. The landfill in Aitutaki was also scheduled to be closed in 2020. Fortunately, much space remains. The repatriation of recyclables, vehicles, electrical waste and whiteware to recycler's overseas takes place intermittently and predominantly relies on externally funded project money.

Littering and dumping of recyclables, hazardous waste and non-recyclable waste is a common occurrence on Rarotonga. Litter is evident along roadsides and at places people congregate, especially beaches. Backyard burning of waste and recyclables takes place daily throughout the Cook Islands.

5.2 Impacts of poor waste management

Improperly managed waste risks the health of the terrestrial and marine environments, as well as the health of communities through potentially contaminated soils, drinking water and air pollution from burning. These effects are exacerbated by the warming effects of climate change (Kallenborn, 2012). Residual waste disposal and treatment with poor management contributes to climate change by producing greenhouse gases such as methane.

Backyard burning is especially hazardous to public health. Open burning produces dioxins, particle pollution, hydrocarbons, volatile organic compounds, carbon monoxide, hexachlorobenzene and ash (US EPA, 2022). These pollutants can affect reproduction and development, suppression of the immune system, disruption of hormonal systems, cancer, respiratory conditions and heart attacks (US EPA, 2022).

Improperly managed waste and litter could negatively affect tourism which in turn will affect the economy. Findings from International Visitor Survey by the New Zealand Tourism Research Institute found tourists are becoming increasingly aware of the shortfalls with current waste management practices within Rarotonga (New Zealand Tourism Research Institute, 2022).

Poor waste management leads to the filling of landfills and dumps faster than designed for. Based on 2016 audit figures, 3,226 tonnes of waste and recycling is generated each year in the Cook Islands. An audit was conducted in 2020 however the 2016 figures are used instead due to the effects of the Covid 19 pandemic on consumption patterns. Based on an audit of landfill waste in 2012, 65% of waste to the landfill in Rarotonga is recyclable or able to be repurposed. This means that of the 1,844 tonnes of mixed waste to landfill, 1,199 tonnes could have been recycled or composted.

5.3 Sustainable financing as a waste management and litter control solution

Sustainable financing schemes operate in over fifty countries worldwide, including Pacific Island countries, Kiribati, the Republic of the Marshall Islands, Federated States of Micronesia, Tuvalu, and Palau. Data from countries with sustainable financing schemes show:

1. Schemes typically result in beverage container recycling rates that are two to three times higher than the rates achieved by jurisdictions that rely on kerbside recycling programs, particularly if the deposit is set at an effective level (ReLoop Platform, 2020).
2. Reduced litter – New South Wales (NSW) has a 52% reduction in the volume of eligible container litter (NSW EPA, 2022).
3. Sustainability – 40 government schemes worldwide have operated for an average of 24.8 years and all but two are still successful (Statista, 2022).
4. Self-funding – Kiribati generated \$26,000 in its first month of operation with a system based on three products (Kiribati, 2022). Their scheme started in 2004.
5. Money going back to communities – In 2011 US\$85,000 was paid to Kosrae communities in the Federate States of Micronesia (population of approximately 8,000) (IISD, 2012). Their current scheme started in 2007.

An effective and environmentally sound alternative to current practices is required to manage waste (recyclable and non-recyclable) generated in the country long-term. Waste minimisation, prevention and improved recycling that contribute to circular economy are the recognised global solutions to improve waste management and need to take priority in the Cook Islands. Sustainable financing, of which the ARDF is an example, is one tool that can help achieve the circular economy.

The implementation of the ARDF will assist with improving recycling by incentivizing sorting and return through its refund component. High quantities of separated recyclables then improve efficiencies at facilities, reduce waste to landfills and reduce litter, burning and illegal dumping. ARDF will facilitate more accurate collection of data on the quantity and type of non-recyclable waste that will need management into the future and contributes to final disposal and recycling costs.

The purchase cost of products includes the cost of raw material extraction and manufacture. As a consumer, an individual pays for the production of goods. The ARDF combines the cost of the products recycling, reuse or disposal into the purchase cost. This creates a connection between raw material extraction and manufacture to end-of-life management, a connection that is lacking in the Cook Islands and many other countries.

