





This initiative is supported by PacWastePlus-a 85 month project funded by the European Union (EU) and implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP) to sustainably and cost effectively improve regional management of waste and pollution.

Legislation Guidance End-of-Life Vehicle Management in the Pacific







This guideline is to provide a legislative guiding template with a technical drafting note that creates an enabling environment for the effective management of end-of-life vehicles at a scale and technological complexity that is financially viable and suitable for the Pacific Islands.

© Secretariat of the Pacific Regional Environment Programme (SPREP) 2024.

Reproduction for educational or other non-commercial purposes is authorised without prior written permission from the copyright holder and provided that SPREP and the source document are properly acknowledged. Reproduction of this publication for resale or other commercial purposes is prohibited without prior written consent of the copyright owner.

SPREP Library Cataloguing-in-publication data

Legislation guidance end-of-life vehicle management in the Pacific. Apia, Samoa : SPREP, 2024.

44 p. 29 cm.

ISBN: 978-982-04-1300 (ecopy)

1. Recycling (Waste, etc.) – Technical reports –
Oceania. 2. Waste management – Refuse and
refuse disposal – Oceania. 3. Waste management – Law and
legislation – Oceania. I. Pacific Regional Environment
Programme (SPREP). II. Title.
363.728 20961

Disclaimer: This publication was produced with the financial support of the European Union. Its contents are the sole responsibility of SPREP and do not necessarily reflect the views of the European Union. This document has been compiled in good faith, exercising all due care and attention. SPREP does not accept responsibility for inaccurate or incomplete information.





Acknowledgment: This report was prepared by Natural Capital Economics Pty Ltd ('NCEconomics') and Marine Plastics Solutions Pty Ltd ('MPS'). This guidance document does not seek to prescribe how a particular depollution activity should be carried out. Neither NCEconomics nor MPS will accept any liability for death, personal injury or any other damages arising because of undertaking any of the depollution actions discussed in this document.



PO Box 240 Apia, Samoa T: +685 21929 E: sprep@sprep.org

W: www.sprep.org

Our vision: A resilient Pacific environment sustaining our livelihoods and natural heritage in harmony with our cultures.

PacWastePlus Programme

The Pacific – European Union (EU) Waste Management Programme, PacWaste Plus, is a 85-month programme funded by the EU and implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP) to improve regional management of waste and pollution sustainably and cost-effectively.

About PacWastePlus

The impact of waste and pollution is taking its toll on the health of communities, degrading natural ecosystems, threatening food security, impeding resilience to climate change, and adversely impacting social and economic development of countries in the region.

The PacWastePlus programme is generating improved economic, social, health, and environmental benefits by enhancing existing activities and building capacity and sustainability into waste management practices for all participating countries.

Countries participating in the PacWastePlus programme are: Cook Islands, Democratic Republic of Timor-Leste, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu.

Key Objectives

Outcomes & Key Result Areas

The overall objective of PacWastePlus is "to generate improved economic, social, health and environmental benefits arising from stronger regional economic integration and the sustainable management of natural resources and the environment".

The specific objective is "to ensure the safe and sustainable management of waste with due regard for the conservation of biodiversity, health and wellbeing of Pacific Island communities and climate change mitigation and adaptation requirements".

Key Result Areas

- Improved data collection, information sharing, and education awareness
- Policy & Regulation Policies and regulatory frameworks developed and implemented.
- Best Practices Enhanced private sector engagement and infrastructure development implemented
- Human Capacity Enhanced human capacity

Learn more about the PacWastePlus programme by visiting







www.pacwasteplus.org

About the Regional Bulky Waste Management Project

PacWastePlus is assisting Pacific Island Countries to improve the management of End-Of-Life vehicles and End-of-Life Tyres by providing guidelines and technical notes on safe handling and dismantling and options for in-country management of these items.

This regional project will complement the bulky waste management initiative under the ISLANDS Pacific Project and develop:

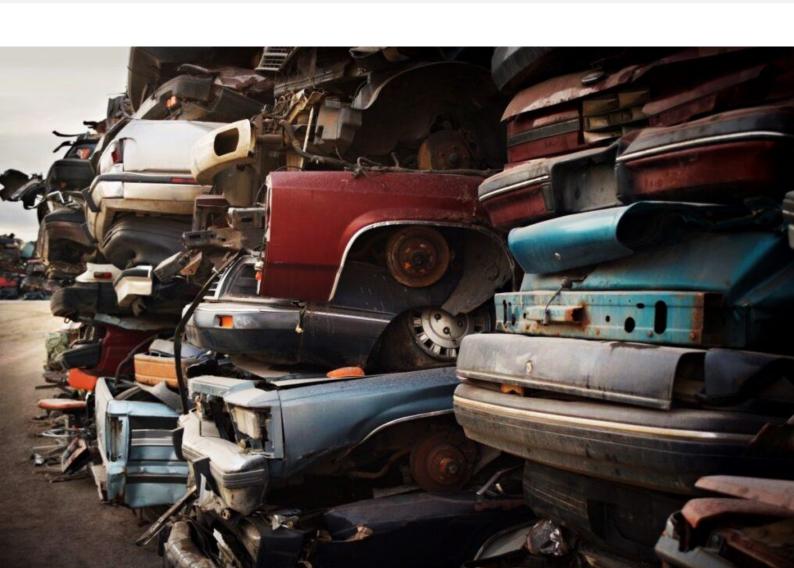
- Guiding document and a Decision Support Tool to guide participating countries on how to design and implement a national ELV management programme.
- Drafting/Guiding Notes on how to draft national legislation for the management of identified bulky waste.
- Dismantling Training Manual to be implemented by national governments to ensure safety of workers and prevent discharges into the environment.

The Practitioner's Guideline on Depollution of End-Of-Life Vehicles can be accessed on the PacWastePlus website.

Technical Guidance on Repurposing End of Life Tyres

Additionally, PacWastePlus completed an option analysis to identify suitable options for the prevention, recovery, reuse, and/or processing of used tyres in Pacific Island Countries. The following reports were established following this analysis work:

- Assessment of End-of-Life Tyres in the Pacific
- Technical Booklet on Non-Processing of End-Of-Life Tyres
- Technical Booklet on Mechanical Processing of End-of-Life Tyres
- Technical Booklet on Thermal Processing of End-Of-Life Tyres



Contents

Glos	ssary of terms	2
1	Introduction	3
1.1	Purpose	3
2	Key principles in ELV legislation and policy design	4
	Policy instruments	
	Guiding frameworks and principles	
	Waste Management Hierarchy	
	Principles in Waste Management and Environmental Law	
	Principles of a Circular Economy	
23	Monitoring, evaluation, and reporting (MER)	
2.5	Key recommendations for setting up and empowering an agency responsible for MER.	
2 /	Compliance and Enforcement	
2.5		
2.5	Comparative Legislative Neview	
3	Technical Drafting Note	11
	Process 1: Development of import standards for vehicles with a short lifespan	11
	Background and Policy Rationale	11
	Legislative Guiding Template	13
	Impact on other legislative instruments	16
	Process 2: Improvement of deregistration systems to support a circular economy	17
	Background and Policy Rationale	17
	Legislative Guiding Template	19
	Impact on other legislative instruments	22
	Process 3: Safe depollution and dismantling of ELVs	23
	Background and Policy Rationale	23
	Legislative Guiding Template	24
	Impact on other legislative instruments	26
4	References	27

Glossary of Terms

Abbreviation	Definition
ASR	Automotive Shredder Residue
ATF	Authorised Treatment Facility
ELV	End-of-Life Vehicle
SPREP	Secretariat of the Pacific Regional Environment Programme
GEF	Global Environment Facility
SIDS	Small Island Developing States
POPs	Persistent Organic Pollutants
UNEP	United Nations Environment Programme
PICs	Pacific Island Countries – These refer to the 15 countries and territories that PacWastePlus operates in: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Republic of the Marshall Islands, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu
ISLANDS	Implementing Sustainable Low and Non-Chemical Development in Small Island Developing States

1 Introduction

End-of-Life Vehicles (ELVs) pose a growing problem in Pacific Islands Countries and Territories (PICs) as populations and consumption increase.

Limited recycling infrastructure and capacity and high costs of transportation to remove ELVs; coupled with a lack of a clear legislative framework, including sustainable funding mechanisms, has led to the mismanagement and improper disposal of this bulky waste stream.

This has resulted in ELVs being discarded across Pacific Island landscapes (**Figure 1**). The abandonment of ELVs in this manner poses hazards to the environment and human health through exposure to a dangerous materials including hazardous liquid wastes, heavy metals, pyrotechnics and Persistent Organic Pollutants (POPs) (UNEP, 2019).



Figure 1. Abandoned ELVs Source: GEFISLANDS.org

The challenges already faced by many Small Island Developing States (SIDS) such as their limited landmass, vulnerability to climate change and sea level rise, and relatively underdeveloped recycling infrastructure (OECD, 2018) gives further emphasise on the need to manage this additional stress.

1.1 Purpose

The purpose of this document is to provide guidance to policymakers and legislators in Pacific Island Countries, for legislation and policy reform for the following processes:

- The development of consistent import standards for vehicles with a short lifespan to ensure that second hand vehicle
 imports to PICs meet environmental performance, safety, and other requirements and to slow the growth of the ELV
 waste stream.
- Improvement and implementation of deregistration systems for ELVs to support development of a circular economy and ensure there is a systematic way for ELVs to be deregistered and collected.
- Regulating for the safe dismantling of ELVs to minimise the potential of adverse health and environmental impacts associated with auto recycling; and ensure adherence to minimum standards for disposal of residual waste.

The guidance document is structured as follows:

- Chapter 2 discusses the key principles and considerations in ELV legislation and policy design.
- Chapter 3 describes the recommended legislative framework for the three processes above and identify existing legislative instruments that may be affected by the introduction of any of the proposed changes identified.
- Chapter 4 presents the summary and conclusions.

2 Key Principles in ELV Legislation and Policy Design

Limitations in waste management regulatory frameworks in Pacific Island Countries (PICs), relating to ELVs, may require new legislation to be created to enable an improved and sustainable system. For example, the Cook Islands identified a key weakness in its solid waste management was the absence of a coherent legislative framework and a single point of accountability (Infrastructure Cook Islands, 2016).

Similarly, the Papua New Guinean Government recognised the need to formulate consolidated waste management legislation and accompanying policies and strategies (SPREP, 2020). However, the creation of new legislation to solve problems in the ELV waste streams must be carefully considered. Not all waste management challenges require the design of new legislation, and in some instances amendments to existing rules may be the preferred solution. The challenge for PICs is to establish a policy and operational environmental that mitigates risks sufficiently and provides for improvements in the management that are appropriate for PICs including considerations of the scale and scope of the problem and the capacity and resources available to manage the problem.

Any new policies or legislation must be well-designed, well-targeted, responsive, and fit-for-purpose (Australian Government, 2023). Policymakers need to demonstrate that where a public policy problem (such as ELV management) necessitates government intervention, all genuine and viable options have been considered (including non-regulatory) to address the problem (Australian Government, 2023).

This is because there can be costs associated with implementing and enforcing regulation, including unintended consequences (NSW Government, 2016). Any approach to new legislation should thoroughly consider both outcomes sought and risks, to ensure greater effectiveness of compliance and enforcement, and efficiency of the regulation. Outcomes based policy and legislation also seeks to leverage government resources to avoid potential compliances failures that would undermine achievement of policy objectives (OECD, 2000).

With policy and legislative design, there is always a challenge for governments in adequately designing the legislation and regulations, implementation, monitoring and enforcement of said legislation and regulations, to ensure it maximises the potential of target citizens, businesses, and non-profit groups, to comply and achieve the policy outcomes sought (OECD, 2000). Any ELV and waste management legislation in PICs must also consider the equity of the policy and legislation, and any potential disadvantage that may result and impact on lower socioeconomic groups.

This section provides an overview of different policy instruments, frameworks, and principles to consider when drafting legislation related to End-of-Life Vehicle (ELV) recycling. This aims to ensure that the policies are effective in achieving their intended goals while also minimizing inefficiencies and inconsistencies. The technical drafting note contains recommendations rooted in these ideas.

2.1 Policy Instruments

Broadly, policy instruments can be categorised as under one of the four following categories: command and control, market-based, voluntary agreements, informational and educational.

