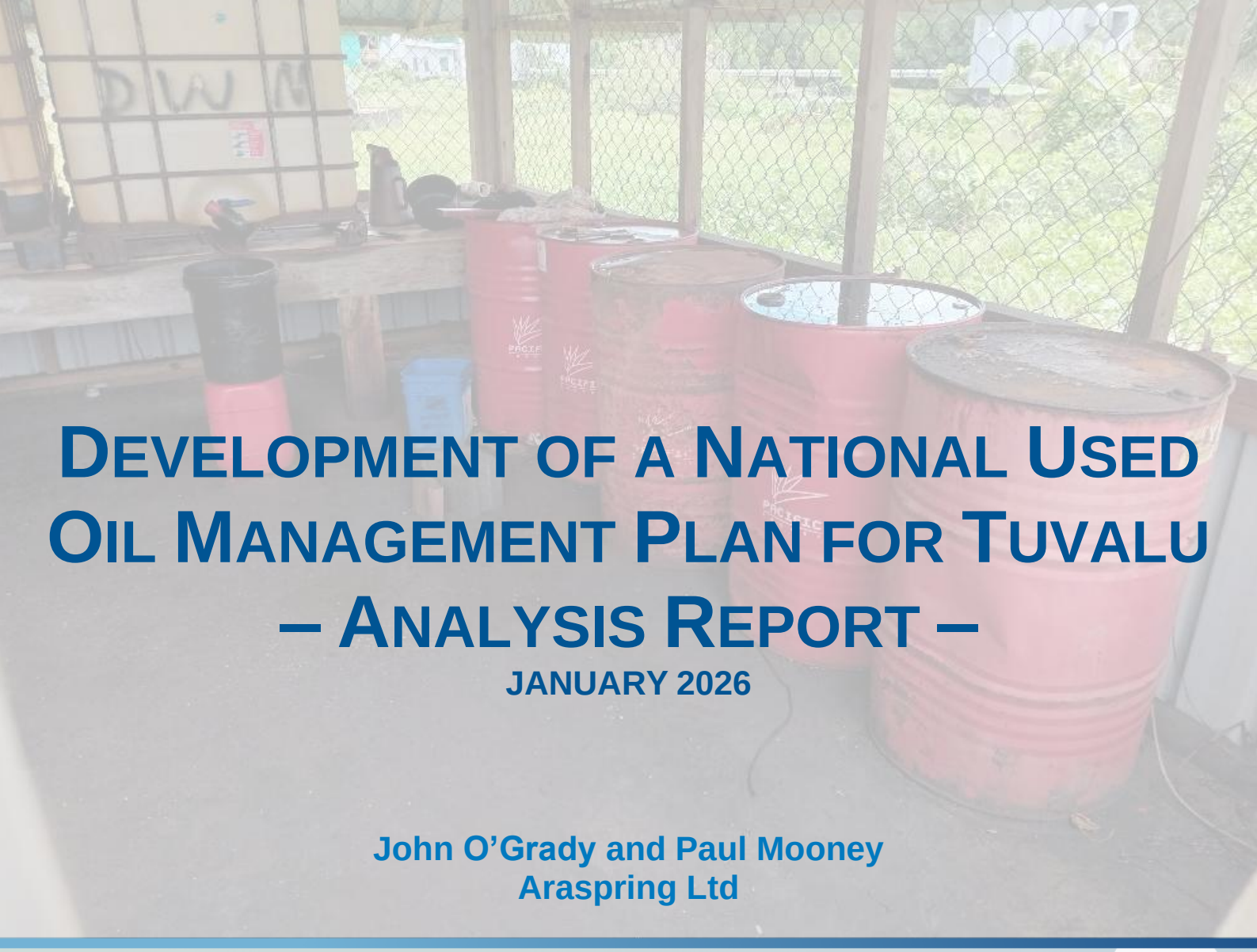

# DEVELOPMENT OF A NATIONAL USED OIL MANAGEMENT PLAN FOR TUVALU – ANALYSIS REPORT –

**JANUARY 2026**

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En partenariat avec

France

AFD AGENCE FRANÇAISE DE DÉVELOPPEMENT

SPREP PROE

SWAP
Sustainable Waste Actions in the Pacific

This initiative is supported by the SWAP2 Project, funded by the Agence Française de Développement (AFD) and implemented by the Secretariat of the Pacific Regional Environmental Programme (SPREP), with the aim of improving waste infrastructure, building capacity, and fostering regional collaboration.

This document has been produced with the financial assistance of the AFD: www.afd.fr/en. The views expressed herein can in no way be taken to reflect the official opinion of the AFD.

# EXECUTIVE SUMMARY

Healthy Pacific ecosystems are essential for the economic development of Pacific Island countries and territories and their communities. However, due to their social, economic and ecological features, these Pacific Islands face special environmental challenges.

The Sustainable Waste Actions in the Pacific Project – Phase 2 (SWAP2), funded by the Agence Française de Développement (AFD), is implemented by the Secretariat of the Pacific Regional Environmental Programme (SPREP).

The purpose of the SWAP2 Project is to help achieve the strategic goals of the Pacific Regional Waste and Pollution Management Strategy (Cleaner Pacific Strategy) by improving waste infrastructure, building capacity, and fostering regional collaboration of several Pacific Island Countries and French Territories.

This particular project focuses exclusively on used oil management for Tuvalu, concluding with the main deliverable of the project, the development of a National Used Oil Management Plan.

The project will be completed in five stages:

- Inception – introductory meetings and desktop study of available information
- Analysis – gathering current data and discussions with stakeholders
- Feasibility Study – preparation of a feasibility study report for consultation
- Draft Used Oil Management Plan – the plan will be based on the feasibility study and consultation
- Final Used Oil Management Plan – finalisation of the plan after further consultation and feedback.

This report is the Analysis Report for Tuvalu. This phase of work comprised local data gathering via various methods, including desktop research, in-person interviews, an in-country stakeholder meeting, phone calls, online meetings and email correspondence.

The following conclusions were drawn as a result of the data gathering work:

a) Based on information obtained, there is likely to be a range of 13,000 to 17,000 litres of used oil required to be managed annually in Tuvalu.
b) There have been eight IBCs purchased by DWM, and with the assistance of PE, 8,000 litres of used oil and lubricants were delivered to BPS in Fiji in 2025. More information is needed, however, about future PE exports and this export pathway should not be relied on as a long term solution.

c) There is a large amount of used oil (40,000 - 70,000 litres) that still needs to be processed and exported from Tuvalu to get this stockpile down to a manageable annual export volume.
d) The current storage facility, equipment and processes for collecting and managing used oil in Tuvalu need immediate improvements to prevent a possible spill event, as it is in a poor state with multiple old degraded containers of various sizes stored with no secondary containment. This is an urgent concern.
e) Used oil is also being reused for unsatisfactory uses in Funafuti and the Outer Islands, especially as a lubricant for motorcycle chains. These uses need to stop as they lead to environmental pollution, including contamination of the important groundwater resource.
f) There needs to be a process implemented to ensure that any system that is adopted for Funafuti is shared with the outer islands of Tuvalu, to have any stockpiles of used oil returned to the facility in Funafuti to be safely managed and exported. Outer Islands stockpiles also need to be managed satisfactorily.
g) DWM staff and other stakeholders need assistance with training and education about how to safely manage used oil and other lubricants. Such training may be delivered in 2026 under the SWAP2 Project.
h) There are clear government priorities for used oil that require effective management to protect human health and the environment. These priorities are being met to a certain extent by having a committee established that has identified the need for management of the used oil. The committee has taken some steps to set up a process to store and export some of the recovered used oil.
i) The Feasibility Study will aim to come up with a clear direction, backed with supporting evidence, for the preparation of a detailed National Used Oil Management Plan.

# ABBREVIATIONS

| | |
|---|---|
| AFD | Agence française de développement |
| ARF | Advanced Recovery Fee |
| ADF | Advanced Disposal Fee |
| BPS | BlueScope Pacific Steel |
| COP | Code of Practice |
| CSA | Chemical Safety Act |
| DoE | Department of Environment |
| DWM | Department of Waste Management |
| IBC | Intermediate bulk container |
| JICA | Japan International Cooperation Agency |
| LPG/CNG | Liquefied Petroleum Gas / Compressed Natural Gas |
| LTC | Landing Craft Tanker |
| NEMS | National Environment Management Strategy 2015–2020 |
| NIP | National Action Plan |
| NSWMS | National Solid Waste Management Strategy |
| PAHs | Polycyclic aromatic hydrocarbons |
| PCBs | Polychlorinated biphenyls |
| PE | Pacific Energy |
| PIC | Pacific Island Country |
| PICTs | Pacific Island Countries and Territories |
| POPs | Persistent Organic Pollutants |
| PPE | Personal Protective Equipment |
| PWD | Public Works Department |
| SCL | Salters Cartage Ltd (SCL) |
| SOE | State of Environment |
| SPREP | Secretariat of the Pacific Regional Environmental Programme |
| SWAP2 | Sustainable Waste Actions in the Pacific - Phase 2 |

| | |
|---|---|
| SWAT | Solid Waste Agency of Tuvalu |
| TCD | Tuvalu Customs Department |
| TEC | Tuvalu Electricity Corporation |
| TT | Tanktainer |
| ULO | Used Oil & Lubricants |
| WL | Waste Levy |
| WMA | Waste Management Act |

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# 1. INTRODUCTION

## 1.1. Project Background

Pacific Island Countries and Territories (PICTs) offer some of the richest areas of biodiversity on the planet. These areas, and their island communities, are under increasing pressure from development and a growing human population, and the social and economic pressures associated with this growth.

Increased populations and urbanisation have led to increased product imports, production, and waste generation. Much of the waste generated through these imported products cannot economically be managed due to issues of small and isolated populations, economic volatility, geographical isolation from large economies, limited institutional, financial and human capacity, and inadequacy of infrastructure to capture and process waste materials.

The Sustainable Waste Actions in the Pacific Project – Phase 2 builds on the first phase of actions to improve waste management in the PICTs. This was funded by the *Agence Française de Développement* (AFD), referred to as *"Sustainable Waste Actions in the Pacific (SWAP)"*. This project had set out to improve sanitation, environmental, social, and economic conditions in Pacific Island countries and territories through improved waste management. To achieve this, the project focused on improving the management of three waste streams: used oil, marine debris, and solid waste. Six countries and territories benefited from this original SWAP project – Fiji, Samoa, Solomon Islands, Tonga, Vanuatu, and Wallis and Futuna.

The second phase is known as SWAP2 and is also funded by AFD. This phase will contribute to achieving the strategic goals of the Pacific Regional Waste and Pollution Management Strategy (Cleaner Pacific 2025) by improving waste infrastructure, building capacity, and fostering regional collaboration of several Pacific Island Countries and French Territories. It is being implemented by SPREP from 2025-2028 and will benefit Fiji, French Polynesia, Kiribati, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu and Wallis and Futuna.

The SWAP2 project aims to support sustainable waste management in the Pacific in ways that will focus on:

1. Supporting local populations and authorities in the development of national waste management policies and actions (collection, sorting, recovery and proper disposal);
2. Improving the delivery of waste services through the development of waste management infrastructures, and implementing pilot projects; and
3. Strengthening the technical, financial and governance capacities of authorities and practitioners.

The four main components that are being addressed by SWAP2 are:

1. Marine Litter
2. Used Oils
3. Solid Waste
4. Regional Collaboration and Knowledge Sharing.

This specific SWAP2 project focuses exclusively on used oil and lubricants in Tuvalu. The foremost deliverable of the project is the development of a National Used Oil Management Plan for Tuvalu. In July 2025, *Araspring Ltd* (New Zealand) in association with *EMV Vanuatu*, were awarded a contract by SPREP/SWAP2 to carry out this work, namely to develop a Used Oil Management Plan for Tuvalu. This is the work now being undertaken.