The Cook Islands ARDF has been referred to as the Advanced Disposal Fee (ADF) in the Strategy, various versions of this policy over the last four years, and in discussions. It is now updated to include 'Recovery' to reflect that the fee accounts for recycling as well as disposal. This also reflects the term as it is being introduced across the rest of the Pacific.

5.4 Options previously considered for financing waste management

Other options that have been considered in place of the ARDF Scheme but not progressed are detailed below.

An environmental levy

Previously a NZ\$5 departure tax was transferred to a special purpose environmental protection fund, with NZ\$3.50 allocated to solid waste management. The fund was abolished in 2011, and departure tax revenues are considered consolidated revenue.

Compared to the proposed ARDF Scheme, a new environmental levy in a departure tax doesn't link the waste generated to the consumption nor does it change behaviour. There is a

reluctance to reintroduce hypothecated taxes that have previously been abolished, so creating a new environmental levy from departure tax will not be sought.

Increasing the operating budget of the Rarotonga Waste Facility

It has been difficult to achieve approval for budget requests for additional funding to purchase new equipment and machinery, engage in contracts and search for land for a new landfill. Requests for significant investments have been declined due to lack of affordability. ICI will not seek to increase operating budget or apply for new appropriations to cover the required services described in this policy. The service described in this policy is beyond what the ICI Waste Management Division is currently prescribed to carry out but is the envisioned expansion of responsibility sought by the Ministry.

5.4.1 History of working toward a sustainable financing mechanism

The ARDF Scheme was first introduced as an idea over 12 years ago. In 2010, the National Environment Service commissioned the Secretariat of the Pacific Regional Environment Programme (SPREP) to start drafting an outline for a Solid Waste Management Strategy. The developers initially recommended a container deposit scheme as a mechanism to fund waste management.

Work towards a financing solution began in 2011, directed by then Minister for Infrastructure. A Solid Waste Management Committee was set up at that time. From this effort, a study to seek a viable long-term financing option was commissioned by the Solid Waste Management Committee with funding from the New Zealand High Commission. The study recommended a container deposit scheme (Waste Connections Ltd & CBEC Kaitiaia, 2012).

The first Solid Waste Management Strategy was endorsed by Cabinet in 2013 and had sustainable financing as a priority. The initiatives of the strategy were expanded in the National Solid Waste Management Policy 2016-2026, linking them to those in the National Sustainable Development Plan 2016- 2020 by way of Goal 3, “Promote sustainable practices and effectively manage solid and hazardous waste”. It was endorsed by Cabinet in 2016³.

The policy provides for sustainable financing mechanisms for recycling and waste management, referencing:

- an advance recovery and disposal fee levied on selected imported items
- creation of a dedicated trust fund to cover the costs of SWM processing and exporting.

In 2019 a working group confirmed the detail of the ARDF and form a direction for the following decisions:

1. The structure of the ARDF
2. The process for how the ARDF will work
3. Who the players are and their roles
4. Where the money would be held
5. Products to be included
6. What is required to advance preparation of the ARDF
7. Direction for the drafting of the ARDF legislation or regulation.

During 2020, a feasibility study (Appendix C to the supplementary document) was commissioned by SPREP on the ARDF Scheme. It reviewed the current costs of shipping, an earlier version of an ARDF Cabinet Submission, and the current version of Part 6 of the Solid and Hazardous Waste Bill. It was informed by discussions with relevant Government

³ CM (16) 0203

staff who had been involved in the development of the ARDF scheme. The study made several recommendations for progressing the ARDF and further iterations to Part 6 of the Bill.

Another working group session was convened in February 2022 to confirm high level decisions to complete this policy. Several follow up meetings were held with MFEM Economic Planning and Treasury Divisions to review financial processes and identify the most suitable option.

5.5 Issues and challenges for the Cook Islands

Unmanaged solid waste is a significant problem because of its risk to human health, ecosystems and visual amenity. Managing waste and preventing its negative effects requires adequate financing. The Cook Islands faces several challenges, as do other small island developing states, in affording or realising mechanisms to finance waste management. Graduating to 'developed' status places added pressure on the Cook Islands, making the country ineligible for some foreign aid that support public services. The contextual challenges include:

- Lack of resourcing for solid waste management
- High transport costs related to small, dispersed land masses, far from recycling centres
- Most consumables imported with historically no consideration for the end-of-life product and packaging waste (asymmetrical trade balance)

Lack of resourcing for solid waste management

Inadequate resourcing and investment (people, expertise and funding) for solid waste management operations and infrastructure has contributed to limited capacity, the inability to ship offshore, inadequate maintenance of solid waste facilities, and the absence of solid waste facilities on some islands. This includes the absence of safe storage for hazardous waste.