This section provides an overview of the different instruments, through a brief description of how they work, their pros and cons, and some examples of how they may be implemented in PICs.

Some examples of policy instruments used to incentivise and encourage certain behaviours with light vehicle imports are summarised in Error! Reference source not found. below.



Figure 2. Four categories of policy instruments

Table 1. Example of policy instruments

Instrument type	Description	Pros	Cons	Example(s)
Command- and-control	These instruments set specific limits and mandates to achieve predetermined targets, permitting certain actions and prohibiting the opposite. These rules are usually backed up by the threat of fines and other penalties. Command and control instruments require the backup of sanctions and regulators need to engage in monitoring.	The setting of regulation and standards are relatively inexpensive, provided the goals are well defined.	There are trade-offs associated with the strength of the sanctions associated with non-compliance. Society may perceive sanctions that are overly punitive as unfair and/or inequitable. This is of special consideration to PICs as they are developing economically. Further, instruments under this class do not consider the unique context of each private entity and are not dynamic (providing a continuous incentive to modify management and behaviour). This means that there is usually no incentive to pursue greater improvement beyond the target.	 Complete bans on used vehicles entering the country due to environment, health, and safety concerns; and to support domestic vehicle manufacturing industries Age limits whereby a vehicle's model year must fall below a specified age or year or manufacture before it can be registered locally Selective technology bans – e.g., banning the import of diesel engines. Emissions standards – imported vehicles must meet a minimum emissions standard e.g., Standards set in the European Union Minimum safety standards – including roadworthiness and crash ratings (UNEP, 2020).
Market-based	These instruments incorporate negative and positive externalities by altering the costs and benefits of actions. This changes the decision making of market participants.	Market-based instruments can be structured in a way to encourage the pursuit of improvements beyond the target, unlike Command-and-Control instruments. Market-based instruments can also be flexibly designed, allowing regulators to create rules that are more equitable.	Given the flexibility of these instruments, there are administrative costs incurred by regulators that will be incurred to ensure they are effective. For example, monitoring to reduce free-riding, and additional officers may need to be hired to collect taxes and levies. Further, regulators face an additional burden of calculating the right level of tax. Taxes that are too high may be inequitable, and taxes that are too low may not incentivise sufficient behaviour change.	Fiscal instruments or disincentives, for example differential registration or customs tariffs based on vehicle age and/or engine size.

Instrument type	Description	Pros	Cons	Example(s)
Voluntary Agreements	Agreement(s) between the government and private parties to achieve a certain level of environmental performance. These agreements may involve economic incentives for participation. Private parties that can achieve the outcomes established in the agreements can shift industries towards best practice and encourage other private parties to follow their example. This policy instrument effectively relies on self-governance of the private entities.	Voluntary agreements differ from Command-and-Control and Market-based instruments in that authorities are more likely to have dialogue with participating private parties under voluntary agreements, which can lead to a greater understanding of the limitations and barriers faced by private entities in achieving the targets and monitoring of compliance.	As there is no compulsion to sign up to these agreements, the relatively soft coercive structure of voluntary agreements leads to the risk of dropout and noncompliance. Investment in monitoring of compliance is likely to be required.	Engaging automotive workshops to encourage/incentivise them to adopt leading practice standards in environmentally responsible dismantling and depollution of ELVs.
Informational	These instruments seek to equip individuals with information and data to encourage behaviour change so that when stakeholders are given the option between two alternatives, they select the more environmentally sustainable option. Informational instruments can be one-way communication or an interactive two-way dialogue.	Informational campaigns and extension work are relatively affordable to implement. Informational instruments can be used to bolster the impact of the other instruments.	As with Voluntary Agreements, informational campaigns alone do not carry any sanctions, and advice or new information may be ignored. Informational instruments require stakeholders (including consumers, investors, government officials, and other actors) to have some pre-existing awareness on environmental issues to work best. Investment in monitoring of the efficacy of informational instruments over time is likely to be required.	 Communication instruments e.g., vehicle labels that include emission and/or fuel economy information. Informing consumers about the hazards associated with improper ELV disposal. Workshops and sharing of best practice dismantling and depollution guidelines with automotive workers.

Source: Taken from Croci (2007), Institute for Global Environmental Strategies (2010), Bouwma et al. (2015)

Many developing and transitioning countries, including in the Pacific, utilise a number of these policy instruments to regulate vehicle imports into their country as there is no single policy instrument that can be uniformly applied across the different issues. To be successful, a legislative framework in the region may draw on the full range of instruments described above.

Any prescribed policy in the drafting instructions should considered the limited nature of existing legislative frameworks currently governing ELV management across PICs. As discussed in the Table above, the effectiveness of interventionist approaches such as Command-and-control and Market-based policy instruments are in part influenced by the coercive strength of the instrument, which requires authorities to expend considerable resources in monitoring and enforcement. Further, there is the risk of introducing overly prescriptive legislation, leading to regulation of entities that might otherwise voluntarily comply under less intrusive requirements (Gunningham and Sinclair, 1998). Additionally, the design of certain policies (e.g., levies based on vehicle age and engine size), requires comprehensive data collection to determine the appropriate amount charged.

For the reasons above, adopt a more gradual approach in policy design may be more cost effective. Informational and voluntary agreements can first be trialled to gather information before escalating to more coercive instruments. This approach has the added benefit of encouraging greater buy-in from stakeholders, thereby improving adherence to a new regime and reducing the risk of failure. Further, this approach also enables regulators to progressively apply further measures if voluntary agreements do not achieve desired outcomes, such as moving to legislated targets if regulated entities do not meet voluntary agreements and targets.

There are four broad types of instruments that policymakers can draw upon: Command and Control, Market-based, Voluntary Agreements, and Informational. There is no simple process to recommend one instrument over another, as the context of each problem needs to be taken into consideration. The four instruments are not mutually exclusive and can be used in combination with each other to achieve outcomes more effectively.

The following section considers the key guiding principles that need to be considered in the selection and design of the policy instruments.

2.2 Guiding Frameworks and Principles

The selection of the right policy instrument(s) should follow relevant guiding frameworks and principles drawn from literature. These frameworks and principles include the waste management hierarchy, various principles in waste management and environmental law, and principles for a circular economy. Not all principles and frameworks will be relevant for all policies and legislation, however, they should be broadly considered and applied where relevant.

Waste Management Hierarchy

Waste management in legislation and policy is largely driven by several key strategies commonly referred to as the waste hierarchy. The waste hierarchy is based on Lansink's Ladder (Slatter, 2005), which establishes an order of preference for managing and disposing of waste. Preventing waste is the preferred option and sending waste to landfill, incineration or disposing it into the environment should be the last option. Broadly it has the following components:

- **Prevent / avoid / reduce or minimise** actions to reduce the amount of waste generated by households, industry and government, and prioritisation of waste avoidance.
- Reuse waste reuse of products avoids the costs of energy and other costs required for recycling
- **Recycle waste** recycling of materials to make the same or different products keeps materials in the productive economy and reduces the need for virgin materials and waste disposal.
- Treatment and disposal of waste treatment prior to disposal of waste to minimise environmental and health and safety impacts. This action also recognises that some waste cannot be safely recycled or reused, and disposal is the only management option (NSW EPA, 2022).

Figure 3 displays different versions of the waste hierarchy from the European Union and from New South Wales (NSW) in Australia. The key point to note is that reuse, recycling and recovery are all preferable to the current approaches across PICs that are largely focussed on minimal treatment and disposal.¹

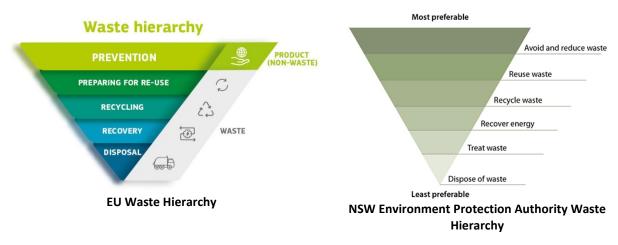


Figure 3. Waste hierarchy in the European Union (left) and New South Wales, Australia (right)

Principles in Waste Management and Environmental Law

The principles for consideration when designing and implementing waste management legislation and policies are summarised in

Table 2.

Table 2. Summary description of principles in waste hierarchy.

Principle	Description
Polluter pays principle	Those responsible for producing pollution should bear the costs of managing it to prevent damage to human health or the environment (Infrastructure Cook Islands, 2016; LSE, 2022). These costs can include
F	minimising the amount of waste generated; containing, treating and disposing of waste; and rectifying environmental harm caused by waste (Queensland Government, 2023b).
	National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment. (Source: Rio Principle 16)
User pays principle	All costs associated with the use of a resource should be included in the prices of the goods and services that result from the use (Queensland Government, 2023b).
	The "User Pays Principle" centres around the idea that the user of a public facility, or consumer of a public good, pays for the environmental good or service or the damages which may arise from that use (OECD/GD(95)124
Precautionary	Where there is a strong suspicion that a certain activity may have environmentally harmful consequences,
principle or	it is better to take action to control or mitigate that activity now rather than waiting for incontrovertible
approach	scientific evidence or research to support action (Brittanica, 2023; Infrastructure Cook Islands, 2016: UN).
Prevention	Allows action to be taken to protect the environment at an early stage and is the foundation principle of
principle	the Basel Convention (the "Basel Convention") on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Brittanica, 2023).
Consultation	All levels of government, communities, organisations and the general public should be consulted and given
principle	the opportunity to influence and participate in decisions on environmental legislation through written comments or public hearings (Brittanica, 2023; Infrastructure Cook Islands, 2016).
Proximity principle	Solid waste should be managed as close to the source as possible; transporting waste has environmental, social and economic costs. This principle aligns to the Basel Convention which establishes that waste should be disposed in an environmentally sound manner in the State where it is produced IF there is the capability (Infrastructure Cook Islands, 2016).

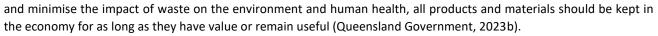
¹ Waste-To-Energy (WTE) of urban wastes is considered by the EU and an increasing number of other agencies as 'disposal', as the energy benefit is lower than the energy used while the atmospheric pollutants (including POPs) and ash pollutants are considerable. Furthermore, no PICT has WTE and none have the volume to sustain the minimum quantity per day needed to consider 'energy recovery' (i.e., 300 tonnes of dry waste a day).

Principles of a Circular Economy

There have been discussions in the Pacific around developing a legislative environment that enables and incentivises a circular economy while disincentivising landfill, burning or dumping end of life products (SPREP, 2021).

Moving to a circular economy involves shifting from a 'take-make-waste' (or 'import-consume-dispose') linear economy to one where there is a continuous flow of materials (Figure 4) (EMF, 2023).

Generally, the key principle of a circular economy is that to promote waste avoidance

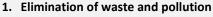


TAKE

LINEAR ECONOMY

CIRCULAR ECONOMY

There are three aspects of a circular economy:



Materials re-enter the economy at the end of their use – by being maintained, shared, reused, repaired, refurbished, remanufactured or recycled. Food and other biological materials are returned to nature to regenerate the land (EMF, 2023).

2. Circulation of products and materials

Keeping materials in use, either as a product or, when that can no longer be used, as components or raw materials. This requires products to be initially designed with their eventual circulation in mind, as there are many products in the current economy that cannot be circulated and end up as waste (EMF, 2023).

3. Regeneration of nature

Shifting the economy's focus from one of extraction and continuously degrading nature, to one of regeneration where we instead build natural capital – increasing biodiversity and returning biological materials to the earth (EMF, 2023).

Any new policy or legislation implemented in PICs to establish or further support a circular economy should consider these three principles and how they might be considered or supported.

2.3 Monitoring, Evaluation, and Reporting (MER)

To determine the effectiveness of the legislation and policies being implemented, monitoring, evaluation, and reporting (MER) is required to enable the relevant authorities and agencies to gather information and to make an evidence-based determination. MER frameworks need to specify:

- Key measurable outcomes, with a focus on aligning them with policy objectives.
- Appropriate spatial and temporal scales for outcome measurement.
- Necessary monitoring and data parameters, integrating specific policy areas such as Standards and regional plans.

Embedding Monitoring, Evaluation, and Reporting (MER) into policy design is essential for shaping effective, transparent, and adaptive environmental policies (OECD, 2019). By doing so, the foundation for a sustainable, well-informed, and accountable approach to ELV management can be established.