## 1.2. Project Deliverables

The overall project deliverables are set out in Table 1 below:

***Table 1:** Project Deliverables*

| Deliverables | Task | Due Date |
|---|---|---|
| **1. Inception Meeting** | 1.1 Participate in an initial meeting with the SWAP PMU organised by SPREP | Within two weeks of the project commencement on 1 August 2025 |
| **2. Inception Report** | 2.1 Host an Inception Workshop with National stakeholders<br>2.2 Undertake a detailed desktop review of existing legislation, policy, strategy and plans that address waste management, institutional frameworks, and other enabling frameworks relevant to waste management | Within 1 month following Inception meeting |
| **3. Analysis Report** | 3.1 Undertake an analysis of used oil production and existing used oil collection, storage, treatment, disposal and export services<br>3.2 Analyse findings against government and stakeholder priorities | Within 2 months following approval of the Inception Report |

| Deliverables | Task | Due Date |
|---|---|---|
| **4. Feasibility Study Report** | 4.1 Development of a feasibility study based on all the information gathered and data obtained through the consultations, interviews, and investigations<br>4.2 Feasibility Study Presentation | Within 2 months following approval of the Analysis Report |
| **5. Draft National Used Oil Management Plans** | 5.1 Compile all the gathered information to develop a Draft National Used Oil Management Plan<br>5.2 National Stakeholder Presentation | Within 2 months following approval of the Feasibility Study Report |
| **6. National Used Oil Management Plans** | 6.1 Final national used Oil Management Plans | Within 1 month following approval of the Draft National Used Oil Management Plans |

## 1.3. Analysis Report

Under the terms of the contract, the consultant is required to:

1. Undertake an analysis of used oil generation and existing used oil collection, storage, treatment, disposal and exportation services to begin to understand any logistical issues or opportunities related to the development of the National Used Oil Management Plan.
2. Analyse findings against the government and stakeholder priorities from the inception meeting.

**Analysis Report**

Develop an analysis report that details the findings from the Analysis phase of work.

The report should provide a clear premise for the issues to be addressed in the draft national Used Oil Management Plan, including the product's scope, geographical scope, and likely services necessary to meet the stated government and stakeholder needs.

The analysis report's conclusion should provide the detailed scope and structure of the feasibility work to be conducted in Phase 3 and will require approval prior to the commencement of the assessment.

## 1.4. Tuvalu National Background

Tuvalu is a small atoll nation located in the Central Pacific, consisting of nine islands which cover a land area of 26 sq km. However, its exclusive economic zone covers an oceanic area of approximately 900,000 sq km. The capital and main island of Tuvalu Is Funafuti, which is where 60% of the total 10,500 population live. Funafuti is the most developed of the islands in terms of both infrastructure and population. It is the first port of entry and has the only airfield.

The islands that make up Tuvalu are Nanumea, Niutao and Nanumaga in the northern area; Nui, Vaitupu and Nukufetau in the central area; and Funafuti, Nukulaelae and Niulakita to the south.

Even though Tuvalu is small, the limited land area and ongoing migration to the main island results is a high population density in Funafuti. This growing population exerts pressure on Funafuti's environment, including consumption of natural resources, waste generation, habitat destruction and environmental degradation.

All nine islands of Tuvalu are low coral formations seldom rising more than five metres above sea level. Six of the islands are low lying atolls made up of motu (islets) fringing the edges of lagoons, and also made up of young, poorly developed, infertile, sandy or gravel coralline soils. Nanumaga, Niutao and Niulakita are raised limestone reef islands. The substrates and soils of Tuvalu are among the poorest in the world.[1] They include exposed limestone rock, beach or reef rock, sand and gravel, loamy sands, acid peat soils, swamp or hydromorphic organic soils or muds created in excavated taro-pits, and artificial soils. The natural soils are normally shallow, porous, alkaline, coarse-textured, and have carbonate mineralogy and high pH values. Soils are usually deficient in most of the important nutrients needed for plant growth.

## 1.5. Visit by Consultant Paul Mooney to Tuvalu

Paul Mooney visited Tuvalu from 9-15 September 2025 to attend the Initial Stakeholder Meeting on 11 September and gather data. A summary of the data gathered is presented below and this is elaborated on in the following sections.

- While the Consultant was present in Tuvalu, there were numerous introductions made with the Used Oil and Lubricant Steering Committee members and other relevant parties to this project.

[1] Government of Tuvalu (2016). *Tuvalu National Biodiversity Strategy and Action Plan 5th Report.* 101pp: https://www.cbd.int/doc/world/tv/tv-nr-05-en.pdf

- During this initial visit, the Stakeholder workshop was held, and some information was shared with the project team that would form the basis for generating the information required for this Analysis Report.
- Customs Reports were requested from the Tuvalu Customs Department (TCD) to be generated for the prior three years (2022, 2023, 2024) to analyse the types and quantities of Oils and Lubricants that are imported into Tuvalu. These reports were provided after the consultant had left Tuvalu and required a number of refinements to ensure the correct product category codes were captured.
- A site visit was made to assess the current Used Oil Storage Facility and equipment located at the DWM location in Funafuti.
- The Consultant met with the Director of DWM to discuss the historical and current process for the collection and storage of the used oil and lubricants in Tuvalu.
- DWM reported that 8 x 1,000 litre IBCs had recently been purchased specifically for storing and exporting used oil from the Funafuti storage site to Fiji by Pacific Energy (PE). This oil goes to the BlueScope Pacific Steel (BPS). The details of this arrangement will be investigated further in the Tuvalu Feasibility report and is also discussed below.
- A questionnaire was provided to the DWM staff (see Appendix 1) to share with their colleagues in the outer islands to capture information on volumes used and stored on these Islands. Three of the 8 outer islands did not respond in time to have their data and information included in this Analysis Report. Further assistance will be requested for information from the DWM staff to provide this data for consideration to be included in the Feasibility study.
- The main energy provider, Tuvalu Energy Department (TEC), advised that they generate approximately 600 litres of oil annually for oil changes to the Funafuti main diesel generator. TEC generates smaller volumes of used oil in the outer islands, and these volumes are included in the totals calculated in this report as per above.
- A site visit was made to the Pacific Energy site in Funafuti, which is the main importer of oils and lubricants for Tuvalu. The PE Tuvalu product list was acquired to assist with the identification of brand names and product codes on the customs report. Unfortunately, at the time of the consultant's visit to Tuvalu, the General Manager of PE was on annual leave, and the information included in this report has been generated from the TCD report, which identifies PE directly, and the volumes that they import annually.

- A questionnaire was supplied to the local project coordinator to visit several vehicle repair workshops on Funafuti, and the Public Works Department (PWD) to assess their stored used oil volumes and processors. This information is summarised in Section 7.2.1 below.
- Follow-up emails and phone calls were made to request additional information and verify data from the Tuvalu stakeholders.

## 1.6. Assistance Provided

The following is acknowledged with grateful thanks.

- The Director of the Department of Waste Management (DWM), Epu Falega, and Emily Lafai, who provided considerable support and assistance at this data gathering phase of the project.
- In addition, numerous stakeholders also gave of their time to support, including the members of the Used Oil Lubricant Steering Committee, who also made themselves available for the Project Workshop held on the 11 September 2025.

# 2. BACKGROUND USED OIL INFORMATION

## 2.1. Used Oil

Used oil is defined as any petroleum-based or synthetic oil or fluid that, through contamination or degradation, has become unsuitable for its original purpose due to the presence of impurities or loss of original properties. This covers all used oil with the classification of hazardous waste under the Waigani[2] and Basel Conventions[3]. This includes any semi-solid or liquid product consisting totally or partially of mineral oil or synthesized hydrocarbons (synthetic oils), oily residues from tanks, oil-water mixtures and emulsions. These may be produced from industrial and non-industrial sources where they have been used for lubrication, hydraulic movement, heat transfer, electrical insulation or other purposes and whose original characteristics have changed during use, thereby rendering them unsuitable for further use for the purpose for which they were originally intended.

Once oils have been used, they commonly contain contaminants such as dirt, metal particles, water and combustion by-products. These contaminants significantly increase the environmental and health risks associated with improper handling or disposal.

Large volumes of used oil can potentially enter aquatic ecosystems in water runoff from urbanized areas. Typically, oil spilled on soil migrates downward by gravity into ground waters, and spreads laterally via capillary forces and soil heterogeneity. Once in the environment, oil hydrocarbons and associated metals may persist for years.

In Tuvalu, the environmental risks associated with used oil are particularly high due to the country's small land area, porous coral soils, reliance on shallow groundwater lenses. Even relatively small spills or leaks of used oil can migrate quickly through the ground and contaminate groundwater and lagoon waters. Once contamination occurs, remediation options are extremely limited and costly. This environmental contamination can then lead to indirect health risks as well as environmental damage.

Ingested oil may adversely impact the ability of animals to digest food and damage their intestinal tracts. Oil also reduces the insulating capacity of animal furs and the water repellency of bird feathers, thus increasing morbidity and mortality due to exposure and eventual drowning.

[2] Waigani Convention to ban the importation into Forum Island countries of hazardous and radioactive wastes and to control the transboundary movement and management of hazardous wastes within the south Pacific region (1995).

[3] Basel Convention on the control of transboundary movements of hazardous wastes and their disposal and Annexes and Amendments (1998)

Major community health considerations arise around the fate of used oil due to its toxicity and its ability to impact on humans through environmental contamination. Used oils typically contain a range of compounds that may have adverse impacts when released into the environment. These compounds include polycyclic aromatic hydrocarbons (PAHs), heavy metals, additives and antioxidants, trace levels of chlorinated solvents, and polychlorinated biphenyls (PCBs). Exposure to these compounds indirectly through environmental contamination can result in damage to human target organs including the liver, kidneys, heart, lungs and nervous system. PAHs are also potent carcinogens and may be present in used oil. Oil concentrations as low as one part per million (ppm) can also contaminate drinking water and cause taste problems.

## 2.2. Used Oil Sources

Used oil can originate from many sources and the following sources were explored:

- Engine oil – typically includes crankcase oils from gasoline, diesel and LPG/CNG engines (often the main sources)
- Engine Oil Filters and how they are managed
- Brake fluids
- Gear oils
- Transmission fluids
- Hydraulic oils and fluids
- Compressor oils
- Refrigeration oils
- Industrial process oils
- Electrical insulating oil (Care must be taken to exclude oil likely to contain PCBs)
- Metalworking fluids and oils
- Heat transfer oils
- Machining oils
- Ship's slops, bilge water, tank cleanings produced by vessels during normal shipboard operations
- Bottom clean-out waste from virgin fuel storage tanks, virgin fuel oil spill clean-ups, or other oil

## 2.3. Sources of Used Oil Contamination

It is important to note that some potential components of used oil should be excluded, mainly for safety reasons – flammability and toxicity. These potential components included:

- Petroleum distillates used as solvents, such as turpentine, kerosene, parts-washing solvents
- Petrol and/or diesel (including biofuels) – including mixtures from refuelling errors
- Antifreeze, radiator flushing, or other inhibitor packages
- Oils derived from animal or vegetable fats and oils – including those used as a lubricant
- Paint and paint brush washings
- Chlorinated oil or solvents
- Any virgin or used oil which may contain PCBs (> 5 mg/kg)
- Soluble cutting fluids

The occurrence of such items was, however, noted as other hazardous waste disposal solutions will be needed.

Any used oil suspected of containing PCBs will need to be tested. Testing can be carried out with test kits, but the test kits contain elemental sodium and cannot be imported by air freight. The alternative is to send samples to New Zealand or Australia for testing. PCB contamination arises from old transformer oils and most PCB contaminated transformer oil was removed as part of a SPREP Persistent Organic Pollutants (POPs) removal project in 2005. It is possible, however, that some may still remain as only out-of-service transformers were dealt with in 2005.

