

Contract to Conduct a Feasibility Study and Develop a National Used Oil Management Plan for Samoa, Solomon Islands, Tonga, and Vanuatu

# Inception report (Solomon Islands)

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## **Inception Report (Solomon Islands)**

February 2022

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# 1.0 Introduction to the AFD Programme to Develop a Used Oil Management Plan

#### 1.1 Background to the Project.

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 growing human population, and the social and economic pressures associated with this growth.

Increased populations and urbanisation have led to increased imports and usage, leading to end of life products and waste generation. Much of the waste generated through these imported products cannot be managed effectively in-country due to issues of small and isolated populations; economic volatility; geographical isolation from large economies; limited institutional, financial and human capacity; and the inadequacy of infrastructure to capture and process waste materials.

Poor waste management poses risks to the economies of PICTs, as most rely heavily on clean environments for agricultural activities and a vibrant tourism industry, therefore polluted and degraded environments pose a significant threat to PICTs.

The overall work funded by the Agence Française de Développement (AFD), referred to hereafter as "Committing to Sustainable Waste Actions in the Pacific (SWAP)", aims to improve sanitation, environmental, social, and economic conditions in Pacific Island countries and territories through proper waste management. To achieve this, the overall work focuses on three streams of wastes: used oil, marine debris, disaster wastes and an overarching issue on sustainable financing mechanisms. Eight countries and territories will benefit from this overall project, and they are Fiji, French Polynesia, New Caledonia, Samoa, Solomon Islands, Tonga, Vanuatu, and Wallis and Futuna.

As part of this process, in December 2021, *Araspring Ltd* (New Zealand) in association with *Going Troppo Consulting* (Australia), *Pacific Reef Savers* (New Zealand) and *POPs Environmental Consultants Ltd* (New Zealand) were awarded a 9-month contract by SPREP/AFD to develop used oil management plans for Samoa, Solomon Islands, Tonga and Vanuatu.

#### 1.2 Contract for Services (Inception Report)

The production of an Inception Report is the 1st stage of the project. Under the terms of the contract, the consultant is required to:

• Host an initial meeting with key government stakeholders to confirm desired

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outcomes and identify key national contacts.

- **Provide Minutes of the government meeting** with confirmation of activities, and scope of work to be developed and agreed by meeting participants prior to commencement of any activities.
- Host an Inception Workshop with National Stakeholders to confirm desired outcomes and to identify key national stakeholders. A full list of key stakeholders is to be included noting their sector, and interest, and the plan for further engagement as the project is implemented.
- Undertake a detailed desktop review of existing national legislation, policy, strategy and plans relevant to waste management that will determine existing systems, confirm the legislative environment and identify key opportunities for used oil management and market for product
- **Prepare an inception report** that presents the findings of desktop research and the outcome and findings from the consultation inception meeting. The report shall articulate the Government's priorities and any additional priorities identified by other key stakeholders and identify how these priorities will be addressed in the workplan. (Under the revised contract of February 2022, the Solomon Islands Inception Report is only required to contain a desktop review of existing legislation, policy, strategy and plans that address waste management, institutional frameworks, and other enabling frameworks relevant to waste management.)
- **Provide a detailed Workplan** of activities (including a timeline) and clearly identify any tasks or responsibilities of the government necessary to ensure project success.

#### 1.3. National Background

Solomon Islands is an archipelago state situated in the South West Pacific Ocean. It comprises nearly 1,000 islands in nine main island groups with a total land mass of 28,400 sq.kms. The islands were a British Protectorate from the late 19<sup>th</sup> century until the country became self -governing on 2<sup>nd</sup> January 1976, achieving full independence on 7<sup>th</sup> July 1978.

Solomon Islands is a constitutional monarchy and a parliamentary democracy based on the Westminster system. The administrative regions consist of nine provinces and one city (Honiara). There is a unicameral parliament of 50 members, elected for four-year terms. However, Parliament may be dissolved by majority vote of its members before the completion of its term. Parliamentary representation is based on single-member constituencies. Suffrage is universal for citizens over age 21. The head of government is the Prime Minister, who is elected by Parliament and chooses the cabinet.