The following are key reasons to adopt MER:

1. **Holistic ELV Narrative**: Integrating MER aspects into policy design ensures the development of a comprehensive and cohesive national framework. This approach enables PICs to tell their ELV story effectively, fostering a sense of unity and purpose within the nation and region, and presenting a coherent image to the world.



Legislation Guidance for End-of-Life Vehicle Management in the Pacific

- 2. Informed Decision-Making: By incorporating MER elements from the outset, policymakers can make well-informed decisions rooted in a nationally agreed evaluation framework (UNITAR, 2017). This approach promotes evidence-based policy development, leading to more effective and targeted interventions in PICs' ELV management. Since MER is inherently connected to information and data management, it contributes to the 'information supply chain,' the effectiveness of which relies on the way information is gathered, organised, shared, and analysed.
- 3. **Enhanced Coordination**: A policy design that incorporates MER aspects encourages collaboration and coordination among various stakeholders. By defining clear monitoring and evaluation parameters, the policy can support greater alignment and synchronisation of efforts, ensuring that diverse voices contribute meaningfully to the ELV narrative.
- 4. Public Trust and Accountability: Transparent and accountable policy design, underpinned by robust MER mechanisms, strengthens public trust (UNITAR, 2017). When the community and regulated entities have visibility into policy outcomes through effective monitoring and reporting, it enhances confidence in the regulatory system. Effective policies require continuous monitoring to ensure that businesses and individuals comply with recycling regulations. Regular checks and audits discourage non-compliance and promote adherence to recycling guidelines (US EPA, 2016). This trust is vital for the success and sustainability of any ELV policy initiative. Enforcement mechanisms, such as penalties for non-compliance and incentives for exceeding targets, create a level playing field.
- 5. **Continuous Improvement**: Considering MER aspects in policy design establishes a foundation for continuous improvement. Long-term monitoring establishes baselines against which progress can be measured. This combined with regular evaluation allows policymakers to adapt to changing circumstances, emerging technologies, and evolving societal needs based on real-time data (UNITAR, 2017). Thus, monitoring recycling rates and materials generation helps in understanding the current state of ELV management efforts and provides insights into areas that need improvement. This adaptive approach fosters resilience and agility in responding to evolving challenges, including a requirement to stop, review and where necessary, change.
- 6. Effectiveness and Comparative Analysis: Integrating MER aspects in policy design ensures efficient use of resources. By clearly defining monitoring and evaluation requirements upfront, resources can be allocated judiciously, preventing inefficiencies and ensuring that efforts are focused on gathering relevant data and conducting meaningful evaluations (UNITAR, 2017). Metrics such as ELV recycling rates, materials generation, pollution reduction, revenue generation, and comparative analysis with other regions provide a quantitative basis for evaluating policy effectiveness and identifying best practices for ELV management.

Key recommendations for setting up and empowering an agency responsible for MER.

- Sustainable MER System Resourcing: It is important to consider how to best fund the MER system, including the fair costs to be recovered from importers, users and recyclers. Monitoring, compliance, enforcement, and assurance activities require appropriate resourcing sustained over the long-term. In the short-term there is a need to invest in appropriate systems, training, and tools to enable the independent compliance regulator to effectively deliver monitoring and risk-based compliance, to help people comply with prospective policies and to assure the community that risks to the people and environment from non-compliance are identified and managed.
- 2. **Simplify legislation**: It is important to utilise the established standards, simplify the language of the law, and use clear and accessible systems to improve the likelihood of compliance, enforcement, and assurance. The complexity of the legislation, impenetrable terminology, and infrequency with which many interact with the law (especially for ELV recycling), can make voluntary compliance and the pursuit of enforcement action difficult. It is recommended that consistency between national regulations and subordinate regulations (state, territory, local) is maintained to avoid confusion about how they relate to each other.
 - Together with national standards, simplified legislation, better guidance material and leveraging simple but intelligent systems, will instil confidence in the self-assessment of actions and offer assurance for actions in alignment with the regulations.
- 3. **Dedicated MER Custodian**: Appoint a national data and information custodian, responsible for delivering an information supply chain. Equip regulators with a comprehensive suite of modern regulatory monitoring, compliance, enforcement, and assurance tools, ensuring adequate funding for effective implementation.

2.4 Compliance and Enforcement

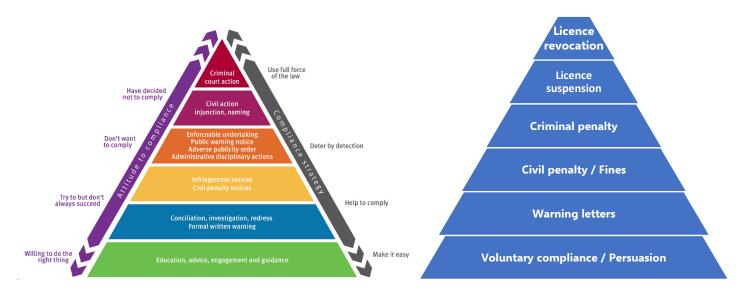


Figure 5 a) Ayres and Braithwaite Enforcement Pyramid (OECD, 2000); b) Office of Fair-Trading enforcement pyramid (Queensland Government, 2023a)

Compliance and enforcement systems are an important component of a responsive regulatory framework being able to meet policy and regulatory objectives. Without effective compliance and enforcement systems in place agencies tasked with implementing the laws and regulations, or in producing the required behavioural changes across business and the community (University of Melbourne, 2021) are lacking a critical tool.

Governments have a long-term interest in maintaining positive attitudes by citizens and businesses towards the regulatory system, as otherwise levels of voluntary compliance can be undermined (OECD, 2000). This is because enforcement is not an efficient substitute for low levels of voluntary compliance.

An enforcement pyramid was developed by Ayres and Braithwaite in 1992 to schematically represent the idea that instead of using the most drastic compliance strategies first, regulators should trade on the goodwill of those they are regulating (OECD, 2000).

Voluntary compliance is always the preferred option, but harsher measures to enforce compliance can be utilised when required. Figure 5 shows the original enforcement pyramid, as well as a modern version by the Queensland Government. The Queensland Government enforcement pyramid also aligns compliance measures with target groups' attitude to the compliance, and the overall strategy for compliance.

In its review of waste management legislation across Pacific Island countries, the University of Melbourne (2021) found that a key gap in enforcement of current waste management legislation was the lack of compliance and enforcement capability; further highlighting a need for additional training and resources for compliance and enforcement personnel across Pacific Island countries.

Specifically, the report identified that training and resources should be concentrated around training of government officers on different investigative techniques, compliance approaches, and evidence preparation (University of Melbourne, 2021).

Additionally, consideration should be given to a regional approach to waste management compliance and enforcement training along similar lines of that provided under the international waste and pollution MEAs such as the MARPOL, Basel, Rotterdam and Stockholm Conventions. Compliance and enforcement measures need to be supported by adequate information and extension campaigns by the regulator to ensure that the target group, business or community are made aware of and understand how to comply with the regulation (OECD, 2000).

ELV and waste management legislation and policy in Pacific Island countries must consider appropriate compliance and enforcement mechanisms to ensure the policy objectives are met. Utilising an enforcement pyramid is a recommended first step in developing the compliance and enforcement system, however, this will be ineffective alone if insufficient training and resources are provided to compliance and enforcement officials.

2.5 Comparative Legislative Review

There are some common elements concerning management of ELVs in legislation, regulation, and policies that can be drawn on from other jurisdictions which link to the waste management principles introduced in Section 2.2. The section below provides examples of ELV regulation internationally.

European Union

Currently the EU has a Directive on end-of-life vehicles in place which sets clear targets for ELVs and their components. The EU Directive sets out measures to prevent and limit waste and hazardous waste from ELVs and their components by ensuring their reuse, recycling and recovery (EUR-Lex 2023).

The EU Directive outlines requirements and responsibilities for new vehicle manufacturers, vehicle owners, vehicle importers and distributors, and waste treatment facilities, ensuring coverage over the entire ELV supply chain.

Some of the key requirements contained within the EU Directive of relevance to potential PICT legislation are:

- Manufacturers, importers, and distributors must provide systems to collect ELVs and where feasible, used parts from repaired passenger vehicles.
- Vehicle owners must receive a Certificate of Destruction when delivered for waste treatment this is a necessary requirement to deregister the vehicle.
- Vehicle owners should incur no cost or expense when delivering an ELV to an authorised waste treatment facility (excepting for some rare circumstances). Manufacturers must meet all of the costs (or a significant part of the costs) involved in delivery of an ELV to a waste treatment facility.
- Waste treatment facilities must be permitted or registered with the appropriate authority where they are located.
- Clear quantified targets are set for annual reporting to the European Commission for the reuse, recycling and recovery
 of ELVs and their parts.

The EU Directive also contains requirements for new vehicle manufacturers, by setting reusable, recyclable and recoverable targets by weight per vehicle; as well as bans on the use of hazardous substances such as lead, mercury, cadmium and hexavalent chromium (EUR-Lex 2023).

These requirements ensure that manufacturers must factor in the dismantling, reuse and recovery of the vehicles in the initial design phase and production of their products; adhering to the second principle of a circular economy requiring that the vehicles design must be based on the eventual circularity of its components at the end of the vehicle's life.

Japan

The Japanese Government passed the End-of-Life Vehicle Recycling Act in July 2002, with effect from 1 January 2005, which fully established the ELV management framework in Japan (Wang et al, 2021). One of the key requirements of the legislation is that users pay recycling fees when they purchase new cars. These upfront recycling fees cover the future disposal costs of fluorocarbons, airbags, and ASR items from the ELVs. The legislation also introduced an electronic trace and feedback system.

In Japan, ELV legislation specified increasing targets for recycling rates for ASR over time. These regulations specified targets of 30% recycling rate by 2005, 50% by 2010, and 70% by 2015 (Ni, 2014). To achieve these goals, automobile manufacturers are responsible for recycling ASR and properly disposing of materials like airbags, fluorocarbons, and other wastes. The costs associated with disposal are covered by recycling fees paid by vehicle users.

The approach of using staggered targets can also be adopted by PICs.

Taiwan

Taiwan and its many small island communities face a similar problem to many PICs, with an increasing volume of ELVs accumulated across its remote islands. In Taiwan, a Recycling Fund Management Board (RFMB) was established under authority of the Waste Disposal Act by the Environmental Protection Administration (EPA) in 1994 (Chen et al, 2010).

The RFMB collects a recycling fee from manufacturers, importers, and sellers of regulated recyclable waste products. This goes into a recycling fund that subsidises recycling activities.

The establishment of this recycling fund has been effective in spurring the Taiwanese recycling industry by helping to fund collection and storage of recyclables.² The RFMB appoints an auditing organisation to certify entities involved in dismantling and recycling to ensure that they adhere to mandatory recycling guidelines.

The voluntary return of ELVs by their owners to service stations and car dealers are subject to dismantling. After sealed rechargeable batteries, motor oil, tires, and coolants have been recycled and usable parts resold, additional waste is sent to waste processors for a fee.

Certified dismantlers and recyclers are provided a subsidy from the RFMB. The remaining part of the vehicle is then shredded, with the steel scrap sold to metal and furnace plants, with non-ferrous components sold for reuse. Automotive shredder residue is incinerated, and the remainder is sent for disposal.

A similar system can be set up in the Pacific Islands through the implementation of an Advanced Recovery Fee & Deposit System (ARFD), a legislative instrument designed to facilitate the sustainable financing of waste management and recycling.

In the context of ELVs, the vehicle owner pays a fee when they import a vehicle and are eligible to reclaim the fee (or a portion of it) when they send their vehicles for recycling. Withheld or unclaimed fees are used to fund the recycling of the ELV (PacWastePlus, 2020).³

² United States Government Environmental Protection Agency. (2012). Workshop Materials on WEEE Management in Taiwan Handout 1. https://www.epa.gov/sites/default/files/2014-05/documents/handout-1a-regulations.pdf

³ PacWastePlus (2020). Factsheet: Advanced Recovery Fee & Deposit Systems. Retrieved from https://pacwasteplus.org/resources/advanced-recovery-fee-deposit-systems/

The implementation of ARFDs can enhance vehicle de-registration systems by:

- Enhancing tracking and verification of vehicles, providing increased accuracy, and ensuring that fees are appropriately collected and returned when the vehicle is properly recycled or disposed of. Additionally, it helps to reduce the risk of fraud and non-compliance.
- Streamlining refund processes and making it easier for consumers to receive refunds when they return their vehicle
 for recycling or disposal. In turn this may also boost consumer confidence and encourage greater participation in the
 scheme.
- Improving data integration between various stakeholders such as government agencies, recycling facilities and manufacturers.
- Reducing administrative burden and resulting in cost savings for both government agencies and businesses responsible for implementing the schemes.
- Encouraging circular economy practices to make it easier to track the entire life cycle of vehicles from manufacture to disposal.
- Supporting policy adjustments for regulators and policymakers to revisit and further refine the rules and regulations governing the ARFD scheme, thus better aligning with the evolving needs and objectives of ELV management.