High transport costs related to small, dispersed land masses

There are significant distances between the capital island, Rarotonga, and the Pa Enua. This factor, combined with the Cook Islands isolation from large urban centres that have recycling facilities, increases the cost of repatriating recyclable waste. This has inhibited recycling and the safe disposal of hazardous waste.

No consideration for end-of-life management

Packaging from food, beverages and tobacco contributes significantly to the generation of waste. This waste stream increases to meet the additional consumption needs of visitors through tourism. Many shipping containers return to New Zealand empty, a clear indicator of the imbalance between the volumes of consumer goods imported versus exported.

5.6 Links to National Sustainable Development Agenda 2020+

The National Vision, as set out in the National Sustainable Development Agenda 2020+ (NSDA) is:

“Turanga Memeitaki” or “Wellbeing for all”

The NSDA sets fifteen national development goals. Goal 4 is most relevant to this policy:

"4. Manage Solid and Hazardous Waste"

The NSDA has identified two indicators to measure progress towards this goal. Indicator 4.1 tracks total waste recycled. Indicator 4.2 tracks the percentage of hazardous waste that is accounted for and managed.

Other NSDA goals of particular relevance are:

"3. Economy, Employment, Trade and Enterprise"

"5. Water and Sanitation"

"11. Our Biodiversity and Natural Environment"

These goals are relevant because of the adverse effects that poor solid waste management can have on the natural environment and diversifying the Cook Islands economic base.

6 Principles

The following principles are integral to the development of this policy and need to be considered in its implementation:

1. Polluter pays principle

Those responsible for causing pollution or generating solid waste should be responsible for the cost of dealing with the waste generated to protect human health and maintain ecological health and diversity. Individual responsibility for solid waste management should be encouraged. It is essential to develop funding mechanisms based on the polluter pays principle, which will sustain solid waste management into the future.

2. Product Stewardship

Acknowledges that those involved in importing, producing, selling, using, and disposing of products have a shared responsibility to ensure that those products or materials are managed in a way that reduces their impact throughout their lifecycle on the environment and on human health and safety. For example, New Zealand has declared some priority products for regulated product stewardship under the Waste Minimisation Act⁴.

3. Consultation principle

All levels of government, communities and organisations should be consulted and informed 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. As mentioned earlier, this proposal has been co-designed with a range of stakeholders.

7 Objectives and tools

The following objectives are guided by, and give effect to, the vision of the policy outlined in section 2. In turn, the supporting tools seek to achieve each objective.

⁴ <https://environment.govt.nz/what-government-is-doing/areas-of-work/waste/product-stewardship/regulated-product-stewardship/>

Objectives	Tools
<p>Objective 1: Develop sustainable financing to manage solid waste</p>	<p>Develop a cost recovery measure that:</p> <ul style="list-style-type: none"> 1.1 encourages behaviour change towards more conscious waste disposal 1.2 enables robust waste management at local and national levels 1.3 does not impact on lower income earners 1.4 does not shift the financial responsibility to one group <hr/> <p>Introduce an appropriate cost recovery measure to pay for:</p> <ul style="list-style-type: none"> 1.5 waste and recyclables to be shipped from the Pa Enua to Rarotonga and onwards to appropriate facilities overseas 1.6 the required resources for processing and transporting waste and recyclables 1.7 software required to operate a robust, transparent system.
<p>Objective 2: Develop a clear and robust institutional and legislative framework to support the sustainable financing mechanism.</p>	<p>Establish a regulatory framework that:</p> <ul style="list-style-type: none"> 2.1 enacts the ARDF 2.2 articulates the roles and responsibilities of agencies responsible for the coordination of the sustainable financing mechanism 2.3 updates the Customs Harmonised System codes to cater for products that have the ARDF placed on them.
<p>Objective 3: Promote the sustainable financing concept to the community and private sector.</p>	<p>Develop and implement a communication strategy that informs and promotes understanding of the sustainable financing concept, targeting the following groups:</p> <ul style="list-style-type: none"> 3.1 importers and retailers 3.2 large-scale waste producers 3.3 general adult population 3.4 youth and children.