## 2.4. Inappropriate Uses of Used Oil

There are several methods for disposing of used oil that are inappropriate and examples of these are:

- disposal on the ground, or into watercourses, sewers or drainage systems
- burial
- using used oil for dust control, weed abatement, vegetation control, timber preservation by painting, staining or dipping
- pest control or as a carrier fluid for agrichemicals (pesticides or herbicides)
- use as a marker, e.g. on playing fields
- placing used oil in rubbish bins to be collected as part of household waste
- open-air burning
- combustion in, for example, kerosene burners
- any other practices, in which the used oil may cause contamination of the ground and groundwater, migrate to watercourses, contaminate air or have negative impacts on humans, plants, animals or other organisms.

## 2.5. Methods of Used Oil Management

Methods of used oil management, including collection and storage, were examined including considering the following storage options:

- Where IBCs (Intermediate Bulk Containers) are used for the collection, storage and transportation of used oil, these must be sound and of good quality. They should not be left in the sun as UV light will break them down. It should be noted that IBCs are for transport and are not designed for long term storage. Used oil stored in IBCs should be transferred to more suitable containers for long term storage.
- Steel drums will corrode and leak, especially where the used oil is mixed with water.
- Plastic drums will deteriorate, especially if left in the sun.
- Bulk storage facilities must be maintained in good condition, regularly inspected and have good secondary containment. They need proper spill control equipment, fire extinguishers and emergency response procedures in place.

It should be noted that long term storage may result in the accumulation of sludges that are difficult to remove by pumping.

# 3. RELEVANT LEGISLATION

## 3.1. Summary Table

Table 2 below sets out a summary of Tuvalu's legislation in relation to used oil management. Further details are provided in the sections that follow.

***Table 2:* Summary of Tuvalu's legislation related to used oil management[4]**

| Framework | Description of Framework | Responsible Ministry or Department |
|---|---|---|
| **The Environment Protection Act (2008)** | An overarching Act on maintaining the environment of Tuvalu. | Department of Environment |
| ***Falekaupule* Act (2008)** | Allows the *Kaupule* to exercise their authority as designated waste management operators by making by-laws under the *Falekaupule* Act. | Ministry of Local Government and Agriculture |
| **Marine Pollution Amendment Act (2017)** | Makes provisions on environmental liability in relation to the prevention and remediation of environmental damage caused by oil, sewage, garbage and other pollutants | Marine Department |
| **Public Health Act (2008)** | Protection and advancement of public health | Ministry of Health |
| **Customs Revenue and Border Protection Act (2014)** | Control of arrival and departure of goods or persons and border protection in Tuvalu and prohibits the import of goods listed in Schedule 2. Empowers the Minister to make Regulations to prohibit the importation into Tuvalu of specified goods | Customs Department |
| **Energy Efficiency Act (2016)** | To promote energy efficiency and energy conservation | Ministry of Energy, Tourism and Transport |

[4]SPREP (2018). *Tuvalu: review of natural resource and environment related legislation*. 17pp.: https://www.sprep.org/attachments/Publications/EMG/sprep-legislative-review-tuvalu.pdf

| Framework | Description of Framework | Responsible Ministry or Department |
|---|---|---|
| **Waste Management Act (2017)** | An act to redefine the roles and responsibilities for waste management in Tuvalu and to make provision for all matters connected with the regulation and management of wastes and the provision of waste related services | Department of Waste Management |
| **Waste Levy (Levy Deposit) Regulation (2019)** | Identifies products to be levied on importation | Department of Waste Management |

## 3.2. The Environment Protection Act (2022)[5]

This Act was enacted in 2008 and revised in 2022. It is administered by the Department of Environment, is the principal act concerning the protection and management of Tuvalu's environment. Some of the areas that the Act regulates are:

- the conduct of environment impact assessments;
- the regulation and control of pollution and wastes;
- all matters concerning the implementation of international environment related conventions;
- the protection of the biodiversity; and
- responses to climate change.

The Act has a wide range of objectives that include the following:

- coordination of the role of government in relation to environmental protection and sustainable development;
- facilitation of the compliance and implementation of obligations under any regional and international agreements or conventions;
- provision of a mechanism for the development of environmental policy and law;
- prevention, control, monitoring and response to pollution;
- reduction in the production of wastes, and at the same time, promotion of the environmentally sound management and disposal of all wastes; and
- facilitation of the assessment and regulation of environmental impacts of certain activities.

[5] Government of Tuvalu (2022). *Environment Protection Act*: https://tuvalu-legislation.tv/cms/images/LEGISLATION/PRINCIPAL/2008/2008-0002/2008-0002_2.pdf

This Act is considered relevant to used oil management as mismanagement of used oil will result in environmental pollution and harm. This Act also manages international conventions including conventions controlling the export of used oil.

### 3.3. Falekaupule Act (2008)[6]

This act was enacted in 1997 and amended in 2008. The *Kaupule* is the local government unit in each island which is designated as the waste management operator in the waste service areas in their area of jurisdiction. The *Kaupule* may make by-laws under the *Falekaupule* Act in relation to any matter and perform the function identified under section 15(2) of the Waste Operations and Services Act (2009).

This Act is considered relevant to used oil management as it addresses the collection and management of used oil in relation to the Kaupule in each island.

### 3.4. Marine Pollution Amendment Act[7] (2017)

The Marine Pollution Act is a comprehensive law dealing with marine pollution and the dumping and incineration of wastes at sea. The Act makes provisions on environmental liability in relation to the prevention and remediation of environmental damage caused by oil, sewage, garbage and other pollutants. The discharge or escape of pollution, voluntarily or caused by omission, is considered an offence to the country. Additionally, the Act includes important provisions on:

- reception facilities in port for disposal of oil and pollutant residues, garbage and sewage from those ships;
- dumping and incineration of waste; and
- marine casualties.

This Act is considered relevant to used oil management as used oil often causes marine pollution. This includes the dumping of used oil from ships and vessels, and oil spills that generate used oil.

[6] Government of Tuvalu (2008). *Falekaupule Act:* https://tuvalu-legislation.tv/cms/images/LEGISLATION/PRINCIPAL/1997/1997-0008/1997-0008_1.pdf
[7] Government of Tuvalu (2007). *Marine Pollution (Amendment) Act:* https://tuvalu-data.sprep.org/system/files/tuvalu-marine-pollution-amendment-act-2017.pdf

## 3.5. Public Health Act (2008)[8]

This Act was enacted originally in 1926 and amended in 2008. The sole purpose of this Act is to empower the Minister to make regulations for the purpose of protecting and advancing public health in Tuvalu and it also defines offences for purposes of the Act. The matters that may be regulated by the Minister include:

- latrines, dustbins and drains;
- scavenging, cleaning and disinfecting;
- removal and disposal of nightsoil and house refuse;
- preventing the spread of infectious diseases;
- regulating the use of any rain, stream, well or water source and the prevention of water pollution;
- mosquitoes; and
- laundries.

This Act is a recently updated old Act but is considered relevant to used oil management in this sense that mismanagement of used oil could result in a public health nuisance.

## 3.6. Customs Revenue and Border Protection Act[9] (2014)

This Act provides for the control of arrival and departure of goods or persons and border protection in Tuvalu. It also prohibits the import of goods listed in Schedule 2 and empowers the Minister to make Regulations to prohibit the importation into Tuvalu of specified goods.

This Act is considered relevant to used oil management as it is important to keep good records of oil imports to verify the amount of used oil generated and keep track of potential used oil generators.

## 3.7. Energy Efficiency Act[10] (2016)

The purpose of this Act is to promote, in Tuvalu, energy efficiency, energy conservation and to give effect to certain obligations that Tuvalu has under the Climate Change Conventions and related conventions. Appliances regulated under the Act include refrigerators, air-conditioners and lights.

[8] Government of Tuvalu (2008). *Public Health Act:* https://tuvalu-legislation.tv/cms/images/LEGISLATION/PRINCIPAL/1926/1926-0008/1926-0008_1.pdf

[9] Government of Tuvalu (2014). *Customs Revenue and Border Protection Act:* https://finance.gov.tv/wp-content/uploads/2022/05/Customs-Revenueand-Border-Protection-Act-2014.pdf

[10] Government of Tuvalu (2016). *Energy Efficiency Act:* https://tuvalu-legislation.tv/cms/images/LEGISLATION/PRINCIPAL/2016/2016-0003/2016-0003_1.pdf

This Act is considered relevant to used oil management as a large percentage of used oil is generated from the use of fossil fuels to generate energy.

### 3.8. Waste Management Act (2017)[11]

This Act unifies waste and pollution management in Tuvalu. Under this Act, the responsibility for the regulation of wastes in Tuvalu is vested in the Department of Waste Management. The implementation of international conventions relating to the management of hazardous wastes is identified as the responsibility of the Department of Waste Management. Regulatory control over waste dumps and waste disposal sites can be exercised by:

a) designated waste management operators in accordance with their functions and powers provided for in this Act, and any other law relating to the management of wastes; and

b) the Department of Environment in accordance with environmental impact assessment procedures, and any other relevant provisions of the laws which relate to environment protection.

The regulation of waste disposal at sea by the dumping and incineration of wastes shall be the responsibility of the Department of Marine and Port Services under the Marine Pollution Act 1991 (as amended).

Litter control measures are identified to be implemented and enforced in accordance with regulations made under this Act, and the management of and regulatory control over medical wastes shall be the responsibility of the Ministry of Health.

This Act is considered relevant to used oil management as used oil management is directly governed by this Act.

### 3.9. Waste Management (Levy Deposit) Regulation 2019[12]

This regulation introduces a levy deposit and refund scheme for 14 types of imported goods to support the recovery, processing, treatment and shipment of those goods at the end of

[11] Government of Tuvalu (2017). *Waste Management Act 2017:* https://tuvalu-legislation.tv/cms/images/LEGISLATION/PRINCIPAL/2017/2017-0022/2017-0022_1.pdf

[12] Government of Tuvalu (2019). *Waste Management (Levy Deposit) Regulation 2019:* https://tuvalu-data.sprep.org/system/files/Waste%20Management%20(LevyDeposit)%20Regulation%202019_V01.docx_v23.05.2019%20.pdf

their life and prescribes rules for the collection and administration of the levy revenue generated.

Under schedule 1 of the regulation, glass bottles, aluminium cans, and PET (polyethylene terephthalate) bottles containing certain beverages or oils are subject to a deposit amount of 10 cents per container; large appliances are subject to a deposit of TV$100 per item; small appliances to TV$30 per item; office and family vehicles to TV$300 per vehicle; motorbikes TV$200; small construction equipment TV$500; medium construction equipment TV$1,000; and heavy construction equipment TV$2,000.

Under the Regulation, importers must collect the levied items at the point of entry once the deposit has been paid, and the levy deposit must be attached to the selling price of the items. The regulation requires that levied products at the end of their life including aluminium, PET, glass computers, laptops, televisions, cars, motorbikes and solar panel batteries be properly packed and delivered for shipping for recycling. Partial refunds of the levy deposit are issued for most of the levied items returned to the Transfer Station for recycling.

This Act is considered relevant to used oil management as it could be extended to cover a levy on the import of lubricating oils and possibly other oils to fund the management of used oil resulting from these products.

# 4. POLICY, STRATEGY AND PLANNING DOCUMENTS

## 4.1. Te Kete: Tuvalu National Strategy for Sustainable Development 2021-2030[13]

### *4.1.1. Overview*

The Tuvalu National Strategy for Sustainable Development 2021-2030 (Te Kete) aims for "A Peaceful, Resilient and Prosperous Tuvalu", emphasizing environmental resilience, sustainable livelihoods, and prudent resource management.

For used oil management, the key issues are Tuvalu's commitments to waste management, climate change adaptation, energy security, and environmental protection.

### *4.1.2. Strategic Priority Area (SPA) 1: Enabling Environment*

National Outcome 5: Environment, Meteorology, Land and Waste Management Strengthened, Key measures are:

- Enforce Environmental and Social Impact Assessments (EIAs).
- Develop and implement improved waste management strategies with communities and the private sector.
- Enhance meteorological and disaster resilience services.
- Apply geospatial tools for environmental monitoring.