Africa

Age restrictions on used vehicle imports are a legislative instrument used by countries in Africa to combat the rise of imported used vehicles. These age restrictions vary from 3 to 12 years with some countries favouring an outright ban on vehicle imports. The various restrictions are summarised in **Table 3**.

Table 3. Summary of import age restrictions in Sub-Saharan Africa

Restriction	Country
3-4 years Mauritius, Seychelles, Algeria, Chad, Gabon, Senegal	
5-8 years Libya, Mozambique, Niger, Tunisia, Côte d'Ivoire, Kenya, Maurit	
10+ years Eritrea, Benin, Democratic Republic of Congo, Liberia, Nigeria, Sw	
Outright ban	Egypt, South Africa, Sudan,

Source: UNEP (2017). Used Vehicle Global Overview

Taxes are another tool used in the region to elicit behaviour change. In Uganda, a 20% levy on the value of the vehicle is imposed on every individual who imports motor vehicles that are 8 years old and above. Environmental levies in Uganda are also imposed on other bulky white goods such as electrical appliances.

In Gambia, an 18 USD environmental tax is levied on used car imports, with an additional 20% excise tax levied on new cars, 15% on cars older than 5 years, 10% levied on cars less than 5 years old.⁵

Mauritius currently has a 'Fee-bate' structure in place to incentivise the import of energy efficient used vehicles. This is done by scaling the value of the levy and rebate in accordance with the emissions generated (measures in terms of CO₂ grams/km) by the vehicle. The greater the emissions of the motor vehicle relative to a pre-determined threshold, the greater the levy. Conversely, the lower the emissions of the motor vehicle relative to the threshold, the greater the rebate. The threshold level of CO₂ grams/km is subject to review every few years to account for the import pattern of new motor vehicles.

⁴ PricewaterhouseCoopers. (2023). Worldwide Tax Summaries, Uganda. https://taxsummaries.pwc.com/uganda/corporate/other-taxes

⁵ United States Government International Trade Administration. (2022). Gambia, The Country Commercial Guide.

https://www.trade.gov/country-commercial-guides/gambia-import-tariffs

⁶ Global Fuel Economy Initiative [GFEI]. (2021). Autotool. https://www.globalfueleconomy.org/transport/gfei/autotool/

This 'Fee-bate' structure highlights the flexibility of market-based instruments. The 'Fee-bate' values are summarised in the table below.

Table 4. Mauritius levy and rebate system for carbon emissions

Value of Fee	Condition
USD 46 per CO₂g/km	for Cars from 159 to 190 CO₂ grams/km
USD 68 per CO₂g/km	for Cars from 191 to 225 CO₂ grams/km
USD 91 per CO₂g/km	for Cars from 226 to 290 CO₂ grams/km
USD 114 per CO₂ g/km	for Cars above 290 CO₂ grams/km
Value of Rebate	Condition
USD 68 per CO₂g/km	for Cars with up to 90 CO ₂ grams/km; and
USD 23 per CO₂g/km	for Cars from 91 to 158 CO ₂ grams/km.

Source: GFEI (2021).

Note: Converted from Mauritian Rupee to United States Dollars based on a 0.0228 exchange rate.

Mauritius also imposes two additional one-off taxes which scale with engine size, as measured by cylinder capacity in cubic centimetres (cc). The first is a 55% excise tax on the car price if the engine capacity is less than 1,600 cc or 100% if the engine capacity is greater than 1,600 cc.

The second tax is a registration fee ranging between USD \$285 to USD \$3,420 which scales with engine size. This is to be paid again if the vehicles are on-sold. An annual road tax between USD \$80 to USD \$296 is charged based on the engine size.

Figure 6 presents an illustrative summary of the regulations on the importation of used vehicles in 2017 (UNEP, 2020). From this, we see that import age restrictions are the most common policy adopted, as it is easier to enforce this regulation relative to other legislative instruments.

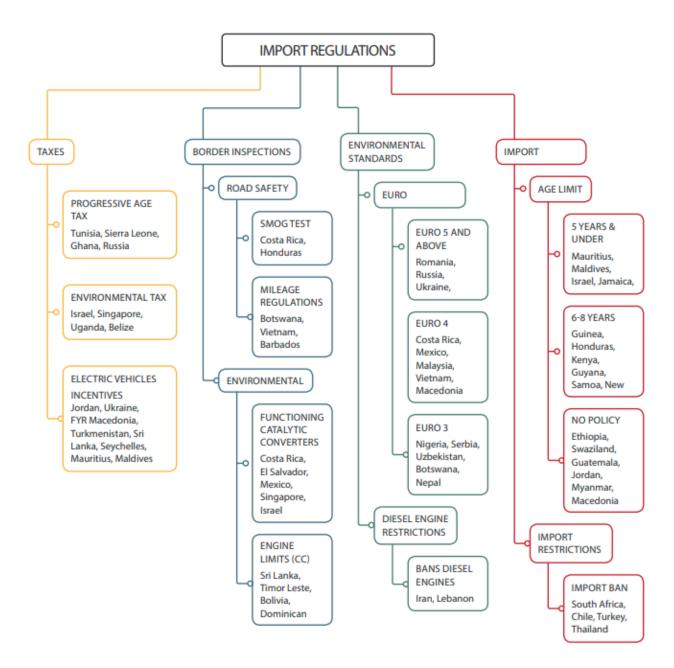


Figure 6. Import regulations for used vehicles adopted by countries

Source: UNEP (2020).

Key Point

Based on a review of legislation employed in other jurisdictions, there are a wide variety of instruments that have the potential to be implemented in PICs. Market-based instruments are the most commonly utilised policy instrument.

3 Technical Drafting Note

After reviewing the current situation with regards to ELV waste management in the Pacific along with the current regulatory and policy framework governing that waste management, our management options report identifies four areas where additional policy and legislation are required across the 15 participating countries. This chapter is divided into the following parts with drafting instructions for each process. These are:

- 1. Development of import standards for vehicles with a short lifespan to ensure that second hand vehicle imports to PICs meet environmental performance, safety, and other requirements and to prevent further accumulation for ELV waste in PICs.
- 2. Improvement of deregistration systems for ELVs to support a circular economy and ensure there is a systemic way for ELVs to be deregistered and collected.
- 3. Safe dismantling of ELVs to minimise the potential of adverse health and environmental impacts associated with auto recycling; and ensure adherence to minimum standards for disposal of residual waste.
- 4. Introduction of a sustainable funding framework for ELV management in PICs.

Recommendations are provided for legislation that would create a consistent framework across Pacific Islands countries, whilst also allowing for insight and adjustments/ amendments to the framework for each specific circumstance of individual Pacific Island countries.

Process 1: Development of Import Standards for Vehicles with a Short Lifespan

Background and Policy Rationale

Over the last few decades there has been a significant growth in vehicle imports to Pacific Island countries. This is largely driven by greater economic and population growth in the region, and increased demand for mobility and desire and capacity to own a car. Additionally, public transport remains relatively undeveloped in most Pacific Island countries, causing increased demand and reliance on public, shared and private transport options (World Bank Group, 2022).

Most Pacific Island countries do not have any import restrictions on used vehicle imports. In combination with the absence of organised local processing for ELVs and the high costs of transportation to remove them, it is considered easier for citizens to abandon the vehicles. This exacerbates the ELV problem in three ways:

- 1. Many of these used cars are imported nearer the end of their extended useful life (noting vehicles are used for longer in PICs), and this reduces the time period between importation and the vehicle's end of life.
- 2. Imported vehicles have a shorter lifespan given the highly corrosive natural conditions associated with close proximity to the ocean, poor condition of roads and lower maintenance capability.
- 3. Vehicle repairs and servicing are more expensive and can take a long time; meaning vehicles requiring even small repairs are often written off instead. However, because of limited economic resources, sometime vehicles are also used beyond their safe lifespan.

An average vehicle's lifespan is influenced by use, maintenance, and accidents and damage. In Pacific Island countries, cars are expected to have a 13 to 15-year lifespan, influenced by reliance on used vehicles, and low average distances travelled (World Bank Group, 2022). Electric vehicle lifespan is also influenced by these factors, with the battery pack being the most expensive component of the car to replace and having an approximate lifespan of 10 years (World Bank Group, 2022). After this time, the overall capacity of the battery pack may be reduced to 80% of the original capacity (World Bank Group, 2022). In Pacific Island countries, the share of electric vehicles is expected to grow between 6% and 19% of all cars by 2030 (World Bank Group 2022).

Import standards in PICs would be an appropriate tool to improve ELV waste management issues in PICs, by preventing importation of used vehicles with a limited lifespan and encouraging importation of used vehicles which meet higher environmental standards. Import standards also support the waste hierarchy framework by working at the front end of the supply chain to reduce future potential ELV waste. Import standards work by setting specific limits and mandates to achieve a certain outcome; and are enforced through the threat of fines and other penalties. The UNEP (2020) found that countries with stricter regulations on the import of used vehicles and associated technology, have a cleaner and more efficient vehicle fleet in their country, and this can also lead to improvements in road safety.

Consideration should be given to implementing import standards in PICs which mandate a maximum vehicle age limit on used vehicle imports, compliance with vehicle mileage limits, or requirements to meet certain emission standards (where appropriate for available fuel sources). However, evidence shows that import standards for second hand vehicle imports are more effective when implemented in combination with other policy instruments, for example, an import duty.

Import duties or taxes as fiscal measures, can rationalise and improve the quality of used vehicle imports (UNEP, 2020). They can take the form of differential customs and registration duties, taxes or exemptions, and are frequently based on vehicle age and/or engine size, or on vehicle emission standards or technology. The use of import duties or taxes in PICs is an opportunity to further incentivise import of younger, low or no emission used vehicle imports, and disincentivise imports of used vehicles that are older and produce more emissions. Furthermore, when the funds raised by these levies are set aside, they can be channelled into partially coving the costs of ELV management.

While the import duties, levies and other fiscal measures so far discussed aim to extend vehicle life, provide other environmental benefits or policy goals there is still a specific need to bridge the gap between the cost of ELV management and the value of the recyclable products produced from them. Given governments are unlikely to dedicate financial resources already committed from existing duties and levies it is evident a new funding mechanism is required.

Introducing an ELV Waste Levy specifically designed to fund the management and recycling of vehicles at the end of their life can bridge this gap. Done as a deposit/return system similar to beverage container systems it can ensure the return of vehicles and provide a source of sustainable financing. To be effective the funds raised through such a system need to be protected in a dedicated fund for the discrete purpose of operating the ELV recycling systems and not hypothecated into general revenue.

Furthermore, it is important that such a system is not linked to discount duties or levies related to incentivise rother environmental benefits or policy objectives as this would erode the ELV Waste Management system.

Maximum Vehicle Age Limits

It is recommended that PICT countries implement a maximum vehicle age limit on used vehicle imports, of between 3 years and 8 years.

Currently, only four Pacific Island countries have maximum vehicle age import restrictions in place for used vehicle imports (between 5 and 10 years). Fiji and Timor-Leste currently impose a 5-year maximum age import restriction on used vehicle imports, while the Cook Islands and Samoa impose a 10-year maximum (UNEP, 2020; Ministry of Customs and Revenue, 2022).