Responsibilities for waste and environmental management exist within a range of legislation and regulations, but no single point of control exists to regulate planning and

operation. There are a range of Acts and Regulations that can be applied to the management of used oil and related wastes. They are set out in Section 3 of this report. State of Environment reports have been published in 2008 and 2019. Some of the key drivers identified in the State of Environment Report 2019<sup>1</sup> that have created pressure on the environment are:

- **Population Growth.** The population has grown rapidly from 200,000 in 1976 to 515,870 as at the 2009 census. The 2019 census recorded the population at 721,455. This growth has been accompanied by migration of people from the provinces into the capital Honiara, which has in turn created pressure on the built environment and municipal services, including waste management and disposal.
- Economic Development. In 2014 approximately 43% of GDP was derived from agriculture, forestry, fisheries and industry including mining. National development goals will underpin poverty alleviation and raise the standard of living. Managing economic development and the consequent impacts on the environment are co-dependent.
- **Climate Change.** This represents the greatest single threat to the livelihood, security and wellbeing of Pacific people. This applies to the Solomon Islands. Poor waste management practices put more pressure on the adverse effects of climate change.
- **Traditional and Contemporary Values and Lifestyles.** Environmental change is also influenced by people's attitudes and approaches towards issues such as environment, development and the meaning of sustainability. For example traditional waste disposal methods such as open burning result in reduced quality of life and impacts on the environment.

Developing and implementing a programme to manage used oil is an identifiable and achievable aim that can make a tangible contribution to improving the state of the environment in the Solomon Islands.

<sup>&</sup>lt;sup>1</sup> Solomon Islands State of Environment Report 2019

## 2.0 Relevant Used Oil Issues

#### 2.1 Issues identified by Used Oil Audit 2014<sup>2</sup>

The 2014 Used Oil Audit was written by Golder Associates for SPREP. It presented the findings of the audit based on in-country visits, interviews and data collection undertaken by Golder in July 2014. The main findings were as follows.

- There were two major importer supplying lubricating and hydraulic oils (South Pacific Oil & Markwarth)
- Solomon Power is a major oil consumer. Others are motor companies & the timber industry.
- In 2015, imports averaged 1.6 million litres per year between 2011 & 2013.
- The report estimated that there should be 800,000 litres of used oil per year recoverable for recycling. No data was offered to verify how much used oil was collected or what volume was exported for recycling.
- There was a major need for stakeholders to see used oil management in a more transparent and accountable way.
- The report did not include a mass balance inventory that examines sources of used oil, quantities of used oil generated, stockpiles of used oil and estimated losses to enable an assessment of the level of used oil mismanagement.

#### 2.2 Issues identified with transboundary shipping of used oil for recycling.

- If overseas export of waste is being considered or undertaken, is should be noted that shipping services and shipping routes vary from country to country. There are currently three companies providing services to the Pacific Island countries, Matson, NPDL and Swires. However different companies service different countries and there is no one company that can provide a common service to all PIC's. New Zealand is a common destination and for this reason many PICs have traditionally sent their used oil to NZ for recycling. Swires operate the Moana Taka Programme which offers countries free shipping for wastes, but this only assists countries that are on the Swires routes.
- As a Waigani or Basel transboundary permit is required for shipments, the objective is to find the most direct route to the disposal location, as then less transit permits are required. (It should be noted that Solomon Islands is a party to the Waigani Convention but not to the Basel Convention.)

<sup>&</sup>lt;sup>2</sup> Contemporary Used Oil Audit 2014 Golder Associates

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#### 2.3. In-country recycling of used oil.

A barrier to in-country reprocessing is that it is only viable if there is an end user who can take the refined product. Most diesel and other internal combustion engine manufacturers will not warrant their engines unless the correct fuels are used, and this means that refined used oil is generally used for heating, such as in furnaces and steam boilers.

Therefore although offshore disposal/recycling may not be regarded by some as best practice, the reality is that shipping to a facility that can recycle and re-use the end product may be most cost effective and sustainable option.

## 2.4 Report on the Cost Benefit Analysis of Used Oil Management Options for the Solomon Island $2015^3$

The objective of the report was to compare the environmental impacts and benefits in a product end-of-life scenario for certain management systems of waste oil disposal that were identified as specific to the Solomon Islands.

The rationale was to have a collection and management system established for used oil that was environmentally preferred; hence other management methods such as dust control on roads, logging industry chainsaw blade lubricants, or dumping in the environment, were then not considered.

The outcomes of a sustainable used oil management system were:

- Assured compliance with legal requirements and national regulations.
- To minimize/eliminate adverse effects of used oil on the environment and the health of people.
- Implementation of a fair user pays concept with used oil generators using the preferred disposal method put in place by legislation and the imposition of levies.
- To encourage recycling where appropriate and cost-effective disposal of used oils.