Explanation of Objective 1 and Tools

The outcome sought by Objective 1 is the sustainable financing needed to achieve the policy vision of a community taking responsibility for sustainable solid waste management.

Objective 1 addresses the challenges identified in section 5.5 of this policy – the high transport costs related to small, dispersed land masses, the lack of resourcing to manage solid waste, and asymmetry between the volumes of consumer products imported versus exported. Sustainable financing will ensure packaging and end-of-life products can be properly managed on island or shipped offshore to safe management facilities. The associated tools give effect to the objective by guiding what the cost recovery measure should and will do. Tool 1.1 recognises that cost recovery measures can promote responsible behaviour by encouraging separation for recycling, discouraging littering, burning and dumping; that cost recovery sums should not change the cost of a product materially so as to impact on low-income earners; and, do not place responsibility on one group over another, such as travellers.

Explanation of Objective 2 and Tools

The outcome sought by Objective 2 is an institutional and legislative framework which legally allows for the ARDF to operate and requires agencies to carry out their roles within the ARDF scheme. Tariff codes need to be updated to target specific consumer products over time. Objective 2 addresses two of the challenges identified in section 5.5 of this policy – the lack of resourcing to manage solid waste. Tool 2.1 gives effect to the objective by recognising that a clear and robust legislative framework needs to address all aspects of the solid waste stream, including clarifying the roles and responsibilities of the agencies involved and the need for identifying packaging apart from product.

Explanation of Objective 3 and Tools

The outcome sought by Objective 3 is the understanding and support needed to advance the vision expressed as 'A community taking responsibility for sustainable solid waste management'. This objective recognises that if stakeholders understand a concept and the need for it, support can be generated. It is very important that the importers and retailers are well informed of the ARDF before implementation as the initial impact of the fees will be felt by them and the return of those costs is slower. The impact on consumers are much less significant. The tools give effect to the objective by providing for targeted education and awareness.

8 Overview of proposed ARDF Scheme

ICI will operate the scheme at the national level. The ARDF will include three components:

1. A refund (paid to consumers who return items)
2. A handling fee (paid to the refund depot operator)
3. A management fee (used to pay for processing equipment, logistics contract service and support systems)

These components will be applied differently depending on whether the item is recyclable or potentially recoverable. Table 2 in the supplementary document provides more information on this. The deposit fees collected for the ARDF Scheme shall be set with reference to expected costs to run the scheme and manage that particular stream of end of life items. For example, the fee charged can be set in relation to the estimated number of bottles/cans/items to be returned and processed. The fees and refund amounts shall be determined according to clear and transparent rules and processes. For example, it is intended that fees will be reviewed and re-set regularly according to supply volumes, collection volumes, and total operating costs: fixed and variable.

The scheme is intended to allow for surplus to be invested into waste management activities over time such as equipment maintenance and replacement.

The Fund

An Advance Recovery and Disposal Fee Scheme Trust (the fund) is identified as the suitable financial option for the scheme. All ARDF collected at the border for the scheme would be held in this fund, and all distributions to ICI would be managed from this fund. This process does not require ongoing appropriation provided the ARDF amounts are set (and re-set) regularly to allow for recovery of all scheme management costs.

The Process

1. The ARDF is collected as a fee on the specified item by Customs when it arrives in-country, to be paid by the importer and deposited into the fund.
2. The importer bears the amount of the fee as a cost associated with importing; the retailer then marks-up the price of the product accordingly, so that the cost is borne by the consumer in the form of an increased purchase price.
3. The used product/container is returned to a refund depot or collected on the roadside
 - a. If returned to a refund depot, the consumer or the person who returns it will receive the refund
 - b. If placed on the roadside for collection, the refund will be forfeited
4. Returned items are consolidated at a central location and shipped offshore or repurposed on-island where solutions exist.

Unredeemed refunds and associated handling fees will remain in the fund and used for the purposes of the ARDF.

Refund depot operators will be contracted by ICI to set up refund depots that receive ARDF specified items and pay out refunds. ICI will contract logistics contractor(s) to transport returned recyclables and products to a central facility on Rarotonga and on to offshore facilities. ICI may commission for items to be repurposed where appropriate. It is proposed that the contractors will be contracted by ICI via service contracts through the Cook Islands Government procurement process. Monitoring, reporting and operating obligations will be outlined in contract conditions.