Given average vehicle age is anticipated between 13 and 15 years, a more stringent maximum vehicle age limit (for example 3 years) would enable citizens in Pacific Island countries longer usage of their vehicles and could reduce the need for increased vehicle imports to replace ELVs. Many countries which currently impose a maximum vehicle age limit of 3 years or less have also seen a significant increase in importation of less emission's intensive vehicles, for example hybrid and electric vehicles (UNEP, 2020). Less restrictive maximum vehicle age limits (for example 8 years or more) would reduce lifetime use of the vehicles by citizens, thus increasing ELV waste and the need for increased new and used vehicle imports. Allowing older vehicles (up to 8 years) will strike a balance between affordability and vehicle longevity. However, in the absence of a strong ELV recycling network, restricting imports to younger vehicles will lessen the burden of the ELV waste management.

In any case, it is not recommended that a full used vehicle import ban is implemented in Pacific Island countries. Such a ban could disadvantage lower socioeconomic groups by limiting access to affordable advanced and efficient vehicles; as well as incentivise importation of new vehicles which do not meet current environmental standards.

Emission Standards

It is recommended that Pacific Island countries implement an emission standard on used vehicle imports of Euro Standard 4

This will ensure that only used vehicles which meet Euro Standard 4 or greater are imported and will assist PICs to meet their goals for greater decarbonisation of their economies (World Bank Group, 2022). Euro Standard 4 was introduced in 2005 and requires petrol cars to produce no more than 1.0 gram per kilometre of carbon monoxide, total hydrocarbon emissions of no more than 0.10 gram per kilometre, and nitrous oxide emissions of no more than 0.08 grams per kilometre. To the extent that similar types of standards could be used for other vehicle classes and/or fuel types, this is worth further consideration.

Euro Standard 4 Emissions standards can also play a role in increasing the economic viability of importing electric vehicles, which currently have higher upfront costs, limited fuel/charging savings, and limited environmental benefits (given the reliance on diesel-fired generation in Pacific Island countries) (World Bank Group, 2022).

In setting an emission standard for used vehicle imports, consideration also needs to be given to the quality of fuel available in import countries. A lack of adequate fuel quality can prevent the optimal use of advanced emission control technology in vehicles (UNEP, 2020). Once countries have corresponding fuel standards in place to support low or ultrasulphur fuel, more stringent vehicle emission standards can be implemented (UNEP, 2020).

The European Commission (Vanherle and Vergeer, 2016) has reported that the largest portion of fuel economy benefits are realised in second hand ownership of young used cars between 4 and 9 years old due to the lower cost of advanced vehicle technology made within this timeframe.

Import duty / Tax incentives

It is recommended that Pacific Island countries implement a specific ELV waste levy on the import of new and used vehicles into their country to help finance the costs of ELV recycling.

A levy would be imposed on the import of vehicles to help finance the ongoing costs of ELV recycling in the country, and a portion of the fee would be returned to the individual upon successful deregistration of the vehicle. For example, in Tuvalu's Waste Management (Levy Deposit) Regulation 2019: Schedule 2 Set Levy Amounts Per Good and Committed Purposes, item 12 "Office and family vehicles" outlines deposit amount (\$400 per unit), of which \$200 is refunded upon deregistration and the remaining deposit is apportioned as management fees (recycling operations subsidy: \$100, and administration and management support: \$100). The same ratio (2:1:1) is applied to construction heavy, medium and small equipment, and motorbikes with varying initial deposit amounts. This levy is separate to the existing import levy's on vehicles as it is a special purpose fund.

Offering a levy reduction on hybrid and electric vehicle imports can help reduce the cost of purchasing and importing these vehicles, whilst also providing an incentive to citizens to purchase vehicles that produce less emissions and have less reliance on fossil fuels; providing additional health and environmental benefits to those countries. For example, Mauritius offers a 50% reduction on the import levy of hybrid and electric vehicles, while Sri Lanka has eliminated all import duties for hybrid and electric vehicle imports. As a result, Sri Lanka has the highest amount of hybrid and electric vehicles per capita of any country in the world and is the second largest import market for used hybrid and electric vehicles from Japan (UNEP, 2020). However, a levy reduction should only be applied to general import duties and not applied to the waste levy. This is because the management complexity and therefore effort-level will increase in response to another waste stream (i.e., lithium batteries) and the cost of ELV management will likely be similar for combustion and electric vehicles.

Legislative Guiding Template

A legislative guiding template has been developed to assist Pacific Islands countries to design and implement effective and suitable legislation for import standards for used vehicle imports to their country.

Area	Key Principles	Recommended Characteristics	
Purpose / Objective	Outline a clear purpose or objective for the legislation to meet the policy outcome.	 The objectives of the legislation are to: a) Ensure used vehicle imports to Pacific Island countries are managed to prevent excessive ELV waste and increase longevity of fleet use. b) Meet environmental commitments around reduced emissions and support the decarbonisation process in Pacific Island countries. c) Provide incentives for citizens to import vehicles with lower environmental and health impacts. d) Outline requirements for importation of used vehicles. e) Establish a system of import levies which can provide funding to support ELV recycling and incentivise citizens to dispose of ELVs responsibly. 	
Definitions	2. Outline specific definitions relevant to the legislation	 a) Bill of Lading – This term is defined as a document issued by a carrier or transportation company to a shipper. It serves as formal acknowledgement that the carrier has taken possession of the goods from the shipper. It is also required documentation to facilitate customs clearance and provides proof of shipment and is needed for insurance purposes. a) End-of-life vehicle – The term 'end-of-life automobiles' in this Act refers to automobiles, including those used as storage or for nontransportation purposes, that have reached the end of their useful life. This includes automobiles equipped with refrigeration units for refrigerated cargo or other components typically removed and recycled during depollution and dismantling, as long as these components have been removed and the vehicles are no longer in use. 	
Import Standards	Establish the age restriction for used vehicle imports.	Restrict used vehicle imports into the country that are older than 3 – 8 years.	
	 Establish emission standard requirements for importation of used vehicle. 	Used vehicle imports must meet Euro Standard 4 emissions requirements.	
Verification system	5. Outline the required verification system for vehicle importers to meet to show they are adhering to the import standards.	The verification system requires the following documentation (where relevant: a) Export, cancellation or deregistration certification from the exporting country b) Vehicle compliance with import restrictions, including confirmation of the year of manufacture of the vehicle from the exporting countries relevant road transport authority c) Road worthiness and usability,	

Area	Key	Principles	Recommended Characteristics	
			d) Cancellation or deregistration certificatese) Certified copy of the original sale document	
	6.	Outline custom duty and levy rates	Suggest a value for the custom duty and/or levy. This value can vary depending on vehicle engine size or vehicle age.	
Clearance system	7.	Establish the process for used vehicle imports into the country that supports the import standards.	Establish clearance processes for imported vehicles which includes the following document requirements (where relevant): a) Engagement of an import or customs house agent to prepare a Customs Entry form and provide clearance of the vehicle after payment of the customs duty. b) Customs entry form must be accompanied by the following documents: i) Bill of Lading or contract issued by a transport company to a shipping company specifying the quantity, type and destination of the goods being shipped. ii) Official invoice iii) Evidence of payment (where applicable)	
	8.	Responsibilities and permissions for customs agents	The Customs House Agent as a representative for the importer can liaise with other relevant government departments to meet any additional requirements for the used vehicles importation.	
Vehicle inspection / compliance audit	9.	Requirements for imports of used vehicles to be inspected for compliance and to ensure biosecurity requirements are met.	Following clearance of the vehicle by relevant departments (e.g., biosecurity, customs), the vehicle must be presented to an authorised agent for inspection and a compliance audit for certification and registration. Biosecurity considerations include: a) Visual inspection b) Photography and videos of staged loading c) Fumigation; and d) Certification from a competent national authority or approved agent.	
Vehicle registration	10.	Outline relevant requirements for vehicle registration.	To be registered by the importer, the following documents are required by the relevant transport authority: a) Copy of the Bill of Lading b) De-registration certificate c) Any other documents requested.	
Compliance / offences	11.	Specify offences and penalties	Vehicles that do not meet the above requirements will not be suitable for import. Compliance with these requirements is mandatory. Non-compliance with the above requirements could	
Monitoring (note linkages with auditing and reporting functions below)	12.	Establish a monitoring target (if relevant)	result in relevant civil penalties or criminal penalties. Monitoring targets should:	

Area	Key Principles	Recommended Characteristics
		 a) Be 'SMART'.⁷ b) Align with policy objectives. c) Be regularly reviewed.
		The number and complexity of monitoring targets should reflect the agency's ability to reliably and consistently maintain and report on data. Maintaining a smaller number of monitoring targets increases the likelihood of effective and sustainable management and is beneficial for environments with limited resources and monitoring and evaluation experience.
	13. Outline measures for if target is not met	The dedicated MER custodian should conduct root cause analysis (see also Auditing, Reporting, and Compliance) to identify the underlying factors contributing to the failure to meet targets, exploring both internal and external influences. Develop and enact a corrective actions plan, including a communications plan, to outline the require process adjustments to ensure targets are being met.
Auditing	14. Specify requirement for auditing.	Auditing should occur annually by the relevant government department or authority who appoints an Auditor or Audit Committee.
		The Auditor should investigate compliance with the import standards by the relevant government department or authority.
		Auditors can obtain relevant records from relevant government departments or authorities.
Reporting	15. Reporting and record keeping requirements for importers	Require used vehicle importation companies to keep records and provide records to the relevant government department or authority; or nominated auditors.
	Reporting and record keeping requirements for	The relevant government department or authority shall keep records and prepare reports as required for nominated auditors.
	relevant government departments or authorities	The relevant government department or authority must provide an annual report to the relevant Government Minister for provision to the Parliament (or equivalent) as soon as practicable.

Impact on other Legislative Instruments

In Pacific Island countries with current waste management or customs legislation in place, amendment may be required to the following relevant legal instruments:

Country	Waste Management Legislation	Customs Legislation
Cook Islands		Customs Legislation Act 2020
Fiji	Litter Act 2008	Customs Act 1986
Kiribati		Customs Act 2019

⁷ Specific, Measurable, Achievable, Realistic, Time-bound.

Country	Waste Management Legislation	Customs Legislation
Marshall Islands	Littering Act 1982	Import Duties Act 1989
	Solid Waste Regulations 1989	
Nauru	Derelict Sites Management Act 2017	Customs Act 2014
Niue		Customs Act 1966
Palau	Solid Waste Management Regulations 2013	Customs Regulations
Papua New Guinea		Customs (Amendment) Act 2014
Samoa	Waste Management Act 2010	Customs Act 2014
Solomon Islands		Customs and Excise Act 2003
Timor-Leste	Decree-Law 5/2017 – Urban Solid Waste Management System	Decree-Law 11/2004 – Customs Code of Timor- Leste
Tonga	Waste Management Act Chapter 32.18 (2016 revised)	Customs Act Chapter 26.03 (2016 revised)
Tuvalu	Waste Operations and Services Act 2009	Customs Revenue and Border Protection Act
	Waste Management Act 2017	2014
Vanuatu	Waste Management Act 2014	Customs Act No.7 of 2013
	Waste Management Regulations 2018	

In Pacific Island countries without specific waste management legislation, amendments to other relevant environmental or public health legislation may be required.

Process 2: Improvement of Deregistration Systems to support a Circular Economy

Background and Policy Rationale

A clear factor in the accumulation of ELV waste and abandoned vehicles in Pacific Island countries is the lack of a system in place to support vehicle deregistration and processing. It is an essential prerequisite of any ELV recycling system to have a better process by which ELVS can enter the official waste stream (GHK, 2006). By having a deregistration system and process in place, citizens can responsibility deal with their vehicles when they have reached the end of their useful life.

Additional benefits of a vehicle deregistration system and process are:

- It supports development of a circular economy by increasing the rate of ELV collection for reuse, recycling and recovery of components.
- There will be a cost saving to government with reduced costs to deal with or retrieve abandoned vehicles.
- They provide accurate data and information on vehicle numbers in the country; providing transport authorities with information on vehicles that have reached the end of their useful life.
- They can provide an additional funding source to support the recycling and waste management system.
- Potential reductions in vehicle crime and fraud (GHK, 2006).

Components of deregistration systems include registration and licensing of authorised collection facilities, delivery of the vehicle to authorised collection facilities by vehicle owners, certificates proving destruction of the vehicle, official deregistration of the vehicle, and financial incentives such as an advanced recovery fee and deposit scheme.

Licencing and registration of end-of-life vehicle collection and recycling facilities

It is recommended that Pacific Island countries require all official end-of-life vehicle collection facilities to be licensed and registered by the relevant government authority.