The report noted the total imported lubricants per year into the Solomon Islands was 1.6 million litres (2015). Identified volumes of used oil constituted about 38% of the total, about 608,000 litres. At the time of the report there were no formal collection systems in place.

The in-country options identified in the report were:

<sup>&</sup>lt;sup>3</sup> Cost-Benefit Analysis of Used Oil Management Options for Solomon Islands, 14 Dec 2015

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- Recycling requiring capital investment to set up micro recycling plant, producing a refined bi-product to be blended with diesel or for use as industrial or heating fuel.
- BlackDiesel blending used oil with diesel to reduce diesel fuel requirements.
- Batch Incineration Units can be portable and clean burning due to multi-chamber combustion design, units can dispose a variety of general and industrial wastes including those contaminated with hydrocarbons.
- Offshore shipping for disposal was considered expensive and not sustainable in the long term.

The report included a cost analysis of the options, including the cost of specialized equipment, collection, shipping and operating expenses. These costings, when updated can provide useful guidance for the current project.

A comparative cost/benefit summary for the options was presented with recommendations indicating the most practical disposal/treatment methods were a combination of recycling and incineration.

#### 2.5 Issues identified with funding

The biggest issue for most of the smaller countries is often funding. In-country reprocessing is generally not feasible due to economies of scale, but the cost of shipping to an overseas facility is a major barrier. This causes delays and consequent pressure on in-country storage, which often leads to bad environmental outcomes. In the medium term the priorities may be to foster effective in-country oil management and consolidation systems, promote education to eliminate bad practices, and support countries to ship the used oil to suitable recycling facilities.

## 3.0 Legislation

In 2020 the University of Melbourne (supported by Australian Aid) produced two publications for SPREP, prepared with the financial support of the EU.

- Stocktake of Existing and Pipeline Waste Legislation: Solomon Islands. 16 March 2020 ISBN 978-982-04-0808-1
- Assessment of Legislative Framework Governing Waste Management in the Solomon Islands November 2020 ISBN 978-982-04-0952-1

Some text in this review is taken directly from these two reports.

#### 3.1 Overview of the Legal System<sup>4</sup>

Solomon Islands is a constitutional monarchy and a parliamentary democracy based on the Westminster system. The administrative regions consist of nine provinces and one city (Honiara). There is a mixed system of common law and local customary law. There is a three tiered system of general courts as well as local courts for customary law and minor local disputes and Customary Land Appeal Courts. Sources of law are the constitution, Legislation (Acts of the National Parliament and from the United Kingdom), common law and customary law.

Responsibilities for waste and environmental management exist within a range of legislation and regulations, but no single point of control exists to regulate planning and operation. There are a range of Acts and Regulations that can be applied to the management of used oil and related wastes.

## 3.2 Overview of Legislation and Regulations as they apply to Used Oil Management

The Environment Act includes a broad definition of wastes as liquid, solid, gaseous or radioactive wastes, whether toxic or not, which are discharged into the environment. There is a lack of clear separation between hazardous waste materials and non-hazardous waste materials, and waste which can or cannot be recycled.

Implementation and Enforcement powers that are available to authorities often rely on a requirement to identify wastes (including discharges of oil) as a form of nuisance (where in the Act, nuisance has a specific legal meaning).

One of the largest volumes of waste material that is recovered and managed is used oil. This is due to the reliance on diesel power for electricity generation and the volume of used oil produced. The Petroleum Act provides the legislation for managing storage and transport of petroleum, and these rules could also be applied to used oil.

<sup>&</sup>lt;sup>4</sup> Stocktake of Existing and Pipeline Waste Legislation – Solomon Islands P6

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Legislation outlined below could be used to prohibit the deposit or disposal of used oil in waterways or into the environment. The Honiara City Council has a wide range of responsibilities for waste management, but not specific to used oil.

There is a clear need to improve the effectiveness of waste management laws to ensure public health and environmental standards are maintained for the local community, in public areas, in the commercial and tourism sectors, and for residential premises if the Solomon Islands is to be successful in increasing socio-economic well-being in the nation.

#### 3.3 Environment Act 1998 (in force September 2003).

Section 3(c) (ii) of the Act includes regulations to control the transport, collection, treatment, storage, and disposal of waste and to comply with and give effect to regional and international conventions and obligations relating to the environment. (This can apply to the transboundary shipment of used oil and associated hydrocarbon wastes under the protocols of the Waigani and Basel Conventions.)