**Relevance to used oil**: reinforces the need for robust hazardous and non-hazardous waste systems, where used oil management fits as part of pollution prevention and environmental protection.

### *4.1.3. SPA 2: Economic Development*

National Outcome 6: Macroeconomic Resilience – Emphasis on reducing reliance on imports and creating sustainable financial frameworks.

**Relevance to used oil**: recovery and recycling could reduce dependency on imported fuels and lower economic risks. This may not be possible in Tuvalu though as the volume of used oil is relatively small.

[13] Government of Tuvalu (2020). *Te Kete – Tuvalu National Strategy for Sustainable Development 2021-2030:*https://finance.gov.tv/wp-content/uploads/2022/05/Te-Kete_TuvaluNationalStrategyForSustainableDevelopment_2021to2030.pdf

National Outcome 9: Strengthening the Private Sector – Encourages private-sector participation and outsourcing of services.

**Relevance to used oil**: opportunities for private contractors or community enterprises to handle used oil collection, transport, and treatment.

#### *4.1.4. SPA 5: Infrastructure Development*

National Outcome 19: Quality and Affordable Energy Supply – Focus on reducing dependence on costly fossil fuel imports and promoting renewable energy expansion.

**Relevance to used oil**: used oil could be explored as an alternative energy source (with safeguards); and improper disposal risks must be avoided.

National Outcome 20: Access to Clean Water and Sanitation – Priority on safeguarding water quality and sanitation.

**Relevance to used oil**: critical to prevent used oil spills and leaks contaminating scarce groundwater and rainwater supplies.

#### *4.1.5. Other Issues*

- Climate Change & Disaster Resilience (National Outcome 4): Pollution control, including hazardous waste like used oil, is vital for resilience.
- Partnerships (National Outcome 2): International and regional cooperation (e.g., SPREP and other agencies) essential for technical and financial support.
- Governance (National Outcome 3): Strengthened legal and institutional frameworks will be needed to regulate hazardous substances and waste streams.

#### *4.1.6. Summary*

In summary, used oil management fits within the National Strategy as part of strengthened waste management systems, energy resilience, and pollution prevention. It underscores the need for institutional frameworks and regional partnerships to ensure that used oil is safely collected, reused where appropriate, and prevented from contaminating Tuvalu's fragile environment.

## 4.2. National Environment Management Strategy 2015-2020[14]

### *4.2.1. Overview*

The National Environment Management Strategy 2015–2020 (NEMS) has set a policy platform to support long-term planning and action on priority national environmental issues. It identifies policy goals and strategies that fall under four thematic areas: Environmental Governance; Island Biodiversity Conservation and Management; Waste Management and Pollution Control; and Environment Awareness and Education. The strategies under the Waste Management and Pollution Control theme are relevant to used oil management.

The NEMS provided a five-year policy guide to strengthen environmental governance, biodiversity conservation, waste management, and environmental education. It complemented the National Sustainable Development Strategy and Tuvalu's international commitments under Multilateral Environmental Agreements (MEAs). Waste management and pollution control are identified as pressing challenges, especially in Funafuti due to urbanisation, limited land, and risks to human and ecosystem health.

### *4.2.2. Waste Management and Pollution Control*

Goal: Waste is appropriately minimised and managed within acceptable levels.

Strategies included:

- Development of the National Solid Waste Management Strategy (NSWMS) and action plans.
- Strengthening waste inventories at Kaupule (local council) level.
- Upgrading dumpsites, securing land for future disposal, and improving collection equipment.
- Establishing enforcement mechanisms for waste regulations.
- Building community awareness and education on 3Rs (Reduce, Reuse, Recycle), composting, and hazardous waste issues.

**Relevance to used oil**:

Used oil is included under hazardous waste and pollution control priorities. Inventories, enforcement, and awareness lay the groundwork for tracking, regulating, and managing used oil.

[14] SRPEP (2017). *Tuvalu: National Environment Management Strategy (NEMS) 2015-2020*: https://library.sprep.org/content/tuvalu-national-environment-management-strategy-nems-2015-2020

Infrastructure upgrades are essential to avoid improper disposal or leakage of used oil.

#### *4.2.3. Governance and Enforcement*

The NEMS called for an effective enforcement system of environmental laws, including hazardous waste regulations. It strengthened the role of the Department of Environment (DoE) in oversight, supported by Kaupule and partnerships with NGOs, churches, and regional organisations (SPREP, JICA). It also promoted the polluter pay principle, which is directly applicable to importers and users of lubricating and other oils, and generators of used oil.

#### *4.2.4. Human and Financial Resource Implications*

The strategy recognised institutional weaknesses and limited capacity for waste management. It called for additional training, dedicated staff, and financing mechanisms. For used oil, this highlights the need for capacity building on hazardous waste handling, secure storage, and sustainable financing for export or treatment.

#### *4.2.5. Key Implications for Used Oil Management*

- **Policy Basis:** Provides a mandate to treat used oil as hazardous waste requiring strict control and enforcement.
- **Systems Development:** Stresses inventories, upgraded facilities, and improved transport/collection.
- **Regional Cooperation:** Supports reliance on offshore treatment/export of hazardous waste, including used oil.
- **Risk Reduction:** Recognises waste (including used oil) mismanagement as a driver of lagoon and groundwater pollution.
- **Public Awareness:** Promotes education and recycling strategies, which could include campaigns on safe used oil reuse/disposal and alternatives to unsatisfactory uses.

#### *4.2.6. Summary*

In summary, the Tuvalu NEMS (2015–2020) provided a policy and strategic foundation for managing hazardous waste, including used oil. While not specifically highlighted, used oil fits within the waste and pollution control objectives. The strategy emphasised legislation, enforcement, infrastructure upgrades, inventories, education, and financing mechanisms, all of which are essential components of a future Used Oil Management Plan for Tuvalu.

## 4.3. National Integrated Waste Policy and Action Plan (2017-2026)[15]

### *4.3.1. Overview*

The policy's vision is "A cleaner and healthier Tuvalu for today and the future generation." It provides a 10-year framework for integrated waste management, covering household, commercial, institutional, liquid, and hazardous wastes across Funafuti and the outer islands. Priorities include minimising landfill disposal, improving hazardous waste management, and ensuring compliance with international obligations.

The policy sets six overarching goals, three of which are directly relevant to used oil management:

- Strengthened institutional systems for waste, including hazardous waste handling.
- Stakeholder awareness and responsibility-sharing, including communities and the private sector.
- Hazardous waste management is aligned with best practice and conventions.

The Policy and Action Plan identify the following in relation to used oil

- Tuvalu generates an estimated 5,000 litres of used oil annually.
- Around 80% is exported to Fiji's steel mill, but ~14,500 litres remain stockpiled in Funafuti.
- Used oil is collected and stored at the Funafuti hangar in tanks, awaiting shipment.
- There is no dedicated treatment or reprocessing capacity on-island, and stockpiling poses risks to soil and groundwater.

### *4.3.2. Policy and Action Plan Directions for Used Oil*

- Hazardous Waste Priority: Identifies used oil, asbestos, healthcare wastes, e-wastes, and chemicals as required strict controls.
- Strategic Action: DWM, Ministry of Health, and Department of Environment to cooperate in handling, storage, and disposal of hazardous wastes including used oil.
- Regional Cooperation: Encourages export to overseas recycling or treatment facilities.
- Infrastructure: Planned Transfer and Recycling Station in Funafuti will segregate hazardous wastes like used oil from general waste.
- Monitoring & Reporting: Hazardous waste flows, including used oil stockpiles and exports, to be tracked and reported.

[15]Government of Tuvalu (2016). *Tuvalu Integrated Waste Policy and Action Plan 2017 – 2026*: https://tuvalu-data.sprep.org/system/files/Tuvalu%20Integrated%20Waste%20Policy%20%26%20Action%20Plan.pdf

#### 4.3.3. Governance and Institutional Framework

- DWM leads to hazardous waste management, including used oil collection, storage, and shipment.
- Kaupule provides local waste services, but hazardous waste remains a centralised responsibility.
- Department of Environment ensures compliance with pollution control laws and conventions.
- Marine Department oversees prevention of illegal disposal at sea.

#### 4.3.4. Challenges

The following challenges are identified:

- Stockpiling risk: Large volumes can remain in Funafuti without secure storage.
- Export dependence: Reliance on Fiji for recycling creates vulnerabilities.
- Capacity gaps: Limited trained personnel and weak enforcement of protocols.
- Land scarcity: Limited options for used oil stockpiling.

#### 4.3.5. Opportunities

The following opportunities are identified:

- Policy alignment: Supports Tuvalu's commitments under waste and pollution conventions.
- Regional partnerships: Potential cooperation with SPREP, donor projects, and private operators for export.
- Energy linkages: Potential controlled re-use of used oil in energy recovery, with safeguards.
- Infrastructure upgrades: Transfer and Recycling Station offers secure storage and preparation for export.

#### 4.3.6. Summary

In summary, the Tuvalu Integrated Waste Policy and Action Plan recognise used oil as a priority hazardous waste stream. While small annual volumes are exported, significant stockpiles can remain on-island, posing risks. The plan mandates safe collection, storage, and export, supported by DWM, DoE, and regional partners. The Transfer and Recycling Station and stronger regulatory enforcement are expected to improve management. For Tuvalu's Used Oil Management Plan, the Integrated Waste Policy and Action Plan provide a strong policy foundation but highlights the urgent need for secure storage, reliable export pathways, strengthened capacity, and integration with broader hazardous waste and energy strategies.

## 4.4. Tuvalu State of Environment (SOE) Report[16] SPREP 2022

### *4.4.1. Overview*

Key drivers of the SOE 2022 Report include population growth, economic development, climate change, and urbanisation.

The pressures identified include pollution, inadequate waste management, and limited land availability.

### *4.4.2. Waste Management Challenges*

- Waste management is identified as one of Tuvalu's most significant environmental issues.*E*
- Although per capita waste generation is not high, land scarcity and high population density limit disposal and recycling options.
- National collection services reach about 90% of households, but the landfill is over-capacity and lacks pollution control systems.
- Some Illegal dumping and open burning persist, while resource recovery and recycling systems are underdeveloped.

**Relevance to used oil:**

- Without dedicated collection and containment, there is a risk of used oil being dumped or burned.
- This could contaminate scarce groundwater lenses and lagoon waters, already stressed by septic leakage.

### *4.4.3. Pollution and Water Quality*

Tuvalu relies heavily on rainwater and fragile groundwater lenses. Groundwater is already polluted by septic tank leakage and waste mismanagement. Used oil spills or leakages pose a high risk of further contaminating groundwater and lagoons, threatening public health, ecosystems, and food security.

### *4.4.4. Governance and Policy Framework*

Tuvalu has an appropriate legislative base for waste management (Environment Protection Act 2008, Tuvalu Integrated Waste Policy & Action Plan 2017–2026, etc. However, enforcement capacity is weak and donor-funded projects provide much support. Solutions

[16] SPREP (2022). *Tuvalu State of nvironment Report 2022*: https://tuvalu-data.sprep.org/system/files/211110-Tuvalu-State-of-Environment-report%20Final%20Interactive.pdf

emphasise strengthening institutional systems, building public understanding, fostering public–private partnerships, and developing recycling systems.

**Relevance to used oil:**

- Establish legally mandated collection and storage systems with pollution controls.
- Build partnerships with private operators and regional facilities for export or safe reprocessing.
- Integrate used oil management into Tuvalu's waste minimisation and recycling strategies.

### *4.4.5. Energy and Climate Change*

Tuvalu relies heavily on imported fossil fuels, though renewables (particularly solar) are expanding with donor support. Used oil management can link to the energy sector through controlled re-use of oil in energy generation (may not be suitable for Tuvalu) and avoiding uncontrolled burning that worsens greenhouse gas and pollutant emissions.