ELV Recycling or waste management facilities should apply for a licence, permit, or registration with the relevant government authority of the Pacific Island country where they are located, prior to conducting business. Once licenced, registered, or permitted, these businesses will be able to issue documentation to vehicle owners certifying that the vehicle has been delivered to an authorised collection depot.

Registration and licencing of vehicle recycling and treatment facilities is essential to ensure that those businesses are appropriately resourced, financed, and can adhere to relevant regulations and requirements around safe vehicle handling and dismantling. Licenced facilities also provide additional confidence to government that recycling, and treatment of these vehicles will meet environmental and public health standards and regulations. A system of licencing also makes monitoring and enforcement of regulations easier and helps to maintain a legal and compliant business environment and reduces instances of crime and fraud. Licencing and registration also mitigate the risk that end-of-life vehicles are delivered to unauthorised or informal facilities and reduces rates of vehicle abandonment (GHK, 2006).

Documentation certifying that the end-of-life vehicle has been delivered to an authorised collection facility

It is recommended that Pacific Island countries require the provision of documentation to vehicle owners upon delivery of their vehicle to an authorised collection facility, confirming that delivery of the vehicle has occurred. It is further recommended that the documentation is required as proof for official vehicle deregistration from the relevant government transport authority.

By issuing a document to vehicle owners certifying that their end-of-life vehicle has been delivered to an authorised collection facility and conditioning that document as a requirement for vehicle deregistration, it provides proof to the relevant government authority that the vehicle owner responsibility disposed of their vehicle. It also improves information collection and provides more accurate records for the government authority about vehicle stock in that country (GHK, 2006).

Such a document can be tied to other financial incentives in place which encourage responsible disposal, for example, an advanced recovery fee and deposit scheme or other tax incentives.

Implementation of an advanced recovery fee and deposit scheme (Product Stewardship)

It is recommended that Pacific Island countries implement an advanced recovery fee and deposit (ARFD) scheme which requires citizens pay a fee upon importation of their vehicle.

An ARFD scheme supports an ELV deregistration system and ELV waste management framework by providing funding for the required recycling and treatment of the vehicle. An ARFD scheme works by incentivising citizens to responsibility dispose of their ELV. Citizens are required to pay a fee upon importation of their vehicle. Upon return to a licenced vehicle collection facility, they are refunded part of their initial deposit.

The portion that is retained by the government can then be used to further support and sustainably finance the vehicle waste management and recycling system (SPREP, 2020b). However, implementation of an ARFD scheme must also consider an official transfer mechanism of the refund, for cases where vehicle ownership has changed since original vehicle importation.

Legislative Guiding Template

A legislative guiding template has been developed to assist Pacific Islands countries to design and implement effective and suitable legislation to establish and maintain a deregistration system for end-of-life vehicles in their country.

Area	Key Principles	Recommended Characteristics	
Purpose / Objective	Outline a clear purpose or objective for the legislation to meet the policy outcome.	 The objectives of the legislation are to: a) Facilitate the circular flow of vehicle parts and components as part of a commitment to circular economy principles. b) Establish a deregistration system and process to manage end-of-life vehicle waste in a responsible way. c) Create a licencing or registration system to establish and regulate end-of-life recycling facilities and collection facilities. d) Encourage vehicle owners to properly dispose of their vehicles at the end of their useful life. e) Improve data collection of end-of-life vehicles to further refine and develop future end-of-life vehicle waste management policies and legislation. f) Provide a funding mechanism to support end-of-life vehicle waste management and recycling processes. 	
Definitions	Outline specific definitions relevant to the legislation	 b) Collection and recycling facility – The term 'collection and recycling facility' refers to a designated establishment that is authorized to receive, handle, and process ELVs for the purpose of recovering valuable materials and components for recycling and reuse.' c) Authorised Treatment Facility – The term 'Authorised Treatment Facility' refers to a facility that possess permit from the relevant authorities after demonstrating compliance with environmental and waste management regulations. These facilities will also have the appropriate infrastructure and equipment to safely handle, depollute, dismantle ELVs. 	
Vehicle owner responsibility	Outline responsibilities of vehicle owners with regards to delivery of end- of-life vehicles	Vehicle owners must deliver end-of-life vehicles to a registered or licenced collection facility. Vehicle owners must not abandon or irresponsibility dispose of end-of-life vehicles at sites that are not registered collection and recycling facilities.	
Collection and Recycling Facilities for end-of-life vehicles	Require all end-of-life vehicle collection and recycling facilities to be registered with the relevant government department or authority.	All vehicle collection and recycling facilities whose purpose is to receive delivery of end-of-life vehicles, must be registered, licenced, or permitted by the relevant government authority prior to commencing operations. Non-registered or non-licenced end-of-life vehicle collection facilities will be prosecuted and are subject to criminal proceedings.	
	Fees for registration as a collection and recycling facility	All vehicle collection and recycling facilities must pay an initial fee for registration to the relevant government authority prior to commencing operations. All vehicle collection and recycling facilities must pay an annual fee for registration to the relevant government authority as a condition of continued operation.	

Area	Key Principles	Recommended Characteristics
		The annual fee for registration as a vehicle collection and recycling facility is also included in the initial fee payable upon registration.
	Requirements for registration	Require all vehicle collection and recycling facilities to provide the following information to the relevant government authority for registration:
		 a) Completed official application form b) Recycling operations plan outlining how the business will operate their site and ensure that end-of-life vehicles delivered are treated responsibly, meeting environmental, health and safety requirements. c) Relevant government identification d) Criminal history check e) Relevant financial history or statements
	Responsibilities of the collection and recycling facility	Registered collection and recycling facilities must treat or store end-of-life vehicles responsibility, and meet all environmental, health and safety requirements. Registered collection and recycling facilities must not abandon or irresponsibly dispose of end-of-life vehicles.
Certificate of Destruction (or equivalent documentation	Outline requirement to provide a Certificate of Destruction (or similar)	Registered or licenced end-of-life vehicle collection facilities must provide vehicle owners with a "Certificate of Destruction" or similar document as proof that the vehicle has been delivered; following inspection that the delivered vehicle is intact or not unnecessarily damaged or tampered with.
certifying that the end-of-life vehicle has been delivered	Describe requirements for Certificate of Destruction	The "Certificate of Destruction" (or similar document) should outline at minimum:
to a registered collection facility)	(or similar)	 a) Name, address, signature and registration or identification number of the establishment or organisation issuing the certificate; b) Name and address of the competent authority for the permit for the establishment or organisation issuing the certificate; c) Where the certificate is issued by a producer, dealer
		or collector on behalf of an authorised treatment facility, the name, address and registration or identification number of the establishment or organisation issuing the certificate;
		 d) Date of issue of the certificate of destruction; e) Vehicle registration number and engine number; f) Class of vehicle, brand and model; g) Vehicle identification number (chassis); h) Name, address, and signature of the holder or owner of the vehicle delivered.
Vehicle deregistration	Specify that the Certificate of Destruction (or similar) is required for vehicle deregistration.	Vehicle owners must present the "Certificate of Destruction" or similar document to deregister the vehicle with the relevant transport authority. Note: This may result in a partial refund of unused vehicle registration (if relevant in the PIC).
Education and notification	Outline requirements for government to educate, notify and/or advertise the deregistration process	The public must be educated and provided accessible information to provide understanding of the required end-of-life deregistration and recycling processes.

Area	Key Principles	Recommended Characteristics	
		 a) The Pacific Island country must undertake educational and publicity activities to increase public understanding of the end-of-life deregistration and recycling process and seek public cooperation for such activities. b) Local Governments within countries shall endeavour to take required measures to promote the end-of-life deregistration and recycling process. 	
Compliance / offences	pecify offences and penalties	It is an offence to abandon, or irresponsibility dispose of end- of-life vehicles in a non-registered facility or location. It is an offence to operate, advertise, or use a collection and recycling facility for end-of-life vehicles that is not registered with the relevant government department or authority. It is an offence for registered collection and recycling facilities to not comply with relevant environmental, health and safety requirements. Non-compliance with these requirements could result in financial penalty, prosecution, or criminal penalties.	
Auditing	Specify requirement for auditing.	Auditing should occur annually by the relevant government department or authority who appoints an Auditor or Audit Committee. The Auditor should investigate compliance with the registration requirements for collection and recycling facilities by the relevant government department or authority.	
		The Auditor should investigate adherence to environmental, health and safety requirements by collection and recycling facilities. Auditors can obtain relevant records from relevant government departments or authorities.	
Record Keeping and Reporting	Reporting and record keeping requirements for importers	Registered or licenced end-of-life vehicle collection facilities must make a record for every end-of-life vehicle delivered to their facility. These records must be provided to the relevant government authority annually. These records are subject to audit by the relevant government authority.	
	Reporting and record keeping requirements for relevant government departments or authorities	The relevant government transport department or authority shall keep records and prepare reports as required for nominated auditors. The relevant government transport department or authority must provide an annual report to the relevant Government Minister for provision to the Parliament (or equivalent) as soon as practicable.	

Advance Recovery Fee and Deposit system legislation

For implementation of legislation for an Advance Recovery Fee and Deposit (ARFD) system, guidance has been published by SPREP and can be found at: https://pacwasteplus.org/wp-content/uploads/2022/03/Step-5-Build-it-Yourself-Guidance-to-Drafting-ARFD-Policy Final.pdf.

However, legislation for an ARFD system as part of a deregistration system should consider the following characteristics:

- The purpose of the advanced recovery fee and deposit scheme is to help facilitate the recycling of end-of-life vehicles; provide an incentive to vehicle owners to responsibly dispose of their vehicle when it has reached the end of its useful life; and to provide a source of funding for the recycling of end-of-life vehicles.
- The fund is to be used for vehicle imports into Pacific Island countries.
- The fund is to be administered by the relevant government authority of the Pacific Island country.
- Upon importation of a new or used vehicle, the vehicle owner will pay a fee to the relevant government department. This fee can be paid in person at the relevant authority's office through an accepted payments mechanism.
- All vehicle importers must pay a fee (\$ per vehicle that reflects estimated cost of ELV management) upon importation into the country.
- Deposit refunds will be provided to vehicle owners upon receipt of the Certificate of Destruction and notification of vehicle deregistration from the relevant transport department.
- Deposit refund can be returned as a percentage of the fee or an absolute dollar figure.

Impact on other Legislative Instruments

In Pacific Island countries with current waste management or advanced recovery fee and deposit (ARFD) system legislation (or similar) in place, amendment may be required to relevant legal instruments:

Country	Waste Management Legislation	ARFD (or similar) Legislation
Fiji	Litter Act 2008	
Kiribati		Special Fund (Waste Materials Recovery) Act 2004
Nauru	Derelict Sites Management Act 2017	
Marshall Islands	Littering Act 1982 Solid Waste Regulations 1989	Styrofoam Cups and Plates, and Plastic Products Prohibition, and Container Deposit Act 2016
Palau	Solid Waste Management Regulations 2013	
Samoa	Waste Management Act 2010	
Timor-Leste	Decree-Law 5/2017 — Urban Solid Waste Management System	
Tonga	Waste Management Act Chapter 32.18 (2016 revised)	
Tuvalu	Waste Operations and Services Act 2009 Waste Management Act 2017	Waste Management (Levy Deposit) Regulation 2019
Vanuatu	Waste Management Act 2014 Waste Management Regulations 2018	

In Pacific Island countries without specific waste management legislation or legislation enabling ARFD, additional amendments may be required to other relevant environmental or public health legislation.

Process 3: Safe Depollution and Dismantling of ELVs

Background and Policy Rationale

ELVs are a major source of POPs contamination, as they contain a variety of POPs containing materials such as plastics, foam, and electrical components. Left untreated, improper dismantling of ELVs may lead to the release of POPs into the environment, contaminating soil, water, and air, leading to a range of harmful effects on human health.⁸ By establishing and enforcing regulations for the safe depollution and dismantling of ELVs to be conducted in ATFs, these risks can be mitigated.

Establishment of Authorised Treatment Facilities (ATFs)

It is recommended that a regulatory framework for ATFs should be established to ensure they possess the necessary infrastructure, equipment, and expertise to dismantle ELVs in an environmentally sound manner. This includes establishing clear standards for facility operation, personnel training, and environmental management practices.