Section 5 establishes an Environmental and Conservation Division consisting of a Director and Environmental Inspectors who enforce provisions of the Act.

Section 6 (1) (b) requires the Division to develop, establish and administer systems of prevention and control of pollution in both the industrial and non-industrial sectors. Waste is dealt with in Part IV – Control of Pollution.

Section 35 states that "No person shall cause or allow waste to be placed in a position from which the waste could reasonably be expected to gain access to any part of the environment and is like to cause pollution."

Section 36 states that "The occupier of any premises shall take all reasonable and practical measures to prevent or minimize the discharge of waste and the emission of noise, odour or electromagnetic radiation from such premises."

Other sections cover penalties and the serving of a Pollution Abatement Notice. Part 5 – Miscellaneous

Amendments to the legislation were drafted in 2016 to implement a new dedicated waste management Section under Part IV - A of the Act, however these amendments were not enacted.

#### 3.4 Environmental Health Act 1980

Section 80 (1) (d) states that "Any person who discharges into any public sewer or drain, or into any sewer or drain, which not being a public sewer of drain, communicates therewith, any chemicals, oil, petroleum, or any manufacturing, trade or other refuse, ..... that causes or may cause any nuisance or danger to persons entering, or being in, or near to, any public sewer or public drain, or danger to any public sewer or public drain itself .... shall be guilty of an offence and liable to as fine of Fifty Dollars".

Section 94 prohibits the depositing of waste in water sources of urban sanitary districts.

#### 3.5 Honiara City Act 1999

There are no provisions in this Act that specifically refer to Waste. The Honiara City Council (Litter) Ordinance 1999 outlines littering offences and penalties. Council officers, appointed by the Honiara City Act 1999 to enforce the provisions of the Environmental Health Act 1980, are authorized to maintain public cleanliness and prevent nuisances. This can include improper management of used oil which creates a public nuisance.

#### 3.6 Petroleum Act 1987

Section 5 prohibits escape or discharge of petroleum from any vessel or vehicle into inland or tidal water. While it is not specified in the Act, used oil could by extension be given the same status as petroleum.

Section 6 requires strong transport of petroleum only in packages from which it cannot escape.

#### 3.7 Mines and Minerals Act 1990 plus Amendments

Under section 80 (j) the Minister may make regulations for the disposal of waste products and the protection of the environment.

#### 3.8 River Waters Act 1964 (as at 1996)

States that any person who in any manner obstructs or interferes with a river or riverbed, or damages or interferes with the banks of any river, is guilty of an offence.

#### 3.9 Solomon Islands Water Authority Act 1996

Section 7(d) states a function of the authority shall be to provide construct, operate, manage, and maintain buildings, works, systems and services for the conveyance treatment and disposal of sewage, disposal of trade and industrial waste and other connected purposes......

Regulation LN 42 1995 restricts introduction of pollutant or wastes into catchment areas.

## 4.0 Policy, Strategy and Planning Documents

#### 4.1 National Development Strategy 2016 – 2035<sup>5</sup>

The long term strategy is to achieve an improvement in the social and economic livelihoods of all Solomon Islanders. One of the five key long term National Development Strategy (NDS) objectives (Objective 4) is to achieve "Resilient and environmentally sustainable development with effective disaster risk management, response and recovery"

Medium Term Strategy # 11 (page 44) is to manage the environment in a sustainable resilient way and effectively respond to climate change mitigation. The strategy is achieved by improved programmes to effectively develop and manage the environment sustainably in the longer term. Policies and programmes will be implemented to promote a holistic sustainable approach to natural resources addressing forestry, marine resources and waste management.

Within NDS Objective # 4 and MTS # 11, the management of wastes, and by extension the management of used oil is addressed.

It is noted that in the NDS Performance Indicators and Targets Section for MTS # 11 (Page 67), there are no targets set for managing wastes.

#### 4.2 National Waste Management and Pollution Control Strategy 2017 – 2026<sup>6</sup>

The Introduction 1.0 states that "the formulation of the Strategy is part of the ongoing efforts of Solomon Islands to address the areas of waste and pollution as the country enters a period of rapid social and economic change. The national level initiatives to address waste since independence can best be described as piecemeal, with the basic responsibility resting on town councils and respective provincial stations and local communities".