**Relevance to Used Oil**

- High vulnerability: leakage of used oil directly endangers Tuvalu's water resources and lagoons.
- Landfills: landfilling is unsuitable for used oil; dedicated systems are needed.
- Policy alignment: national waste and climate strategies call for better hazardous waste controls, recycling, and partnerships.
- Capacity gaps: enforcement, infrastructure, and public awareness remain weak; donor and regional support are essential.
- Opportunity to link used oil management with renewable energy transition and offshore hazardous waste treatment systems.

### *4.4.6. Summary*

In summary, the SOE 2022 highlights that Tuvalu's waste sector is under severe stress, with overflowing landfill, pollution of freshwater, and weak hazardous waste controls. These conditions make used oil a priority risk stream. A Tuvalu used oil management plan must therefore focus on dedicated collection and containment systems, prevention of leaks, regional export or reprocessing partnerships, and strong integration with waste governance and energy policies.

# 5. PREVIOUS SURVEYS AND ENERGY SUPPLY

## 5.1. Used Oil – Based on the 2014 Survey[17]

The 2014 Golder survey for SPREP stated that annual imports of lubricating oil averaged 6,500 L (2011–2013), and the main generator was the Tuvalu Electricity Corporation (TEC). Pacific Energy SWP Ltd was the importer of lubricating and hydraulic oils. The estimated waste oil generation was about 3,500 L/year.

The main points were:

- In 2014, TEC produced about 1,600 L/year on Funafuti; it was noted that waste oil was stored in tanks, and there was a stockpile of about 2,500 L.
- Pacific Energy had commenced shipping waste oil to Fiji (approx. 20 × 200 L drums were shipped during the first Pacific Energy Shipment).).
- Motor vehicles – growing fleet (especially motorbikes).
- Waste oil was also being reused for lubrication (e.g., chains) rather than stockpiled.
- Government workshops – containers used for waste oil, but poor segregation (mixed with batteries, transformers, etc.).
- Landfill – too small, not suitable for hazardous waste, no secure public storage site.

Golder reported that shipping waste oil to Fiji costs about USD $5,500 per container. While this figure may appear low, it dates back to 2014 and may not include all associated expenses, such as port fees at both ends, inland transportation to BlueScope Steel in Fiji, and other handling costs. It is also possible that Pacific Energy covered part or all of these costs. The upcoming Feasibility Study will therefore include updated freight and handling costs, and investigate the current logistical and financial arrangements surrounding this shipment, including the respective roles and cost responsibilities of the Department of Waste Management (DWM), Pacific Energy, BlueScope Steel in Fiji, and other stakeholders. The objective is to establish a clear and updated cost breakdown and gain a comprehensive understanding of how the process is organised and operates in practice.

It was proposed by Golder to have a centralised storage site and an approach that combines the export of waste oil with other recyclables (scrap, batteries, etc.). It was also suggested to evaluate in-country recycling/filtration technologies.

[17] Golder Associates (2014) Tuvalu Contemporary Used Oil Audit for SPREP

It was noted that there was no specific national waste oil legislation in 2014, and used oil management responsibility was suggested for Solid Waste Authority of Tuvalu (SWAT) and the Energy Office.

It was noted that Tuvalu was a party to the Waigani Convention for hazardous waste movements in the Pacific).

It was also noted that the 2012–2020 Energy Plan aimed at 100% renewable electricity and that was a key driver, with implications for reducing oil use over time.

The 2014 Report Key Findings were therefore:

- At least 3,500 L/year of recoverable used oil.
- Immediate priority: safe collection and centralized storage.
- Export uneconomic unless integrated with other waste streams and shipping efficiencies.
- Need for a national management framework, possibly with regional partnerships.
- Feasibility of in-country reprocessing/reuse technologies should be explored.

## 5.2. Used Oil – Based on the 2019 NIP Report[18]

The 2019 NIP Report stated that Tuvalu imports around 30,000 litres of lubricants per year and exports 20,000 litres of used oil per year (i.e. 66% of import volumes) to Bluescope Steel in Fiji. The upcoming Feasibility Study will help determine whether the exported 20,000 litres fully accounted for all used oil generated each year or if a portion remains stored. It will also clarify whether these exports include used oil recovered from historical stockpiles.

The 2019 report also stated that:

- Used oil that is not collected is mainly used as a motorbike chain lubricant.
- There are currently issues around lack of insurance to cover used oil exports preventing its export to Fiji.
- A total of about 10,000 litres of used oil (as of October 2019) are stockpiled in IBCs and other containers on Funafuti.
- Each of the outer islands has an IBC for used oil collection and storage, although these IBCs containing used oil are unable to be transported back to Funafuti on the inter-island passenger boat.

A significant discrepancy can be observed between the estimates of lubricant imports reported in the 2014 survey (6,500 litres) and the 2019 survey (30,000 litres). This represents a 4.6-fold increase over five years, which appears unlikely. The difference is

[18] Going Troppo (2019) Tuvalu National Implementation Plan for Persistent Organic Pollutants

difficult to explain and raises concerns about the accuracy of one or both datasets. The upcoming Feasibility Study will help clarify the current situation regarding lubricant imports and identify possible reasons for this inconsistency.

## 5.3. Energy Supply[19]

Tuvalu has an energy supply goal to replace all diesel generation of electricity with renewable sources; and to increase energy use efficiency in Funafuti by 30%. These goals are directly linked to the nation's climate change policy and sustainable development plan.[20]

To meet these goals, Tuvalu must develop around 6MW of renewable energy electricity generation capacity. To help meet this objective, electricity is being generated using renewable energy in all nine islands of Tuvalu. The system requires standby diesel generation to provide a back-up to the renewable energy supplies when weather conditions limit renewable energy generation.

Approximately 75% of all outer island electricity production is from renewable sources, as fuel transportation from Funafuti increases the cost of electricity generation and has environmental risks associated with potential fuel spills. Conversion or replacement of existing diesel generators to run on bio-diesel fuel is proposed to take place in the last stage of the renewable electricity conversion.

It is estimated that 5% of the annual national electricity production will be eventually supplied from bio-diesel generation. Energy efficiency improvements will be initially targeted on Funafuti, which has a higher power demand *per capita* than the outer islands and consumes 95% of the electricity generated by the Tuvalu Electricity Corporation (TEC). The energy efficiency programme will include public education, energy audits and technology improvements. In 2019 Tuvalu was using around 1.8 million litres of diesel fuel per year to generate 6.3M kw of electricity (Funafuti: 5.9M kw pa; and the outer islands 0.34M kw pa total).

## 5.4. Basel Convention

Tuvalu is a Party to the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal (the Basel Convention). This convention aims to achieve the environmentally sound management of hazardous wastes by minimising transboundary movements consistent with environmentally sound and efficient; treatment

[19]Government of Tuvalu (2011). *Master Plan for Renewable Electricity and Energy Efficiency in Tuvalu*: *Enetise Tutumau 2012-2020*
[20]Government of Tuvalu (2005). *National Strategy for Sustainable Development 2005-2015*. 28pp

and disposal as close as possible to the source of generation; and minimisation of generation.

The Basel Convention is of importance when considering disposal of hazardous wastes, including used oil, by export to treatment facilities in other countries that are Party to the Basel Convention. All exports of hazardous wastes are required to comply with stringent control procedures, including being approved by both the exporting and importing countries.

The Basel Convention provides more flexibility than the Waigani Convention (see below), regarding possible export destinations for used oil. Used oil has, in the past, been exported from Pacific Countries to destinations that are not in the Pacific, including South Korea, India and Saudi Arabia.

## 5.5. Waigani Convention

Tuvalu is a Party to the Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (Waigani Convention). The Waigani Convention objective is to prevent the importation of hazardous and radioactive waste into the South Pacific region, to minimize production within the region and to ensure the environmentally sound management and disposal of existing wastes. As with the Basel Convention, transboundary transactions in hazardous wastes between Parties are required to comply with stringent control procedures.

The Waigani Convention can only be used for the export of hazardous wastes to destinations within the Pacific, including Fiji, Australia and New Zealand.

# 6. USED OIL IMPORT INFORMATION

The following (Table 3 below) is the information obtained from the Tuvalu Customs Department, for quantities of lubricating oil and related products.

***Table 3:** Products Imported into Tuvalu*

| HS Code | Item | Net Weight (kgs) 2022 | Net Weight (kgs) 2023 | Net Weight (kgs) 2024 |
|---|---|---|---|---|
| 27101212 | Petrol | 1,382,507 | 1,179,677 | 1,430,194 |
| 27101911 | Diesel | 4,071,581 | 3,636,500 | 4,732,750 |
| 27101932 | Kerosene | 44,300 | 31,000 | 34,000 |
| 27101940 | Grease | 262 | 459 | 387 |
| 27101940 | Lubricating Oil | 14,324 | 26,400 | 33,462 |

The above figures show significant variation from year to year and also from product to product. Varying activities taking place on Funafuti may have influenced the demand for these products, including the recent increased infrastructure activity referred to in Section 7.1 below. It is noted, however, that the quantity of lubricating oil used has increased steadily. The upcoming Feasibility Study will aim to examine these figures more closely to understand better the product import trends.

Pacific Energy are the largest importer of oil and lubricant products to Tuvalu. There are no other regular importers of oil or lubricants to Tuvalu. Over the 3-year period for the provision of the import data, PE were responsible for 98% of Oil and Lubricant Imports.

Pacific Energy do take back large volumes of used lubricant oil from the majority of their customers, where the used oil can easily be recovered. They also arrange for exports for DWM of used oil to Fiji through their arrangement with BlueScope. Further details of this arrangement will be investigated in the feasibility report and is also discussed in Section 8.5 below.

Large volumes of other types of oils are also imported that are not suitable for recycling or are burnt in the operation of engines such as two stroke outboard motors, brush cutters and chainsaws and other lubricating oils, such as chainsaw bar oil and hydraulic oil, etc.

# 7. USED OIL GENERATION

## 7.1. Estimate of Used Oil Generated

The statistical information provided by the Tuvalu Customs Department (Section 6 above) gave a figure of 33,462 litres of lubricating oil imported in 2024. Numerous previous used oil investigations have provided a "rule of thumb" that about 50% of lubricating oil added to engines ended up as used oil. Based on the 2024 figure, it could therefore be expected that about 16,700 litres of used oil were generated for the last full year of data.

There are other sources of used oil besides lubricating oil, such as hydraulic oil, heat transfer oil, grease and a range of others as per Section 2.2 above. Some used oils also contain water, often as an emulsion that does not readily separate. These factors may add another 5% to the quantity of used oil, which would bring the figure up to around 17,535 litres.

There have been two large infrastructure projects undertaken recently in Funafuti with the resurfacing of the international runway and the Tuvalu coastal adaption project. Both of these projects have seen an increased amount of large equipment operating in Funafuti that require lubricants and used oil would have been produced from these projects. The usual production of used oil may therefore be less than 17,535 litres. Based on the 2023 figure (26,400 litres) and using the same logic as above, the usual used oil production may be nearer to 14,000 litres/year. This can be quoted as a range, say: **13,000 -17,000 litres/year.**

## 7.2. Organisations Visited

### *7.2.1. Workshops*

All workshops in Funafuti were visited, and the results of the visits are presented in Table 4 below.