The financial flows from the collection point at Customs to the fund, and from ICI to contracted parties, will be monitored by Crown Accounts. These flows will be subject to audit at year end by Crown Audit. ICI will make appropriate checks on contracted parties to ensure that systems are correctly accounting for waste flows.

The ARDF Scheme will initially apply to the following products, before expanding to others where and when approved:

- Vehicles and heavy machinery
- Electrical goods
- Whiteware
- Plastic beverage bottles and aluminium cans
- Tyres

Further operational detail of the scheme is included in the supplementary document.

9 Monitoring, evaluation and reporting

The Waste Management Division of ICI will co-ordinate monitoring, evaluation and reporting on this policy via an implementation plan for the ARDF to enactment. Monthly updates will be provided to the Secretary of ICI for updating to the Minister for Infrastructure.

10 How the ARDF Scheme contributes to the Solid Waste Management Strategy Vision and Plans

The approval of the ARDF Scheme will complement other initiatives that are planned to work alongside it (Appendix A to the supplementary document). Together, these initiatives are designed to create a waste management system that enhances public and environmental health by reducing the impact that unmanaged waste has on human health, ecosystems and visual amenity. ICI and partners in the waste management sector can then focus on historic waste stockpiles currently posing a threat to human and environmental health, especially in the Pa Enea.

As detailed in section 5.1, the ARDF Scheme alongside waste minimisation and prevention will enable recycling and eventually safe disposal, progressing towards the Strategy's vision of a zero waste Cook Islands.

If the vision of the ARDF is realised and it is applied to all products, ICI intends to ship all waste products and packaging to Rarotonga for final treatment, processing and onward shipping to recyclers and destruction facilities overseas. With the ARDF in operation, separation will be improved markedly, which improves efficiencies at waste facilities throughout the Cook Islands. A future option for managing residual waste can be reflected in the ARDF placed on the applicable products. More on this in the supplementary document.

11 Financial impact of the ARDF Scheme

The financial flows associated with the proposed ARDF Scheme have been modelled by MFEM. The amounts are based on early estimates of imports and waste and returns

characteristics. As such, the figures included below are indicative at this stage only. Detailed modelling will be conducted as part of the implementation phase for the Scheme.

11.1 What the modelling shows

The modelling shows that the amounts flowing into and out of the fund are potentially significant. The amount accumulated in the fund depends critically on two aspects in particular:

1. the return percentage of aluminium and plastic beverage bottles and cans); and
2. how often the fee components are re-calibrated and the policy around cost recovery.

Based on the modelling in Figure 1, approximately \$1.1M is expected to be received into the fund while the operation of the scheme including equipment maintenance and replacement, will vary between \$600,000 and \$800,000 per year for the first eight years, then rising to between \$800,000 and \$900,000 after eight years, as costs increase.

The return percentages determine what is paid out of the fund to deposits and contracts. Too low return rates, and the Scheme collects too much and pays out too little. Too high return rates, and the Scheme collects not enough and pays out too much. Regular recalibration allows for the fee components to be set according to actual, observed import and waste flows. Collecting fees at the border allows for imports of waste to be monitored, and fed into decision-making about how the fee components should be set.

A cost-recovering scheme is self-supporting, but the fund does not accumulate because the components of the fee are re-set to match the real cost of waste management, logistics and scheme administration. A scheme designed to gather funds for other purposes, however, would allow for the fund to accumulate (perhaps to provide finance for big, lumpy investments in the future).

The charts below show the likely trajectory of the fund balances for an accumulating fund. The figures show what would happen - given ICI's current knowledge about import and waste recovery rates - in a scenario where the fee components are not re-set to provide for cost-recovery. The result is a fund balance that continues to accumulate, and reaches \$4 million balance after 20 years.