This strategy also re-enforces the regional goal, and the vision of "A Cleaner Pacific", and builds on the previous Solid Waste National Strategy 2009 – 2014. "

The strategy sets out 10 main sections, with those applicable to used oil management being:

Chapter 3 - Major waste and pollution streams,

Chapter 4 – Institutional and legal frameworks and programmes, and Chapter 9 – Major Focus Areas

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 <sup>&</sup>lt;sup>5</sup> National Development Strategy 2016 – 2035 Ministry of Development Planning and Aid Co-ordination April 2016
 <sup>6</sup> National Waste Management and Pollution Control Strategy 2017 – 2026 Ministry of Environment

Chapter 3.2 Liquid Waste (page 12) describes liquid waste as fluids in any form, dirty or clean, toxic or not, such as oil, grease, fats, or sewage. It notes the importance of proposed new regulations and review of the Environment Act to capture definitions of all key waste streams. "Liquid waste is an issue for which the government will need to carry out research and develop appropriate guidelines and standards".

Chapter 3.3 Hazardous Waste (page 12) describes a chemical waste as any waste generated from harmful chemicals, usually industrial, that may or may not be hazardous by definition depending on a prescribed Act or regulation. It notes that "in the Solomon Islands, aside from the Environment Act 1998 definition of waste, hazardous and chemical wastes are not definite terms by any legislation".

Chapter 4.1 Institutional Framework: sets out the key agencies responsible for waste and pollution:

Ministry	Act	Responsibility
Ministry of Environment, Climate Change, Disaster Management & Meteorology	Environment Act 1998	All waste and pollution control issues
Provincial Governments	Provincial Govt Act 1997	All waste and pollution in Provincial Centres
Solomon Islands Water Authority	SIWA Act 1992	Disposal of trade & industrial waste
Solomon Islands Marine Safety Administration	Shipping Act 1998 and Shipping (Marine Pollution) Regulation 2011.	Pollution in the Marine Environment
Solomon Islands Port Authority		Waste Management in the port jurisdiction – refuse, petroleum oil & bilgewater
Ministry of Lands	Lands & Titles Act 1996	Land related issues for waste and pollution

Chapter 9.0 (Major Focus Areas) identifies strategic actions with outcomes leading to a robust policy and legislative framework, supported by strong institutions with skilled and trained people to lead waste management and pollution control.

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Strategic actions applicable to used oil management are:

9.1.2 - Establish a national waste and pollution committee with sub-committees on specific wastes such as chemicals, E-waste, oil, healthcare wastes and waste water.
9.1.3 - Undertake a national stocktake of all prescribed premises for Honiara, Gizo, and Auki followed by other provincial centres and towns.

9.1.5 - Undertake a waste management capacity assessment for all major provincial centres starting with Honiara.

This strategy was published in 2017. A function of the Analysis Report for this project will be to investigate and report on progress with the above strategic actions and any outcomes that apply to the management of used oil and associated waste streams.

#### 4.3 Solomon Power Sustainability Report 2019.

Solomon Power is a State Owned Enterprise. Under Section 4 of the State Owned Enterprises Act, the principal objective of the company is to "operate as a successful business", and to this end be .... "an organization that exhibits a sense of social responsibility by having regard to the interests of the community in which it operates".

Further, it pledges to act in a socially responsible manner by.... "Incorporating sustainability into our business activities and working to improve sustainable outcomes in terms of resource management". (Page 1 of the report). This can include the environmentally sustainable management of used oil.

Solomon Power has a regulatory function mandated by the Electricity Act to.... "be responsible for the licensing of standby generators, independent power producers and cogeneration of power". Under this function Solomon Power may have the ability to oversee used oil management practices for the organizations which it licenses.

## 4.4 Petroleum and Alternative Liquid Fuels Strategies and Investment Plan (2014 – 2019)<sup>7</sup>

Strategy Outcome 2). Petroleum storage and handling facilities conform to local and international safety, health and environmental standards.

The strategy highlights commitments, policy statements, strategies and activities that the Ministry of Mines, Energy and Rural Electrification (MMERE) through its Energy Division will focus on the next five years to better manage and co-ordinate the petroleum sector in the Solomon Islands.

<sup>&</sup>lt;sup>7</sup> Petroleum and Alternative Liquid Fuels Strategies and Investment Plan (2014 – 2019) Ministry of Mines, Energy and Rural Electrification 2014

Part 1 - Section 2.3. Discharge and storage of petroleum products and disposal of waste produced in a petroleum storage facility needs to be managed properly.