***Table 4:** Information from Funafuti Workshops*

| Workshop: | Teavaki Mechanical Workshop | Tolauapi Workshop | Public Works Department | Halo Mechanics | Malia and Brothers |
|---|---|---|---|---|---|
| **Equipment Services** | | | | | |
| Motorbike | Yes | Yes | Yes | No | Yes |
| Car | No | Yes | Yes | Yes | Yes |
| Marine | Yes | No | No | No | No |
| Large Vehicle | No | Yes | Yes | Yes | Yes |
| **Type of Lubricant Used** | | | | | |
| Engine Oil | Yes | Yes | Yes | Yes | Yes |

| Workshop: | Teavaki Mechanical Workshop | Tolauapi Workshop | Public Works Department | Halo Mechanics | Malia and Brothers |
|---|---|---|---|---|---|
| Hydraulic Fluids | Yes | Yes | Yes | Yes | No |
| Transmission | Yes | Yes | Yes | Yes | Yes |
| Compressor Oils | Yes | Yes | Yes | No | Yes |
| Gear Oil | Yes | Yes | Yes | Yes | Yes |
| **Other Details** | | | | | |
| Supplier | Pacific Energy | Service Station and Pacific Energy | Pacific Energy | Pacific Energy | Pacific Energy |
| Used Oil Stored on Site | 480 | 30 | 1000 | 332 | 480 |
| Storage Method | 20 Litre Cans | 20 Litre Cans | Tanktainer | 20 Litre Cans | 20 Litre Cans |
| Disposal | DWM | No disposal | DWM | DWM | DWM |
| Used for Chain Lubrication | Yes | Yes | Yes | Yes | Yes |
| Used Oil Staff Training | Yes | No staff | Yes | Usually, no staff | Yes |
| Notes | Has Staff and self- taught by senior mechanic | No notes | Training Provided | Training by Senior if needed | Trained elsewhere and had knowledge to start own business |

This information is summarised below.

Following the initial consultation with Stakeholder representatives by the consultant, local consultations took place with five of the Workshops located on Funafuti, including the Public Works Department (PWD).

There were several different lubricating products held on site at the separate locations, including motor oil, compressor oil, hydraulic and transmission fluids.

All the workshops held used oil onsite up to 1,000 litres in volume. The used oil was stored in a combination of old oil containers at the smaller workshops and a 1,000-litre Tanktainer at the PWD site.

The various workshops all used Pacific Energy for their lubricant supplier and after storing the used oil on their various sites, most workshops reported taking the used oil and lubricants to the DWM for consolidation and to await export.

All workshops reported using the used oil to lubricate motorcycle chains. Tuvalu's main mode of transport is small motorcycles. While this is an effective use of the used oil in the salt air conditions, the volumes of the used oil consumed for this purpose would not be deemed a viable long-term solution for the management of the used oil in Tuvalu. It also risks contaminating groundwater and harming the environment due to spills.

A combined total of 2,320 litres of used oil, and lubricants was stored across the five workshop locations with minimal secondary protection (bunding) witnessed at these sites during the time of the consultant's visit.

The National Used Oil Plan should look to formalise the processes and maximum volumes for storing used oil and lubricants at these workshops, with more consistent collection or delivery procedure in place to deliver this product to a properly equipped and managed used oil facility at the Department of Waste Management site.

The Funafuti workshops visited were:

- Teavaki Mechanical Workshop
- Tolauapi Workshop
- Public Works Department
- Halo Mechanics
- Malia & Brothers

Some Photos of these workshops are shown below:

| Malia & Brothers | Halo Mechanics |
|---|---|
|  |  |
| **Teavaki Mechanical Workshop** | |
|  |  |

| Public Works Department (PWD) |
| --- |
|  |

***Photo 1:** Current used oil storage practices at workshops in Tuvalu*

### *7.2.2. Tuvalu Electricity Corporation (TEC)*

The Tuvalu Electricity Corporation (TEC) is a state-owned enterprise. TEC was established by the Tuvalu Electricity Corporation Act 1990 as a sole provider of electricity services to the rest of Tuvalu.

The TEC has set a vision of "Powering Tuvalu with Renewable Resources" and this aligns well with the Tuvalu Government's set target of 100% renewable energy by 2025.

All the islands of Tuvalu are on continuous full power supply, and the access rate is 100%. The outer islands are powered by hybrid solar PV system with a diesel generator on standby. For the main island of Funafuti there are some solar PV systems tied to the grid with diesel base load generators.

The TEC is a large user of lubricating oil (and other oil) in Tuvalu, and conversely also a large generator of used oil. TEC's current on-site used oil storage strategy is:

- "Short-term operational storage only" (drums/IBCs used between oil changes and periodic transfers), with
- Most long-term stockpiling of TEC waste now occurs at the DWM used oil on Funafuti.

TEC therefore stores only limited volumes of used oil on-site at the Funafuti power station at any one time. The bulk of the national stockpile is held at the DWM's used oil storage area on Funafuti – see Section 8.1 below.

Mr Samuelu Numela of TEC, who attended the stakeholder inception meeting, advised that TEC uses approximately 600 litres of new oil when they complete an oil change for the main diesel generators on Funafuti. This oil change occurs annually at the Funafuti TEC site. It is assumed that similar oil changes occur on the Tuvalu outer islands diesel engines, albeit that these less populated islands would have smaller diesel power generators that require less oil for operations and maintenance.

The 2014 Tuvalu Used Oil survey stated that TEC produced about 1,600 L/year on Funafuti; it was noted that waste oil was stored in tanks, and there was a stockpile of about 2,500 L.

It is understood that the majority of the used oil stockpile is held by the DWM, but this was not specifically clarified with Mr Samuelu Numela during the Consultant's visit and this will need to be confirmed with DWM staff during the internal stocktake that they have committed to completing to assist with this project.

### *7.2.3. Outer Islands*

The in-country visit by the consultant did not allow for a visit to each of the Tuvalu outer islands. DWM explained that they had staff on each of the islands that would assist with providing information back to the project team.

A questionnaire was provided to the Outer Islands DWM staff (See Appendix 1) to share with their colleagues in the outer islands to capture information on volumes of used lubricants and storage facilities, and any other comments on used oil and lubricants on these Islands.

Three of the 8 outer islands did not respond in time to have their data and information included in this analysis report. Further assistance will be requested for information from the DWM staff to provide this data for consideration to be included in the Feasibility Study; however, some information can be summarised from some of the responses received and other Tuvalu desktop research.

Outer-island power generation accounts for roughly 5% of total national generation, implying used oil from generator operations is similarly low compared to Funafuti. Transport constraints mean that while outer-island generation is modest, the proportion of used oil stored or disposed of informally is likely higher. As with Funafuti, informal reuse practices include use as a motorbike chain lubricant and mechanical lubrication. The answers received from the Outer Islands are summarise in Table 5 below:

***Table 5:** Summary of Outer Islands Answers*

| Questions | Various Answers Received |
|---|---|
| Storage practices | Store in drums, cans or IBC |
| Any training provided – Spill, Handling, Fire etc | No training provided |
| Alternative uses on the Island | Motorbike chains, Lubricant, Starting fires |
| Disposal | Tipping on the ground, throwing in the rubbish |
| Clean Up | Soil or Soap |
| Recommendations | Training, Education, PPE, |

Each island has dedicated drums or an IBC for the storage of used oil. For the islands that replied to the questionnaire, a total of 584 litres of used oil (see Table 6 below) was stored in various receptacles and locations.

***Table 6:** Outer Islands Population and Used Oil Volumes*

| Outer Island | Population | Used Oil Volumes stored |
|---|---|---|
| Nanumaga | 391 | No Reply |
| Nanumea | 610 | No Reply |
| Nuilakita | 36 | No Reply |
| Niutao | 550 | 300 |
| Nui | 514 | No Reply |
| Nukufetau | 581 | No Reply |
| Nukulaelae | 341 | 234 |
| Vaitapu | 1,007 | 50 |
| **Outer Islands Total** | **4,030** | **Confirmed: 584** |

Outer-island used oil generation can be assumed as 5–10% overall, of the national total. Improved outer island reporting should be a priority for the Used Oil Management Plan.

The following additional information will need to be confirmed by the DWM team for the Feasibility Study stage:

From each Outer Island Kaupule:

- The missing information for Nui, Nuilakita and Nukufetau;
- Diesel consumption and oil-change schedules from TEC for each island;
- Status and conditions of storage containers and IBC (e.g. empty/half/full);
- Number of drums or containers present;
- Photographs of IBCs and drums for validation;
- Opportunities for transport to Funafuti for consolidation at the DWM site. This could

possibly be done in 20-litre containers, although this may be impractical;

- Training, community education and Personal Protective Equipment (PPE) requirements for DWM staff.

The upcoming Feasibility Study will need to address the safety, stability, and cost of transporting numerous small, potentially leaky containers versus the consolidated, more robust intermediate bulk containers (IBCs), and also how the IBCs can be safely transported.

Two photos below illustrate typical used oil storage on the Outer Islands.

| Niutao Used Oil Storage | Vaitupu Used Oil Storage |
|---|---|
|  |  |

***Photo 2:** Typical used oil storage practices on the Outer Islands, Tuvalu*

# 8. EXISTING USED OIL MANAGEMENT

## 8.1. Used Oil Storage Facilities

The current used oil storage facility is located at the DWM site in Funafuti. This is shown in Figure 1 below, which includes all the buildings that are part of the Department of Waste Management Facility. This facility is located on the Eastern side of the Airport Runway, towards the northern end of the runway and just North-East of the Tuvalu Sports Ground.

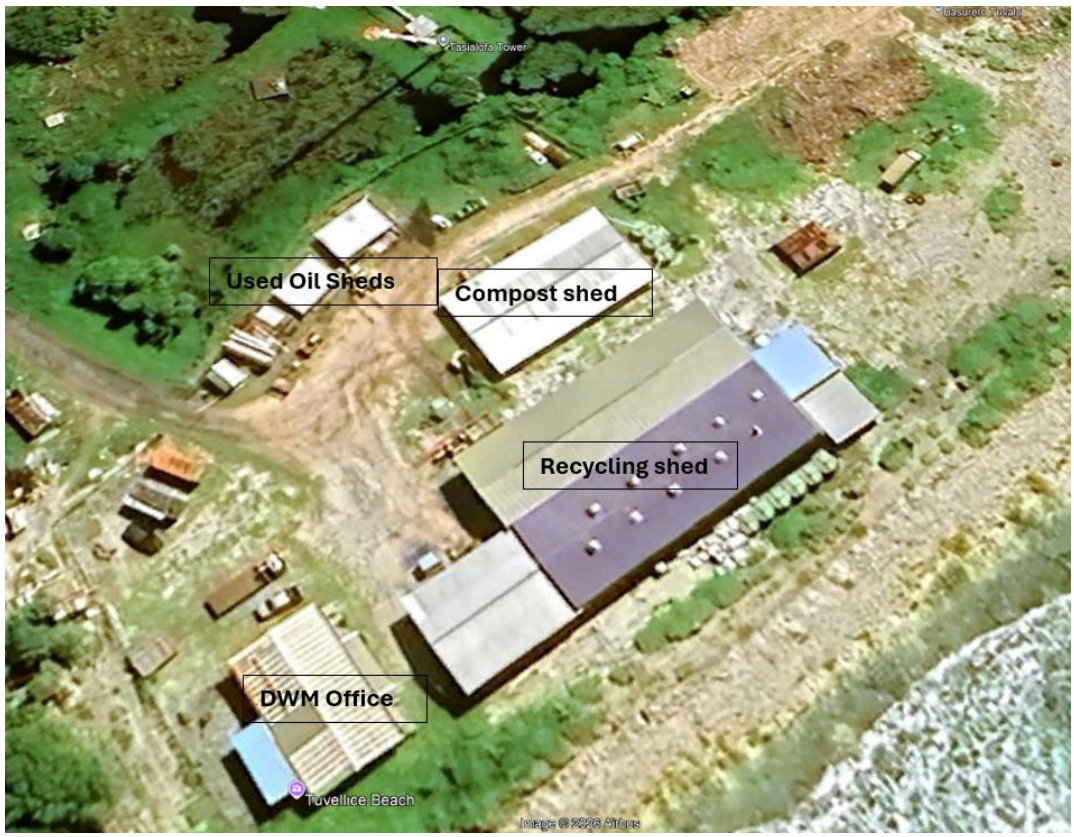



***Figure 1:* Used Oil Storage Facilities**

The main building houses smaller containers like 5-litre to 20-litre containers commonly referred to as "top up" packs, there are multiple 205-litre (44 Gallon) steel drums stored outside, with some stored under a lean-to roof connected to the main building. These drums are in poor condition, and the ground shows signs of previous hydrocarbon spills.