Figure 1 ARDF fund revenue and spend components, 20 year horizon, 'no reset' scenario

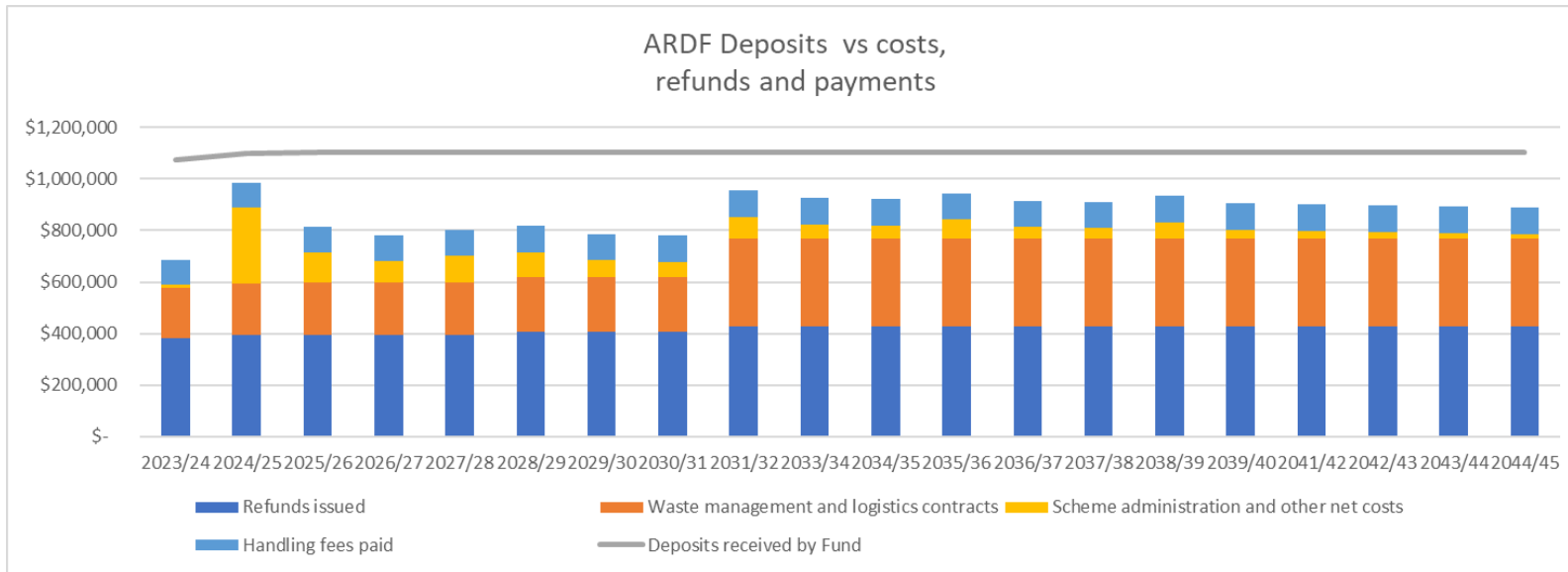
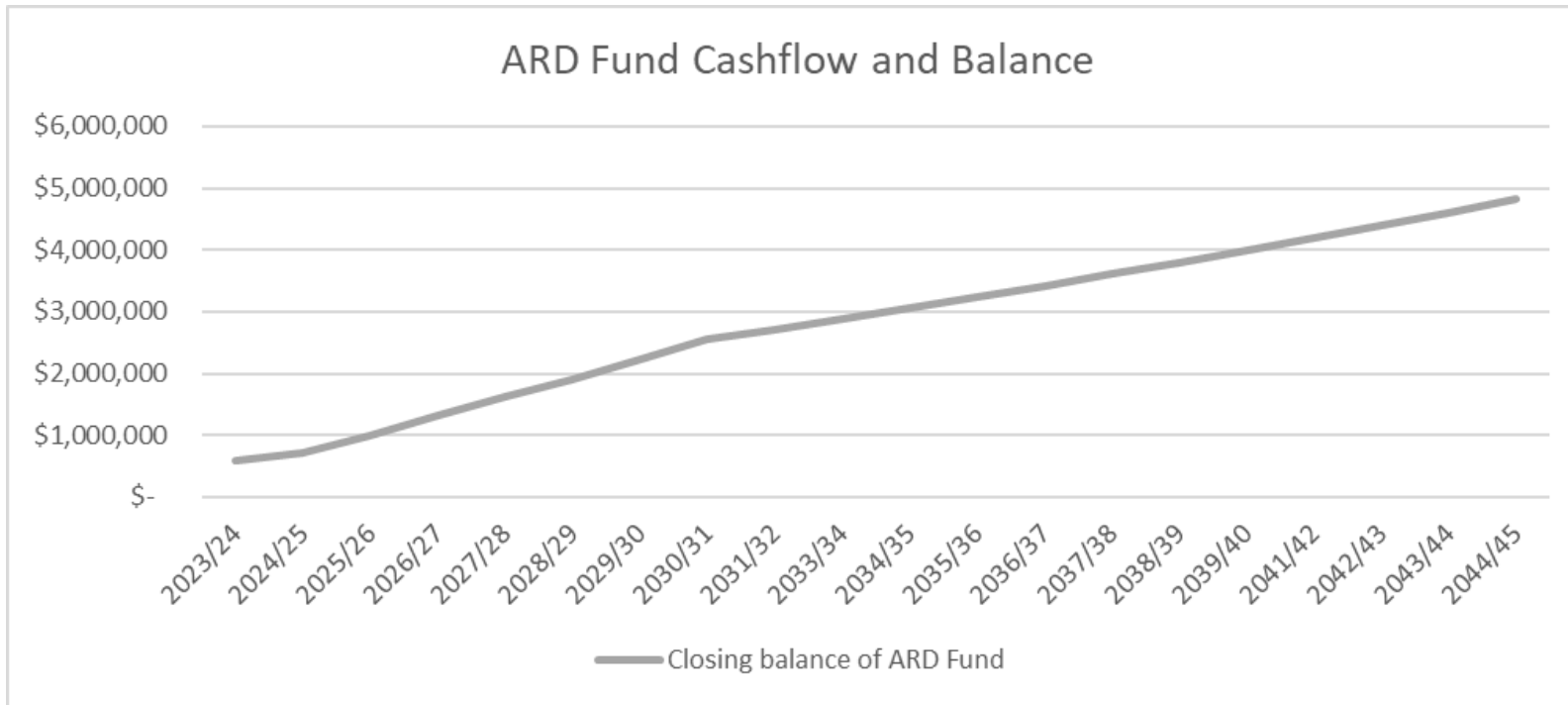