Section 2.3.2. A more strategic approach is for the government-owned company South Pacific Oil Limited (SPOL) and the Energy Division to work together with the provincial council to set up proper facilities and depots to increase energy security and facilitate proper safety and environmental standards.

Part 2 – Section 2.4

Table 1 in plan: Summary of petroleum sub-sector status of Implementation. (Page 15) Review of 2007 the Policy statement

Reference 1.2 – Ensure that petroleum storage and handling facilities conform to local and international safety and environmental standards. The report rated Implementation Ranking as Unsatisfactory.

Reference 1.4 - Ensure that waste related to petroleum products is disposed of in an environmentally sound manner. The report rated Implementation Ranking as Unsatisfactory.

Reference 4.2. – Ensure there is a regulation for the disposal of petroleum-related waste. The report rated Implementation Ranking as Unsatisfactory.

Table 3 in plan: Key Strategies, Activities, Indicators, and Estimated Costs. (Page 21)

Reference 2.2.2.1. Integrate the need for waste disposal of petroleum-related waste in the Environment Act and carry out training to environment officers/inspectors. Stakeholder – Ministry of Environment – Estimated cost (SBD) 112,943.

Reference 2.2.1.1 Ensure the draft contingency oil spill plan is finalized and implemented. (No cost estimates provided)

Table 9 in plan: Schedule of Investment Strategies for the Petroleum Sector

Reference Strategy 2.2.2 details costs to ensure there is a regulation for disposal of petroleum related waste, training of environment officers/inspectors and training for spill response responders.

Summary of the review of the 2007 policy statement – out of six policy statements only one was fulfilled. Out of nine strategies, only one was fulfilled and three were partly fulfilled. Section 3.2 noted the need to ensure there is a regulation for disposal of petroleum related waste.

As part of the analysis stage of this project, progress with ongoing implementation of these strategies will be further examined during consultation with the Ministry of Energy. Cost estimates outlined in Table 9 will be reviewed and where necessary updated and used as guidance for the draft Used Oil Management Plan.

## 5.0 Organizations

Government departments and ministries, and other organisations that are involved, directly or indirectly, in used oil management, are presented in this section. Some names and contact details are not included at the time of writing this report, and the list will be updated when the next stage of the project, namely the preparation of the analysis report, is undertaken.

#### 5.1. Government Departments

Ministry	Name	Email	Phone Number (office)	Additional Information
Ministry of Environment, Climate Change, Disaster Management and Meteorology (MCCDMM)	Director: Dr. Melchior Makati. Ms Debra Kereseka		+677 27062/23031	Focal Point for this project
Ministry of Finance – Customs and Excise Division	Contact person: Ms Besty Sipolo		+677 21060	Data on Imports of lubricating oils
Solomon Island Power Authority	Director: Mr. Donald John Kiriau		+677	Trading as - Solomon Power.
Ministry of Mines and Energy	Mr Krista Jacob Totapu		+677	Responsible for energy supply in the provinces
Solomon Islands Maritime Safety Administration	Operations Director: Mr Eddie Tokuru			Vessel Inspection & Surveying, Marine Pollution
Solomon Islands Port Authority	CEO: Mr. Eranda Kotelawala		+677 22646	Operations division for Marpol Services

Company	Name	Email	Phone Number (office)	Description of Services Provided
South Pacific Oil	CEO: Mr Carson Korowa Assistant Special Duties: Mr.Walter Roto	<u>spo@solomon.</u> <u>com.sb</u>	+677 21838	Major Distributor Main importer of Petrol Supply airport wtih AVGAS and JET A-1 Fuel
Markworth Oil Ltd	Manager for Finance Control Kirsten Markwarth	<u>mobil@solomo</u> <u>n.com.sb</u>	+677 22374 fax: +677 21708	Major Fuel Distributor Main importer of Diesel
Melanesian Oil Company	n/a	<u>ckorowa@spo.c</u> om.sb	+ 677 218383 fax: +677 25225	Major lubricants Distributor Purchases fuel from South Pacific Oil and distributes it in the Western Province.

## 5.2 Importers of lubricating oil and associated products

#### 5.3 Major retailers of lubricating oil and associated products

Company	Name	Email	Phone Number (office)	Description of Services Provided
Ela Motors Honiara	Service Mgr: Milton Wate		+677 30314	Toyota Dealership
United Auto Honiara	Service Mgr:	<u>sales@ua.com.</u> <u>sb</u>	+677 39118	Multi Brand Dealership.
Didds Service Station Honiara	n/a	<u>ckorowa@spo.c</u> om.sb	+ 677 218383 fax: +677 25225	Fuel and lubricants retailer.