There are several IBCs stored onsite, with some stored inside rusty shipping containers. These, along with several other containers that currently have used oil stored inside them, are in very poor condition and pose a serious risk of failure that will potentially cause used oil to spill out onto the surrounding unsealed ground and escape into the immediate environment.

The are various larger storage vessels located close to the main shed area that are stored on soil with no protection from the weather, and with no bunding to catch any spills when transferring used oil or in case of a failure of the storage vessel. There is also a large rainwater tank that has been used to store oil. These rainwater tanks are not designed for storing used oil or hydrocarbon products, and the long-term storage of these oil products in this vessel may cause degradation of the plastic and structural failure.

Several shipping containers also contain unknown quantities of used oil. Probably in drums and IBCs.

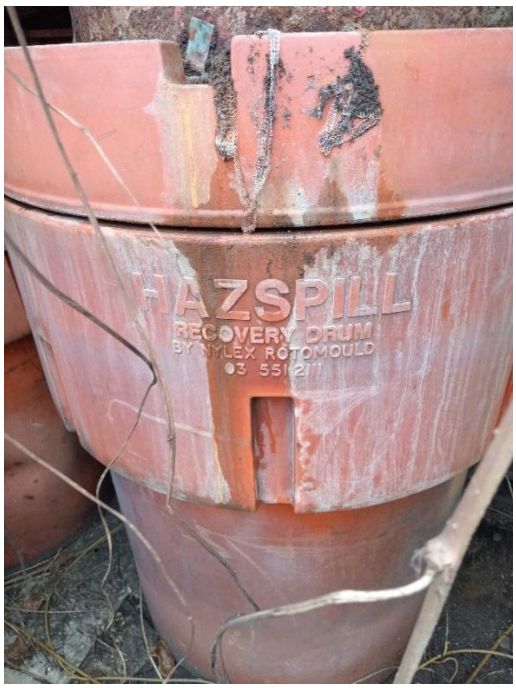
The combination of containers that have historically been utilised to store the used oil are in very poor condition, and there is very little evidence of correct storage processes implemented at this site, with a lack of restricted access, signage, safety and spill equipment in the immediate vicinity.

The DWM mentioned that they are currently in discussions with SPREP to look for assistance for the development of a new used oil storage facility including new storage containers.

The series of photos below are taken from the DWM Used Oil Storage Area on Funafuti. These photos highlight the lack of restricted access to the majority of the site, along with limited signage, no firefighting equipment, no spill prevention materials, and no bunding for containment of storage vessel spills and leaks.

It is difficult to estimate how much used oil is stored at the site, especially as much of is it stored in shipping containers that are difficult to open and inspect. **The best estimate that can be made, however, is that there is 40,000 – 70,000 litres of used oil stored at this location which in a severe weather event could cause considerable damage to the immediate surrounding areas and water catchments if the used oil escaped from the storage containers.**

The photos below illustrate the storage arrangements at the Used Oil storage facility.


HAZSPILL
RECOVERY DRUM
BY NYLEX ROTOMOULD
03 551 21


DDM
DDM

***Photo 3:*** ***Views of the DWM Used Oil Storage Facility, Funafuti, Tuvalu***

## 8.2. Unsatisfactory Use / Disposal Practices in Tuvalu

### *8.2.1. Use as a Motorcycle Chain Lubricant.*

During the consultant's visit to Tuvalu, many people commented that they commonly utilised used motor oil to lubricate their motorcycle chains. While this seems harmless and a cheap way to prevent rust on the motorcycle chain in a highly corrosive salt air atmosphere, it is not proven to be a good long-term solution for the prolonged life and performance of the motorcycle chain. Apart from this not actually being good for the motorcycle chain, the used oil is not designed to adhere to the chain and is thrown off with the force of the chain turning over the sprocket at high revolutions, which spreads the oil onto the roadways, which in turn will eventually wash into the groundwater in Tuvalu.

### *8.2.2. Painting onto Steel Frames to Prevent Saltwater Corrosion.*

As with the application of used oil onto the motorcycle chain, while this practice seems to have some logic, it is likely that using used oil will cause the surface to attract additional dirt and dust, which in effect causes harm to the original steel's protective coating. Again, this is an understandable practice but and most of the oil will probably end up in the soil as a harmful soil and water pollutant, contaminating groundwater.

### *8.2.3. Painting Used Oil on Sports Fields*

Another use of used oil is to use it for marking out lines on sports fields. It is not, however, considered environmentally satisfactory to use a water and soil contaminant to mark out sports fields for community use. Again, groundwater will become contaminated.

## 8.3. Used Oil Export

Possible destinations to be recommended for export of used oil from Tuvalu are BlueScope Pacific Steel in Fiji (usually used for Tuvalu) and Salters Cartage Ltd in New Zealand, although others will be recommended. The following information is updated from a 2018 SPREP Used Oil Report[21].

**BlueScope Pacific Steel, Fiji**

a) BlueScope Pacific Steel (BPS) collect and burn used oil in their steel processing plant in Suva.
b) They are very proactive in the local market in collecting used oil for this purpose and they operate a professional collection and storage system.
c) They have quite a large storage capacity but not sufficient to take very large amounts of used oil. They have a limited capacity to manage sludge, and they do not have a tank cleaning capacity.
d) The local market keeps them well supplied to meet their used oil needs and their core business is steel making and not used oil.
e) They are therefore not interested in importing used oil directly into Fiji from overseas countries.
f) They do receive used oil from other countries indirectly if they have the capacity – for example from Pacific Energy shipments from other countries, especially Tuvalu and Cook Islands.
g) The BPS operation is sound and meets audit criteria for health, safety and environmental impact, with the possible exception of the air emissions.
h) BPS may be willing to take part in plans to import used oil from other countries in the future but only as an indirect partner, and only if they have the capacity and resources to manage the used oil.

**Salters Cartage Ltd (SCL)**

a) SCL is a company based in Auckland New Zealand that receives and processes used oil. Their main outlet for the used oil has been the two main Oji plants in New Zealand, although both are now operating at reduced capacity and less product range, and consequently the demand for processed used oil has lessened in New Zealand.

[21] SPREP (2018) *Desktop Review of Used Oil Management Data.* Authors: D. Haynes, A. Leney & J. O'Grady. March 2018.: https://library.sprep.org/sites/default/files/report1-review-used-oil-management-data.pdf

b) SCL has been receiving used oil from various Pacific countries for many years and were keen to continue and expand this source of used oil, although this keenness has diminished with the drop in processed used oil demand.
c) They receive not only used oil, but also used oil filters, oily rags, oily sludge, and hydrocarbon-contaminated soils.
d) They take used oil in a variety of containers, drums, IBCs, pallets and Tanktainers.
e) They are well set up to receive used oil from Pacific countries, and they offer a good option as a recipient for any Pacific used oil exporting scheme.
f) They fully accord with all the consent conditions imposed on them by Auckland Council.

### 8.4. Pacific Energy – Used Oil Exports from Tuvalu to Fiji

Pacific Energy (PE) in Tuvalu has undertaken (and paid for) shipments of used oil from Tuvalu to BPS in Fiji, although it has been difficult to obtain information from PE in Tuvalu regarding these shipments. What is known is presented below and more information and clarification will be sought at the Feasibility Study Stage, as this will be important information for the Final Used Oil Management Plan.

The last shipment of Used Oil under this arrangement between DWM and PE took place in mid-2025 and 8,000 litres were exported in 8 x 1,000 litre IBCs. The IBCs have not yet been returned to Tuvalu to prepare for the next shipment. Based on the estimate of annual used oil generated, of 13,000-17,000 litres/year (Section 7.1.1 above), this represents between approximately 50-60% of the used oil generated per year in Tuvalu.

The following is known from previous reports:

- 2014 Audit: Pacific Energy SWP exported several consignments of used oil from Tuvalu to Fiji. One confirmed shipment included 20 drums of 200 L each (about 4,000 L). Two more similar shipments were planned for October and December 2014, but it is not known if they occurred.
- 2018 SPREP Desktop Review: Confirmed that Pacific Energy continued exporting used oil to Fiji using its LCT tanker from 2014 onward.
- 2022 SPREP Technology Options Report[22]: BPS in Fiji was confirmed to accept used oil from Tuvalu and the Cook Islands via Pacific Energy shipments.

The following is known about the frequency of PE shipments of used oil from Tuvalu:

- Past exports have been irregular and based on availability.

[22] Paul, S. (2022). *Used oil management – technology options report: A submission to SPREP*. MRA Consulting Group for the SPREP, Apia, Samoa. https://library.sprep.org/content/used-oil-management-technology-options-report

- No fixed schedule is documented.
- Shipments occur when:
    - Sufficient volume accumulates (often ≥5,000 L).
    - Pacific Energy has backload shipping capacity.
    - BlueScope has storage capacity available.

The expected frequency in future is not known but may be one shipment every 1–3 years.

The 2014 Audit estimated the shipping cost at USD 5,500 per 20 ft container (e.g. US1.375/L if this is based on the 20 drums, or 4,000 litres, that were shipped at the time of the report) and said that full costs were unlikely to be recovered by the sale of oil with an Advanced Recovery Fee (ARF). The actual cost is now probably higher and will be confirmed in the Feasibility Study. The upcoming Feasibility Study will estimate accurately the export cost in US$/litre of used oil, including updated freight and handling costs.

It is known from previous discussions with BPS that they do not generally pay for used oil or freight. A small import fee applies in Fiji (FJ$0.02/L).

With regard to the likelihood of continued PE exports of used oil from Tuvalu to Fiji, it is understood that PE's Tuvalu Manager has indicated willingness to continue arranging shipments, and BPS Fiji remains open to receiving used oil indirectly when capacity allows. There are, however, risks, including:

- Increased freight/insurance costs.
- BPS storage capacity limits.
- Shipping schedule irregularity.

Therefore, this export route is viable but fragile and should not be relied on as the sole long-term solution. The upcoming Feasibility Study will therefore rigorously explore and cost alternative or complementary pathways (e.g., agreements with other regional processors like Salters Cartage Ltd and shared regional shipping schemes).

The recommended planning position for devising Tuvalu's Used Oil Management Plan is therefore:

- Recognise the PE-BPS export pathway as an important disposal mechanism.
- Regard it, however, as intermittent and not guaranteed.
- Incorporate alternative or supplementary options in the national management system.

# 9. STAKEHOLDERS

The list of key stakeholders and their contact emails are shown in Table 7 below. This table also shows which stakeholders are members of the existing used oil committee and which stakeholders attended the Inception Meeting.