Figure 2 ARDF accumulated cash balances, 'no reset' scenario



11.2 Core inputs for the initial modelling

The modelling is based on the below set of core inputs. These can be varied in the model prepared by MFEM.

Figure 3 Core inputs

Items	Size	2025 waste handling estimate	Volume shipped from Pa Eua	Return rates	Refund	Handling Fee	Management Fee	ARDF	Refund Introduction date	Waste handling & management contracts introduction date	Elapsed time (YEARS) before it becomes waste
Vehicles and machinery	Up to 100kg (SMALL SCOOTERS)	50	7	100%	\$0.00	\$0.00	\$50.00	\$50.00	2031/32	2031/32	8
Vehicles and machinery	101+kg (MOTORBIKES)	50	7	100%	\$0.00	\$0.00	\$100.00	\$100.00	2031/32	2031/32	8
Vehicles and machinery	Up to 3000kg (CARS)	41	5	100%	\$0.00	\$0.00	\$450.00	\$450.00	2031/32	2031/32	20
Vehicles and machinery	Between 3,001kg and 20,000kg (LARGE TRUCK or SUV)	15	2	100%	\$0.00	\$0.00	\$1,050.00	\$1,050.00	2031/32	2031/32	20
Vehicles and machinery	Above 20,000kg (HEAVY MACHINERY)	15	2	100%	\$0.00	\$0.00	\$2,000.00	\$2,000.00	2031/32	2031/32	20
Laptops	All	100	13	100%	\$20.00	\$2.00	\$10.00	\$32.00	2028/29	2028/29	5
Monitors	All	100	13	100%	\$20.00	\$2.00	\$10.00	\$32.00	2028/29	2028/29	5
Computers	All	10	1	100%	\$20.00	\$2.00	\$10.00	\$32.00	2028/29	2028/29	5
Medium TV	Up to 10kg	100	13	100%	\$20.00	\$2.00	\$20.00	\$42.00	2028/29	2028/29	5
Large TV	10kg+	3	0	100%	\$20.00	\$2.00	\$40.00	\$62.00	2028/29	2028/29	5
Medium Office printers	Up to 20kg	10	1	100%	\$20.00	\$2.00	\$10.00	\$32.00	2028/29	2028/29	5