Company	Name	Email	Phone Number (office)	Description of Services Provided
Solomon Motors Honiara	Manager: Tamisia L. Teiona		+677 22219/ 20258	Fuel and lubricants retailer.

#### 5.4 Organizations and companies that may generate used oil

The following are identified as likely to be significant generators of used oil due to the nature of their activities. They will be interviewed during the next phase of the project where comprehensive information will be gathered from generators of used oil.

Used Oil Generator	Contact Person	Email	Phone	Comments
Ministry of Infrastructure & Development	Contact Person: Mr. Jimmy Nuake & Mr. Leslie Nate		+677 28605/21141/ 23428	Mechanical Works Services Dept. Manages the Government vehicle fleet.
Solomon Power	Contact Person: Mr. Martin Sam		+677 39422/39466	Electricity generator, producing used oil from generating plant.
Solomons Port Authority Honiara & Noro	Contact Person: Thierry Nervale		+677 22646	Marpol services - used oil and bunker slops
SolTuna Processing Plant Noro	Manager: Tamisia L. Teiona		+677 11286	Tuna processing
Fishing Industry Vessels	Various vessel owners/operat ors			Vessel operators & Marine engine servicing companies
Bus & Transport companies	Various owners/operat ors			Vehicle operations & maintenance.
Solfish Ltd	Gen.Mgr		+677 38122	Mining

Used Oil Generator	Contact Person	Email	Phone	Comments
	Shirley Abe			
Tradeco Shipping	Agency Mgr. Francis Peter		+677 22588	Shipping Agent
NofoKava Construction Ltd	Mgr: Ms Katy Nori		+677 747 6692	Transport Logistics
APID/Bintan Mining			+677	Bauxite Mining - West Rennell
Axiom KB Ltd Isabel			+677 29877	Mining - Isabel.

## 6.0 Institutional Frameworks for used oil management.

#### 6.1 Current Known Management Systems

There are no formal used oil collection systems operating in the Solomon Islands. No verifiable data is available, other than informal commentary on inappropriate re-use and disposal practices. A limited number of the larger used oil generators such as Solomon Power consolidate the used oil they generate and manage the disposal, generally by distribution to individuals for a variety of generally environmentally unsustainable uses.

These uses include but are not limited to:

- Chainsaw blade lubricants in the timber industry
- Dust suppression on gravel roads
- Line marking on sports fields
- Weedkiller
- Fuel for heating and cooking burners
- Random dumping in storm-water drains or waterways and on land

Export to another country for disposal (ie South Korea, India, New Zealand) was considered as too expensive and therefore not an option.<sup>8</sup>

#### 6.2 Current Known Opportunities

There are various estimates of the volume of used oil generated per annum, ranging from 608,000 litres<sup>9</sup> to 800,000 litres<sup>10</sup>. These estimates are now over 6 years old, and will be updated during the next phase of the project where comprehensive information will be gathered from generators of used oil.

Notwithstanding traditional resistance to export for disposal due to cost perceptions, there are in fact shipping options available to manage Solomon Islands used oil. Sofrana ANL<sup>11</sup> operate a service out of Auckland with the southbound route calling at Honiara, Brisbane and Auckland. Export for disposal in Brisbane or Auckland are possible. Neptune Pacific Direct Line (NPDL)<sup>12</sup> operate a service between Honiara and Fiji, where Bluescope Steel offer services for disposal of used oil.

<sup>&</sup>lt;sup>8</sup> Cost Benefit Analysis of Used Oil Management Options for Solomon Islands – December 14 2015 Section 5

 <sup>&</sup>lt;sup>9</sup> Cost Benefit Analysis of Used Oil Management Options for Solomon Islands – December 14 2015 Section 5
 <sup>10</sup> Contemporary Used Oil Audits 2014 – Golder Associates

<sup>11</sup> https://www.anl.com.au/products-services/line-services/flyer/WPACANL

<sup>12</sup> https://www.npdlship.com/services/service-routes/

Solomon Islands is not serviced by Swire Shipping who offer the Moana Taka service that provides Pacific Island countries with shipping at no cost for waste shipments.