***Table 7:** Key Stakeholders*

| Name | Representing | Email Contact | Used Oil Committee | Inception Meeting |
|---|---|---|---|---|
| Epu Falenga | Dept of Waste Management | efalega@gov.tv | | Yes |
| Emily Lafai | Dept of Waste Management | 54icha.lafai@gmail.com | | Yes |
| Suialofa Eliuta | Dept of Waste Management | seliuta@gov.tv | Yes | Yes |
| Emely Panapa | Dept of Waste Management | emely.panapa@gov.tv | | Yes |
| Miriam Taukiei | Dept of Waste Management | mirinto88t@gmail.com | | Yes |
| Esther Koulapi | Dept of Waste Management | ekoulapi@gov.tv | | Yes |
| Falesala Kale | Tuvalu Customs Department | fkofe@gov.tv | | Yes |
| Lifuka Simeti | Tuvalu Customs Department | lifusimeti@gmail.com | Yes | |
| Tebeke Teakai | Tuvalu Customs Department | tteaukai@gov.tv | | |
| Richard Gorkrun | Tuvalu Climate Action Network | 54ichard.gorkrun@gmail.com | | Yes |
| Fioiata Vaguna | Office of Attorney General | sfvaguna@gov.tv | Yes | |
| Teligofou Sakaio | Office of Attorney General | telikarice14@gmail.com | | Yes |
| Leota Patiale | Pacific Energy | leota.patiale@p.energy | Yes | Yes |
| Eliuta Taula | Tuvalu Police (Mataili Patrol Boat) | etaula@gov.tv | Yes | Yes |
| Ioapo Tapu | Fisherman on Funafuti Association (FOFA) | ioapotapu@gmail.com | Yes | |
| Taaku Sekielu | Tuvalu Electricity Corporation | taakusekielu@gmail.com | Yes | |
| Samuelu Numela | Tuvalu Electricity Corporation | samuelunumela0576@gmail.com | | Yes |
| Kavatia Vaeta | PWD Mechanic Section | toajnrkv@gmail.com | Yes | |

| Name | Representing | Email Contact | Used Oil Committee | Inception Meeting |
|---|---|---|---|---|
| Multiple | Tuvalu Workshops and Garage Representatives | | | |
| Admin Office | MacKenzie Trading Ltd | mackenziekiritome@yahoo.com | Yes | |
| Imo Fiamalua | Department of Energy | ifiamalua@gov.tv | Yes | |
| Betty Melton | Department of Energy | bmelton@gov.tv | | Yes |
| Soseala Tinilau | Department of Environment | stinilau@gov.tv | Yes | Yes |
| Tiale Panapa | Department of Environment | tiale.panapa@gov.tv | | |
| Fioiata Vaguna | Office of Attorney General | sfvaguna@gov.tv | Yes | |
| Koloa Tofaga | Fisheries Department (Manaui) | knofoala@gmail.com | Yes | |
| Falesa Teuila | Marine Department | falesahipa@gmail.com | Yes | Yes |
| Ikemia Saitala | Tuvalu Fisheries Authority | ikesaitala@gmail.com | | Yes |

# 10. KNOWN GOVERNMENT PRIORITIES

The Tuvalu Department of Waste Management (DWM) has identified the following priorities.

1. **Filling the Legislative & Regulatory Void:** No specific legislation or regulation targets used oil, leading to ambiguity in handling, storage, and transport.

   **What is needed is to develop Specific Used Oil Regulations,** i.e. draft and enact subsidiary regulations under the *Waste Management Act (2017)* specifically for used oil. These should define:
   - **Generator Responsibilities:** Obligations for large generators (TEC, workshops) to store oil properly and hand it over to authorized collectors.
   - **Transport & Storage Standards:** Technical standards for containers (including IBCs), storage facilities (secondary containment, signage), and transport.
   - **Tracking Manifest System:** A simple but mandatory paper-based or digital system to track used oil from generator to exporter, ensuring accountability.
   - **Clear Prohibitions:** Explicitly banning the use of used oil as a chain lubricant or other unsatisfactory uses, or open burning.

2. **Overcoming Operational & Logistical Challenges:** There is a lack of a reliable, funded system for collection from outer islands and also to fund the export overseas (e.g. Fiji). This is compounded by insurance and shipping issues. What is needed is:
   - **Formalized Export Protocol:** Establish a standing agreement with a licensed overseas facility, including standardized contracts and pre-arranged insurance.
   - **Dedicated Shipping Logistics:** Integrate used oil shipments with other scheduled hazardous waste exports (e-waste, batteries) to share costs. Explore partnerships with regional shipping projects (e.g., SPREP's SWAP2 and GEF ISLAND programme) for dedicated waste shipment voyages.
   - **Outer Islands Collection Protocol:** Develop a specific protocol for the outer islands, including a schedule for collecting used oil using government vessels or charter services, rather than relying on passenger boats.

3. **Overcoming Data Deficiencies:** There is inconsistent and outdated data on oil imports and used oil generation, that undermines effective planning and monitoring. What is needed is:

- **Standardized Data Collection:** Implement a mandatory reporting requirement for oil importers (via Customs) to report volumes and types of lubricants imported.
- **Used Oil Tracking:** Link import data to a manifest system that tracks used oil collected by DWM. This will allow for accurate calculation of a used oil generation ratio (e.g., what % of new oil becomes waste oil, although this may vary over time).
- **Centralized Database:** The DWM should maintain a simple database to track stockpile levels in Funafuti and on the outer islands in real-time.

4. **Overcoming Infrastructure & Capacity Shortfalls:** Inadequate secure storage facilities and a lack of technical training for personnel handling hazardous waste. What is needed is:
   - **Secure Central Storage Facility:** The new Transfer Station must include a dedicated, impermeable hazardous waste storage bay with secondary containment bunds, roofing, and clear signage specifically for used oil IBCs. This could also be used for other hazardous wastes requiring export.
   - **Training Programmes:** Develop and deliver certified training for DWM and Kaupule staff on the safe handling, storage, and spill response for used oil and other hazardous wastes. This should be a recurring programme, not ad-hoc.

5. **Establishing Financial Sustainability:** No clear, sustainable funding model for the ongoing costs of collection, storage, and export. What is needed is:
   - **Extended Waste Levy Scheme:** Amend the *Waste Levy (Levy Deposit) Regulation 2019* to include lubricating oils. A small levy (e.g., $0.50/L) on all imported new oil would create a dedicated fund to help pay for the collection, storage, and export of the resulting used oil, implementing the polluter-pays principle.
   - **Cost-Benefit Analysis:** Conduct a study to evaluate the true full cost of used oil management (including environmental damage avoided) versus the cost of inaction, to justify budget allocations and levies.

# 11. WORK STILL TO BE DONE

## 11.1. Feasibility Study

Develop a Feasibility Study prior to the development of the National Used Oil Management Plan that addresses the following:

- Products to be included in the Used Oil Management scheme.
- Sectors to be serviced by the Used Oil Management scheme.
- Recommendations for options on how to best deliver the Used Oil Management scheme and services. This includes suitable management and recovery options, including regional export, co-processing, and local treatment.
- Identification and specifications of any equipment or materials required for the establishment of used oil collection, storage, treatment and disposal stations, including cost estimates for infrastructure needed (collection tanks, bunded storage, testing kits, PPE, etc.).
- Assessment of the capacity building needs of government and the oil and waste industry to enable the implementation and operation of the proposed National Used Oil Management Plan. This will include staffing, training needs.
- Identification of the system data capture and monitoring necessary to effectively manage service contracts, report to the community, and assist the country to report on its obligations under international conventions (monitoring system details, including any technological requirements should be detailed).
- Provision of recommendations for national engagement and education of the oil/used oil sector and community to assist with the implementation success of the National Used Oil Management Plan.
- Identification of likely international markets.
- Institutional responsibilities, regulatory gaps, and opportunities for integration into Tuvalu's broader waste strategy.
- Monitoring and evaluation indicators aligned with regional reporting obligations (e.g., Basel, Stockholm, Waigani Conventions).

The draft Feasibility Study will be validated through a virtual stakeholder workshop.

## 11.2. Draft National Used Oil Management Plan

The Consultants will compile all the information gathered and data obtained to develop an effective and appropriate draft "National Used Oil Management Plan" that addresses all the

needs identified in the Feasibility Study and implements the recommendations of the Feasibility Study.

This draft will include all the information presented in the Feasibility Study with the additional information on a recommended set of engagement and socialisation strategies to increase and sustain user participation.

The Plan will include any other information deemed necessary and as directed throughout the contract by the Tuvalu Government.

This plan will synthesise findings from the Feasibility Study into a structured action-oriented strategy covering:

- Regulatory improvements.
- Infrastructure roll-out.
- Institutional arrangements.
- Financing mechanisms (including potential donor support).
- Timeline and sequencing of implementation.
- National targets and performance measures.
- Education and outreach strategies.

The Draft Management Plan will be presented to a Stakeholder Workshop in Tuvalu. All feedback received will be incorporated, and the final version of the National Used Oil Management Plan will be presented.

### 11.3. Final National Used Oil Management Plan

The Consultants will incorporate all the comments received from the Government as well as those from all other key stakeholders, finalise and submit the final "National Used Oil Management Plan".

The final version will be tailored for both operational use and alignment with national development objectives.

# 12. CONCLUSIONS

The following conclusions can be made:

a. Based on information obtained, there is likely to be a range of 13,000 to 17,000 litres of used oil required to be managed annually in Tuvalu.
b. There have been eight IBCs purchased by DWM, and with the assistance of PE, 8,000 litres of used oil and lubricants were delivered to BPS in Fiji in 2025. More information is needed, however, about future PE exports and this export pathway should not be relied on as a long-term solution.
c. There is a large amount of used oil (40,000-70,000 litres) that still needs to be processed and exported from Tuvalu to get this stockpile down to a manageable annual export volume.
d. The current storage facility, equipment and processes for collecting and managing used oil in Tuvalu need immediate improvements to prevent a possible spill event, as it is in a poor state with multiple old, degraded containers of various sizes stored with no secondary containment. This is an urgent concern.
e. Used oil is also being reused for unsatisfactory uses in Funafuti and the Outer Islands, especially as a lubricant for motorcycle chains. These uses need to stop as they lead to environmental pollution, including contamination of the important groundwater resource.
f. There needs to be a process implemented to ensure that any system that is adopted for Funafuti is shared with the outer islands of Tuvalu, to have any stockpiles of used oil returned to the facility in Funafuti to be safely managed and exported. Outer Islands stockpiles also need to be managed satisfactorily.
g. DWM staff and other stakeholders need assistance with training and education about how to safely manage used oil and other lubricants. Such training may be delivered in 2026 under the SWAP2 Project.
h. There are clear government priorities for used oil that require effective management to protect human health and the environment. These priorities are being met to a certain extent by having a committee established that has identified the need for management of the used oil. The committee has taken some steps to set up a process to store and export some of the recovered used oil.
i. The Feasibility Study will aim to come up with a clear direction, backed with supporting evidence, for the preparation of a detailed National Used Oil Management Plan.

# Appendix 1 – Outer Islands Questionnaire

| **Technical assistance to develop a National Used Oil Management Plan for Tuvalu** | | | |
|---|---|---|---|
| Stakeholder Interview - Outer Island name | | | |
| Stakeholder Representative - DWM staff member | | | |
| Araspring Representative for any follow up questions | | | |
| Date | | | 2025 |

| **Oil Importers** | **Year** | **Year** | **Year** |
|---|---|---|---|
| **What volume of different oil types are used on the Island (litres)** | **2024** | **2023** | **2022** |
| Engine oil | | | |
| Brake fluids | | | |
| Gear oils | | | |
| Transmission fluids | | | |
| Hydraulic oils and fluids | | | |
| Compressor oils | | | |
| Refrigeration oils | | | |
| Industrial process oils | | | |
| Electrical insulating oil (Care must be taken to exclude oil likely to contain PCBs) | | | |
| Metalworking fluids and oils | | | |
| Heat transfer oils | | | |
| Machining oils | | | |
| Who are the lubricants sold to and in what annual quantities (i.e. who are the end users)? | | | |
| | | | |
| | | | |
| | | | |
| **Used Oil Questions** | | | |
| How is the used oil collected and stored (i.e. drums, IBCs, bulk storage etc)? | | | |
| | | | |
| | | | |
| | | | |
| Storage type and capacity, long term storage type and capacity? | | | |
| | | | |
| | | | |
| | | | |
| How long is Oil stored before disposal? | | | |
| | | | |
| | | | |
| | | | |

| |
|---|
| How are other chemicals (e.g. petrol, paint, antifreeze) stopped from contaminating the used oil? |
| |
| |
| |
| How much used oil is currently stored on site and for how long approximately? |
| |
| |
| |
| How are used oil filters managed? |
| |
| |
| |
| How have you disposed of used oil in the past? |
| |
| |
| |
| What is the cost to dispose of the used oil? Per litre? |
| |
| |
| |
| How is the used oil disposed of now? |
| |
| |
| |
| Are there any other (unsatisfactory) used oil disposal practices still carried out? |
| |
| |
| |
| Is there any treatment of the used oil on site (eg water separation….)? |
| |
| |
| |
| How are oil spills managed? |
| |
| |
| |
| Is there any training in oil spill management? |
| |
| |
| |
| Are storage areas bunded? |

| |
|---|
| |
| |
| |
| Is there any practical use for used oil on the Island? |
| |
| |
| |
| |
| |