ATFs are sites that are designed with special requirements to account for the hazards associated with treatment of ELVs. Broadly, key features of ATFs include:⁹

A site location that accounts for the operational capacity and considers environmental and social precautions (e.g., non-permeable surfaces to prevent the leakage of harmful liquids into the environment),

- Designed with appropriate ventilation to for worker respiratory health,
- Signages around the facility that details a clearly labelled floor plan,
- · Personal Protective Equipment (PPE) to enable workers to safely complete their tasks
- Specialised tools and equipment for dismantling of ELVs.

After depollution and dismantling, parts of the ELV that have economic value e.g., lead batteries, non-ferrous and ferrous scrap metal, non-ferrous wiring, platinum catalysts, recoverable spare parts can be recovered and resold.

Mandate for Depollution

It is recommended that PICs shall encourage participants engaged in treatment operations (e.g., automotive workshops) to adopt and maintain certified environmental management systems. Hazardous materials and components shall be removed and segregated to prevent cross-contamination of substances. Resource recovery and further recycling activities can only be done after depollution is done.

Prior to dismantling, ELVs must undergo a depollution process to remove hazardous materials such as batteries, fluids, and catalysts. This process should be conducted by trained personnel using appropriate technologies and adhering to strict safety protocols. Treatment options for the depollution of ELVs include:

- Batteries and liquefied gas tanks pose significant safety hazards during ELV dismantling due to the risk of
 fire, explosion, and toxic chemical exposure. Therefore, their removal must be conducted with utmost care
 and adherence to strict safety protocols.
- Airbags and other potential explosive components, such as seatbelt pretensioners, must be deactivated or neutralized to prevent accidental detonation during ELV dismantling.
- Removal and proper storage of fuel, motor oil, transmission oil, gearbox oil, hydraulic oil, cooling liquids, antifreeze, brake fluids, and air-conditioning system fluids. These fluids can be hazardous to human health and the environment if not handled properly.

⁸ World Health Organisation [WHO]. (2020). Food safety: Persistent Organic Pollutants (POPs). Accessed at <a href="https://www.who.int/news-room/questions-and-answers/item/food-safety-persistent-organic-pollutants-(pops)#:~:text=Human%20exposure%20-%20for%20some%20compounds,genotoxicity%20and%20increased%20birth%20defects.

⁹ Natural Capital Economics (2023). Practitioner's Guideline on Depollution of End-of-Life Vehicles: Depollution Guidelines.

Legislative Guiding Template

Area	Key Principles	Recommended Characteristics
Purpose / Objective	Outline a clear purpose or objective for the legislation to meet the policy outcome.	The objectives of the legislation are to: a) Minimise environmental impact by promoting safe and sustainable dismantling processes. b) Introducing guidelines for worker safety, training requirements, and safe handling procedures. c) Provide appropriate and effective waste management facilities across the country d) Store hazardous waste safely and prior to its transfer to other environmental sound disposal facilities [overseas] e) Ensure waste management facilities are fit for purpose and financially and operationally sustainable f) Facilitate the resource recovery process from the recycling of materials from ELVs.
Definitions	Outline specific definitions relevant to the legislation	 a) Treatment means any activity that is done to an ELV at an ATF for depollution, dismantling, or preparation for disposal b) Depollution refers to the process of removing hazardous materials (batteries, fuels, lubricants, airbags, coolants, and refrigerants) from ELVs prior to dismantling c) Dismantling refers to the process of systematically taking apart an ELV to prepare for recovery of materials, shredding, or disposal.
Authorised Treatment Facilities (ATF) site selection	ATFs should consider appropriate site requirements	Appropriate site requirements are: a) Sites should have access to roads and transportation infrastructure to facilitate the movement of ELVs and other recovered materials b) Facility design should also consider the potential for expansion c) Select a site with adequate drainage to prevent environmental contamination from hazardous materials. Avoid flood-prone areas and ensure proper containment systems for stormwater runoff. d) The facility should be well ventilated to limit the circulation of pollutants and negative impacts on worker's respiratory health e) Site selection should be considerate of potential noise and air pollution to surrounding communities, and be situated away from sensitive environmental areas e.g., rivers, wetlands, and forests
Mandate for depollution	Requirements for depollution	 Sites should have access to roads and transportation infrastructure to facilitate the movement of ELVs and other recovered materials

Area	Key Principles	Recommended Characteristics
Compliance / offences	Specify offences and penalties	It is an offence to abandon, or irresponsibility dispose of end-of-life vehicles in a non-registered facility or location. It is an offence to operate, advertise, or use a collection and recycling facility for end-of-life vehicles that is not registered with the relevant government department or authority. It is an offence for registered collection and recycling facilities to not comply with relevant environmental, health and safety requirements. Non-compliance with these requirements could result in financial penalty, prosecution, or criminal penalties.
Monitoring	Establish a monitoring target (if relevant)	Monitoring targets should: a) Be 'SMART'. b) Align with policy and environmental objectives. c) Be regularly reviewed. The number and complexity of monitoring targets should reflect the agency's ability to reliably and consistently maintain and report on data. Maintaining a smaller number of monitoring targets increases the likelihood of effective and sustainable management and is beneficial for environments with limited resources and monitoring and evaluation experience.
	Outline measures for if target is not met	The systems should be equipped with early warning systems that detect deviations from targets (such as KPIs). The Dedicated MER Custodian should Conduct root cause analysis (see also Compliance) to identify the underlying factors contributing to the failure to meet targets, exploring both internal and external influences. Conduct education workshops and other extension work to course-correct and adapt targets if it is determined necessary. Develop and enact a corrective actions plan, including a communications plan, to outline the require process adjustments to ensure targets are being met.

Impact on other Legislative Instruments

The introduction of minimum standards for ATFs and depollution mandates can also have some negative impacts on other legislative instruments. For example, they may increase the cost of compliance for businesses, and they may create additional administrative burdens for government agencies.

These requirements can serve as a catalyst to strengthen existing legislative instruments related to environmental protection and waste management legislation:

Country	Waste Management Legislation	
Fiji	Litter Act 2008	
Kiribati		
Nauru	Derelict Sites Management Act 2017	
Marshall Islands	Littering Act 1982	
	Solid Waste Regulations 1989	
Palau	Solid Waste Management Regulations 2013	
Samoa	Waste Management Act 2010	
Timor-Leste	Decree-Law 5/2017 — Urban Solid Waste Management System	
Tonga	Waste Management Act Chapter 32.18 (2016 revised)	
Tuvalu	Waste Operations and Services Act 2009	
	Waste Management Act 2017	
Vanuatu	Waste Management Act 2014	
	Waste Management Regulations 2018	

4 References

Australian Government. (2023). https://oia.pmc.gov.au/sites/default/files/2023-05/oia-impact-analysis-guide-march-2023 0.pdf Australian Government Guide to Policy Impact Analysis.

Brittanica, 2023. Principles of environmental law. https://www.britannica.com/topic/environmental-law/Principles-of-environmental-law

Bouwma, I. M., Gerritsen, A. L., Kamphorst, D. A., & Kistenkas, F. H. (2015). Policy instruments and modes of governance in environmental policies of the European Union: past, present and future.

Croci, E. (2007). The economics of environmental voluntary agreements. Economia delle fonti di energia e dell'ambiente. Fascicolo 1, 2007, 1000-1022.

Chen, K. C., Huang, S. H., & Lian, I. W. (2010). The development and prospects of the end-of-life vehicle recycling system in Taiwan. Waste management, 30(8-9), 1661-1669.

Ellen Macarthur Foundation [EMF], 2023. What is a circular economy?.

https://ellenmacarthurfoundation.org/toPICs/circular-economy-introduction/overview#principles

EUR-Lex, (2023). End-of-life vehicles. https://eur-lex.europa.eu/EN/legal-content/summary/end-of-life-vehicles.html

European Union, (2002). Commission Decision of 19 February 2002 on minimum requirements for the certificate of destruction issued in accordance with Article 5(3) of Directive 2000/53/ED of the European Parliament and of the Council on end-of-life vehicles. Official Journal of the European Communities. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002D0151&from=ET

Fiji Revenues and Customs Service, 2019. Personal Import of second hand motor vehicles. https://www.frcs.org.fj/wp-content/uploads/2019/06/Import-of-second-hand-vehicles.pdf

GHK. (2006). A study to examine the benefits of the End of Life Vehicles Directive and the costs and benefits of a revision of the 2015 targets for recycling, re-use and recovery under the ELV Directive. Final Report to DG Environment. https://ec.europa.eu/environment/pdf/waste/study/final_report.pdf

Government of Tuvalu. (2016). *Tuvalu Integrated Waste Policy and Action Plan: Towards Cleaner and Healthier Islands*. https://faolex.fao.org/docs/pdf/tuv193524.pdf

Gunningham, N., & Sinclair, D. (1998). Designing smart regulation. In Smart regulation: designing environmental policy. Oxford: Oxford University Press.

Infrastructure Cook Islands, (2016). Cook Islands Solid Waste Management Policy 2016 – 2026.

https://policycookislands.files.wordpress.com/2017/05/2016 ci-solid-waste-management-policy-2016-2026 final.pdf

Institute for Global Environmental Strategies [IGES]. (2010). Policy Tools for Sustainable Materials Management. https://www.iges.or.jp/en/publication_documents/pub/discussionpaper/en/1925/policy_tools_smm_dp_final.pdf

London School of Economics and Political Science [LSE]. 2022. What is the polluter pays principle? https://www.lse.ac.uk/granthaminstitute/explainers/what-is-the-polluter-pays-principle/

Ministry of Customs and Revenue. (2022). Border Services. https://www.revenue.gov.ws/home/faq/customs-faqs/border-services/#:~:text=All%20vehicles%20should%20be%2010,Buses%20are%20prohibited.

Ni, F., & Chen, M. (2014). Studies on pyrolysis and gasification of automobile shredder residue in China. Waste management & research, 32(10), 980-987.

Niue Island Government. (2010). National Integrated Waste Management Strategy 2010 – 2015. https://niuedata.sprep.org/system/files/niue_Waste_Management_Strategy_4Mar2011-low_res_2.pdf

NSW Government. (2016). Guidance for regulators to implement outcomes and risk-based regulation. https://www.productivity.nsw.gov.au/sites/default/files/2018-

05/Guidance for regulators to implement outcomes and risk-based regulation-October 2016.pdf

NSW Environmental Protection Agency [NSW EPA]. (2022). The waste hierarchy. https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/warr-strategy/the-waste-hierarchy

OECD. (2000). Reducing the risk of policy failure: challenges for regulatory compliance.

https://www.oecd.org/gov/regulatory-policy/46466287.pdf.

OECD. (2018). Making Development Co-operation Work for Small Island Developing States, OECD Publishing, Paris, https://doi.org/10.1787/9789264287648-en.

OECD. (2019). Policy Monitoring and Evaluation, OECD Publishing, https://www.oecd.org/gov/policy-monitoring-evaluation.htm

Palau Government. (2017). National Solid Waste Management Strategy: The Roadmap towards a Clean and Safe Palau 2017 to 2026. https://www.sprep.org/attachments/VirLib/Palau/palau-national-solid-waste-management-strategy.pdf Queensland Government. (2023a). Fair trading compliance program. https://www.qld.gov.au/law/laws-regulated-industries-and-licensing/fair-trading-enforcement/compliance-program

Queensland Government. (2023b). Waste Reduction and Recycling Act 2011.

https://www.legislation.qld.gov.au/view/html/inforce/current/act-2011-031#sec.9

SPREP. (2020a). Stocktake of Existing and Pipeline Waste Legislation.

SPREP. (2020b). Factsheet Advanced Recovery Fee and Deposit Systems.

https://www.sprep.org/sites/default/files/documents/publications/advanced-recovery-fee-deposit-factsheet.pdf

SPREP. (2021). Third Clean Pacific Roundtable turns focus to Circular Economy. https://www.sprep.org/news/3rd-clean-pacific-roundtable-turns-focus-to-circular-economy

Slatter, J. (2005). The European Union's legislative framework for hazardous waste management. NATIONAL ENVIRONMENTAL LAW REVIEW, (1), 55-59.

Tuvalu Waste Management Act 2017 - https://tuvalu-legislation.tv/cms/images/LEGISLATION/PRINCIPAL/2017/2017-0022/WasteManagementAct2017 1.pdf

UNEP. (2017). Used Vehicle Global Overview.

UNEP. (2019). The new POPs under the Stockholm Convention.