Large office printers	Up to 100kg	1	0	100%	\$20.00	\$2.00	\$80.00	\$102.00	2028/29	2028/29	5
Commercial printers	101kg+	1	0	100%	\$20.00	\$2.00	\$80.00	\$102.00	2028/29	2028/29	5
Microwaves	All	323	43	100%	\$20.00	\$2.00	\$10.00	\$32.00	2028/29	2028/29	5
Ovens and dishwashers	All	25	3	100%	\$20.00	\$2.00	\$60.00	\$82.00	2031/32	2031/32	15
Washing machines	All	100	13	100%	\$20.00	\$2.00	\$60.00	\$82.00	2031/32	2031/32	10
Dryers	All	20	3	100%	\$20.00	\$2.00	\$60.00	\$82.00	2031/32	2031/32	10
Small fridge	Up to 40kg	384	51	100%	\$20.00	\$2.00	\$50.00	\$72.00	2031/32	2031/32	10
Medium fridge	41kg to 75kg	100	13	100%	\$20.00	\$2.00	\$50.00	\$72.00	2031/32	2031/32	10
Large fridge	76kg to 85kg	50	7	100%	\$20.00	\$2.00	\$150.00	\$172.00	2031/32	2031/32	10
X-Large fridge	86kg+	3	0	100%	\$20.00	\$2.00	\$150.00	\$172.00	2031/32	2031/32	10
Commercial chillers	All	5	1	100%	\$0.00	\$2.00	\$200.00	\$202.00	2031/32	2031/32	10
Small deep freeze	Up to 40kg	141	19	100%	\$20.00	\$2.00	\$50.00	\$72.00	2031/32	2031/32	10
Medium deep freeze	41kg to 75kg	179	24	100%	\$20.00	\$2.00	\$50.00	\$72.00	2031/32	2031/32	10
Large deep freeze	76kg to 85kg	1	0	100%	\$20.00	\$2.00	\$150.00	\$172.00	2031/32	2031/32	10
Small airconditioners	Up to 30kg	30	4	100%	\$20.00	\$2.00	\$50.00	\$72.00	2031/32	2031/32	8
Medium airconditioner	31kg to 59kg	5	1	100%	\$20.00	\$2.00	\$50.00	\$72.00	2031/32	2031/32	8
Large airconditioner	60kg+	5	1	100%	\$20.00	\$2.00	\$50.00	\$72.00	2031/32	2031/32	8
Beverage bottles (PET plastic)	Per item	1307957	15388	75%	\$0.20	\$0.05	\$0.15	\$0.40	2023/24	2023/24	0.17
Beverage cans (Aluminium)	Per item	1325981	15600	75%	\$0.20	\$0.05	\$0.05	\$0.30	2023/24	2023/24	0.17

Tyres	Between 3kg - 10kg	200	27	50%	\$0.00	\$1.00	\$5.00	\$6.00	2023/24	2023/24	0.25
Tyres	11 to 50kg	164	22	75%	\$0.00	\$1.00	\$10.00	\$11.00	2023/24	2023/24	0.25
Tyres	51 to 100kg+	180	24	75%	\$0.00	\$2.00	\$20.00	\$22.00	2023/24	2023/24	0.25

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⁵ No year on document.

Appendix A: Stakeholders consulted

A consultation draft of this policy was circulated to the following stakeholders for comment. Not all stakeholders returned a response:

- Chamber of Commerce
- Cook Islands Investment Corporation
- Cook Islands Tourism Corporation
- Cook Islands Tourism Industry Council
- Crown Law Office
- House of Ariki
- Island Governments - Aitutaki, Atiu, Mitiaro, Mauke, Mangaia, Manihiki, Palmerston, Penrhyn, Pukapuka/Nassau, Rakahanga
- John Wichman
- Koutu Nui
- Marae Moana
- Ministry of Education
- Ministry of Finance and Economic Management – Economic Planning Division
- Ministry of Finance and Economic Management - Development Coordination Division
- Ministry of Health
- Muri Environment Care
- National Environment Service
- Office of the Prime Minister
- Office of the Prime Minister - Central Policy and Planning Office
- Office of the Prime Minister - Climate Change Cook Islands
- Office of the Public Services Commission
- Te Aponga Uira
- Te Ipukarea Society
- Almost 80 importers, retailers, rental vehicle companies, bars on Rarotonga

The Waste Management Division of ICI acknowledges the feedback received from the groups for the consultation draft of this policy. Much feedback has influenced the final draft of the policy.