UNEP. (2020). Used Vehicles and the Environment.

UNITAR. (2017). Monitoring and evaluation policy framework, United Nations Institute for Training and Research. https://unitar.org/sites/default/files/media/file/Monitoring-and-Evaluation Revised%20April%202017.pdf

U.S. Environmental Protection Agency. (2016). "Managing and Transforming Waste Streams: A Tool for Communities." EPA530-K-16-001.

Vanherle and Vergeer. (2016). "Data gathering and analysis to improve the understanding of 2nd hand car and LDV markets and implications for the cost effectiveness and social equity of LDV CO2 regulations", Transport & Mobility Leuven.

Wang, J., Sun, L., Fujii, M., Li, Y., Huang, Y., Murakami, S., Daigo, I., Pan, W., and Li, Z. (2021). "Institutional, Technology, and Policies of End-of-Life Vehicle Recycling Industry and its indication on the Circular Economy – Comparative Analysis between China and Japan. Sec. modelling and Optimization for Decision Support (vol. 2).

 $\frac{\text{https://www.frontiersin.org/articles/10.3389/frsus.2021.645843/full\#:} \sim \text{text=Japan's} \% 20 \text{ELV} \% 20 \text{recycling} \% 20 \text{manage ment} \% 20 \text{framework, when} \% 20 \text{they} \% 20 \text{purchase} \% 20 \text{new} \% 20 \text{cars}.$

World Bank Group. (2022). Regional e-mobility policy framework and technical guidelines in the Pacific Island Countries. Final Report. https://www.wbgkggtf.org/sites/kggtf/files/2023-02/Pacific%20E-mobility%20Roadmap%20-%20Final%20Report%20%28With%20presentational%20edits%29.pdf

Appendix Summary of existing Waste Legislation in the Pacific Islands

Country	Relevant Legislation and Regulations	Relevant ELV Waste Management Policies
Cook	Environment Act 2003	Solid Waste Management Policy 2016-2026
Islands	Includes offences for disposal of any toxic chemical or waste in a manner likely to harm the environment.	Identifies that there is a need for a coherent legislative framework to drive implementation of all waste management initiatives.
Fiji	Environment Management Act 2005	National Solid Waste Management Strategy 2011 – 2014
	Environment Management (Waste Disposal and Recycling) Regulations 2007	Aims to increase the proportion of solid waste that is managed in a cost-
	General environmental management and pollution control legislation that extends to pollution caused by a variety of hazardous and other wastes.	effective, financially sustainable, legally compliant and environmental sound manner. The strategy briefly outlines the current situation with derelict and abandoned vehicles. The strategy does not outline actions or an
	Litter Act 2008	implementation plan with regards to ELVs, but it does discuss the problem with lead acid batteries and its intention to introduce a system of returns for
	Prescribes penalties for littering for various offences and includes abandoning dangerous litter including vehicles.	these batteries.
Kiribati	Environment Act 1999	Kiribati Trade Policy Framework 2017-2027
	Environment (Amendment) Act 2007	Seeks to implement measures including an environmental licensing system support waste measurement and pollution control. It also seeks to build capacity to facilitate the notification and reporting requirements under existing waste and chemical related conventions.
	 Section 12 – makes it an offence to litter in an open or public place without an environmental licence 	
	Section 20 – 'Duty to clean-up environment' provides that a person who	
	causes or allows the discharge of any waste or other substance in	
	contravention of the Act must take any appropriate actions to remove the waste or other substance and remedy, mitigate and contain any harm to the	
	environment. Failure to comply is an offence – maximum fine of \$100,000- or 5-years imprisonment.	
	Special Fund (Waste Materials Recovery) Act 2004	Kiribati Waste Management and Resource Recovery Strategy 2020 – 2030
	This legislation details the items that require deposits to be paid, when they must be paid, how much should be paid, to whom it should be paid, and the rate of refund of those deposits.	Policy aimed at governing the management of solid, chemical and hazardous waste.

Country	Relevant Legislation and Regulations	Relevant ELV Waste Management Policies
Marshall Islands	National Environmental Protection Act 1984 Allows the EPA to make regulations and take enforcement actions.	Kwajalein Atoll Solid Waste Management Plan 2019 – 2028 and Action Plan 2019 – 2023
		Current waste management situation and issues, strategic targets and an action plan.
	Solid Waste Regulations 1989	National Environment Management Strategy 2017 – 2022
	Regulation for the prevention of water, air and land pollution from solid waste. Establishes requirements for solid waste storage, collection, responsibility, a permit system for solid waste disposal facilities, and standards for solid waste disposal facilities.	Identifies poor waste management and pollution control as key environmental risks. Activities include that the Built Environment is to provide proper waste management services and management of hazardous waste.
	Littering Act 1982	N/A
	Littering includes unauthorised dumping of vehicles or vehicle parts. A person who commits littering is guilty of an offence under the Act.	
Nauru	Litter Prohibition Act 1983	National Solid Waste Management Strategy 2017 – 2026
	General prohibition on littering in open air vicinities with litter, refuse or rubbish of any kind, which would likely include end-of-life vehicles.	Outlines three goals with respect to effectively manage waste and pollution to minimise the negative impacts on public health and the environment. The strategy specifically includes bulky waste such as derelict vehicles.
	Derelict Sites Management Act 2017	N/A
	The legislation makes provision for the identification, control, removal, disposal and management of derelict properties, buildings and vehicles.	
Niue	Environment Act 2015	National Biodiversity Strategy and Action Plan 2015
	General environmental protection legislation including provision for development consent for certain activities including the environment. Also includes provisions for disposing of waste.	Theme 5 is 'Management of waste and pollution'. Includes derelict vehicles in bulky waste definition and outlines previous programs to remove ELVs and store ULABs.
Palau	National Code Title 17: Crimes	National Solid Waste Management Strategy 2017 to 2026
	Section 2509 creates the offence of 'criminal littering', whereby litter includes improperly discarded paper, metal, plastic, glass or solid waste.	Outlines the current situation for ELV processing and that stakeholders think vehicles and ULABs (amongst other things) should be included in new waste management legislation. It also includes a strategic action 3.2 for responsible agencies to strengthen existing and develop new public-private partnerships.

Country	Relevant Legislation and Regulations	Relevant ELV Waste Management Policies
	National Code Title 24: Environmental Protection Solid Waste Management Regulations 2013 Regulations for the management, including storage and disposal, of solid wastes.	Palau Climate Change Policy for Climate and Disaster Resilient Low Emissions Development Outlines the government priority to assess the viability of introducing waste-to-energy technologies and waste reduction/recycling measures.
Papua New	Environment Act 2000	National Water, Sanitation and Hygiene (WaSH) Policy 2015 – 2030
Guinea	Environment (Amendment) 2015	Desire for all solid waste to be disposed of safely and appropriately.
	Principal legislation for environmental protection, including for waste management.	
	Environment (Prescribed Activities) Regulation 2002	
	Prescribes activities, including those related to waste treatment and disposal which require permitting.	
Samoa	Waste Management Act 2010	Samoa National Waste Management Strategy 2019 – 2023
	Outlines provisions relating to regulation and management of wastes, offences, waste management operations, dumping and incineration of wastes at sea, and community involvement in waste management. Legislation aligns to the Stockholm Convention and Rotterdam Convention by requiring regulation of POPs and hazardous wastes.	Aims to improve waste management practices in Samoa.
Solomon	Environment Act 1998	National Development Strategy 2016 – 2035
Islands	One objective of the Act is to regulate the transport, collection, treatment, storage and disposal of wastes and to comply with and give effect to regional and international conventions and obligations relating to the environment.	Medium Term strategy 11 is to promote a holistic, sustainable approach to waste management.
		National Implementation Plan for Stockholm Convention on Persistent Organic Pollutants 2018
		Recognises the problem of ELVs in the context of POP emissions.
		National Waste Management and Pollution Control Strategy 2017 – 2026
		Comprehensive overview of waste sources, legal frameworks, issues and objectives. No specific mention of ELVs.

Country	Relevant Legislation and Regulations	Relevant ELV Waste Management Policies
Timor-Leste	Decree-Law 5/2017 – Urban Solid Waste Management System	N/A
	Includes legislation around bulky waste and establishes an obligation of users not to abandon waste in public areas. The law also includes definitions of recoverable waste as all waste capable of being selected and whose transformation leads to a useful end, such as glass, used tyres, batteries, and electrical and electronic equipment.	
Tonga	Waste Management Act Chapter 32.18 (2016 revised)	Tonga National Strategic Development Framework 2015-2025
	Provides for the development of the waste management sector, with wide ranging powers and responsibilities for the Waste Authority Ltd. The Act also establishes provisions for waste collection and disposal services, contracting arrangements, fees to be levied and collected, preparation of operating plans and reports, development of codes of practice, community awareness raising, and monitoring of public health and environmental impacts.	To achieve its organisational outcome for a 'cleaner environment and less pollution from household and business activities building on improved waste management, minimisation and recycling', Tonga plans to develop an effective country-wide program to proactively reduce the creation of solid waste and manage the segregation, disposal and recycling of wastes.
	 Section 13 – outlines that levies and fees can be used for disposal of hazardous wastes. 	
	 Section 24 outlines a range of offences relating to wastes including toxic and hazardous wastes. For example, persons must not import any toxic or hazardous wastes, move toxic or hazardous wastes into, out of or within Tonga, or store or dispose of toxic or hazardous waste in contravention of international obligations. There are also offences relating to the dumping of waste in places that are not approved waste dump sites which cause pollution to people or the environment. 	
	Hazardous Wastes and Chemicals Act 2010	Tonga National Infrastructure Investment Plan (NIIP) 2013-2023
	Provides for the regulation and proper management of hazardous chemicals in accordance with international practices and the international conventions applying to the use, transboundary movement and disposal of hazardous substances. The Act also provides for the limitation of POPs by regulating and also prohibiting their use within Tonga.	Has allocated high priority to the 'solid waste' sector, with an estimated \$4 million to be invested into new landfill or transfer stations.
	Environment Management Act Chapter 47.02 (2016 revised)	-
	Environment Management (Litter and Waste Control) Regulations 2016	

Country	Relevant Legislation and Regulations	Relevant ELV Waste Management Policies
	The Act ensures the protection and proper management of the environment. The Regulation defines activities and offences that related to waste pollution including the dumping of waste and hazardous waste, waste causing pollution and the burning of litter and waste.	
Tuvalu	Waste Operations and Services Act 2009	Integrated Waste Policy and Action Plan 2017-2026
	Waste Management Act 2017 Outlines roles and responsibilities for waste management in Tuvalu. The legislation also specifies categories of waste that need to be disposed in defined ways, including bulky waste. The Act also outlines that environmental	Outlines bulky waste generation in Funafuti and that lake of waste management results in ELVs lying around roadsides and coastal areas (Government of Tuvalu, 2016). The action plan includes a number of activities aimed at reduced bulky waste accumulation.
	and public health standards must be monitored and enforced.	National Action Plan to Combat Land Degradation and Drought 2006
		Outlines that there is no waste management policy in place that takes care of the disposal of solid bulky waste like cars and trucks. It also indicates that people dump their waste in a place convenient to them and do not take into consideration the environment impacts associated with their actions.
	Environment Protection Act (2008 Revised Edition) General environmental protection legislation for Tuvalu that also facilitates compliance and implantation of obligations under MEAS to which Tuvalu has ratified.	Tuvalu National Action Plan to reduce releases of Unintentional Persistent Organic Pollutants 2018-2022
		Identifies vehicles as a source of POPs, as well as waste oils. Has an action to provide tax incentives that favour importation of vehicles and engines that emit lower levels of POPs.
Vanuatu	Waste Management Act 2014	National Waste Management and Pollution Control Strategy and
	Waste Management Regulations 2018	Implementation 2016 – 2020
	Provides for the protection of the environment by encouraging effective waste services and operations. It also includes provisions for litter and waste disposal.	The strategy has a goal for all types of generated wastes are reduced, collected, reused, recycled and treated by environmentally sound technologies suited to local conditions and waste to landfill is minimised. Waste includes scrap metal and chemical waste but doesn't discuss ELVs specifically.
		Vanuatu 2030 The People's Plan: National Sustainable Development Plan 2016 – 2030
		Includes a policy objective to reduce waste and pollution through effective waste management and pollution control.