### 7.0 Inception Meetings

#### 7.1 Meeting Description

A national inception meeting was held on Friday 4<sup>th</sup> March 2022, between MEDMCC (Ms Debra Kereseka, National Focal Point and Ms Wendy Beti), SPREP (Ms Julie Pillet SWAP Project Co-Ordinator), Mr John O'Grady (Project Contract Manager), Ms Gaylyn Puriana (National Project Consultant) & Mr Boyne Drummond (Project Consultant). The minutes of this meeting are in Appendix 1.

A National Inception Workshop was held on Wednesday 16<sup>th</sup> March 2022. The objective of the Inception Workshop was to inform Key National Stakeholders about the project, to confirm desired outcomes and to identify other key stakeholders who should be involved in the project. The minutes of the meeting are in Appendix 2, including the list of attendees and the chat file, containing questions and answers.

#### 7.2 Feedback from the Inception Meeting

A request for feedback was sent to a cross-section of key stakeholders who attended the Inception workshop. The questions on which feedback was requested, and the responses, were as follows:

## Feedback from the Ministry of Environment Climate Change Disaster Management & Meteorology ( MECDM)

The National Waste Management & Pollution Control Strategy 2017-2026 specifies the government's priority in relation to waste oil management which is covered under section 9.6 - Infrastructure, equipment & cleaner technology. This strategic action includes supporting government, development partners and private sector investment in waste management infrastructures and facilities such as landfills, recycling plants, reuse and minimization of wastes and cleaner technologies.

Through the SWAP project the project will definitely encourage the government to work closely with the waste generators/private sectors to address this issue.

#### Presentation

Attendees indicated the content and presentation was good. South Pacific Oil commented that the scope of the presentation could be more clearly defined to assist the streamlining of questions.

#### Any barriers to participation in the workshop

AFD / SPREP Inception Report - Used Oil Management Project for Solomon Islands

Attendees identified the following issues:

- Length of the workshop was an issue
- A face to face workshop is preferable, Zoom workshops are less effective
- Internet quality was an issue for attendees in remote locations, drop-out and buffering.
- Zoom workshops are not as effective when there are large numbers of attendees.

#### Particular needs of stakeholder organizations that should be included in the plan

- The MCA commented that the plan should include bitumen waste.
- There is a need for a national used oil storage facility
- The plan must be nationwide
- The plan must provide a solution for all customers who purchase lube oil.

#### Strategy for managing used oil presented at the workshop

Attendees noted the options presented during the workshop, but did not see a clear long term strategy with costs included. The disposal options were not clearly defined.

#### What solutions would stakeholders like to see in the plan?

Attendees indicated that the plan should be a centralized management plan that provides safe and effective storage and disposal.

Documentation should be centrally co-ordinated, simple and easy to use otherwise the recording system will collapse.

Effective solutions are required for disposal and recycling.

#### Proposal to introduce a levy

Attendees generally agreed that a levy could be considered, however negative feedback was received from South Pacific Oil who stated "no - we need a waste oil management solution first. If you place a levy, a lot of illegal importation will happen (is happening now), people will go under the radar, making it difficult to track".

Another attendee stated that the amount of any levy should be reasonable.

During face to face interviews, Statistics Department stated that the infrastructure exists to introduce a levy on new oil as there are already levies/taxes imposed on some imports.

#### Any other comments on used oil management in the Solomon Islands

It was suggested that the government should sponsor a small business to undertake the task of co-ordinating and exporting waste oil. Alternatively find a local solution like recycling, blending or incineration.

Another noted that recycling and management in the Solomon Islands will be quite expensive.

Another noted that the plan must be established in the Act and government policy.

#### Any other comments on the format & presentation of the workshop

One attendee stated that a site visit to view a waste oil situation is necessary to understand the problem.

Another reiterated the problem that virtual (Zoom) meetings are not recommended due to poor network reception.

### 8.0 Detailed Work Plan

A logical step-by-step methodology that focuses on assessing used oil from the point it is generated until it is finally disposed of will be used to develop a national used oil management plan. Used oil can originate from many sources and, as far as possible, all national sources will be explored.

These sources typically include:

- Engine oil typically includes crankcase oils from gasoline, diesel and LPG/CNG engines
- Brake fluids
- Gear oils
- Transmission fluids
- Hydraulic oils and fluids
- Compressor oils
- Refrigeration oils
- Industrial process oils
- Electrical insulating oil
- Metalworking fluids and oils
- Heat transfer oils
- Machining oils
- Ship's slops, bilge water, tank cleanings produced by vessels during normal
  - o shipboard operations
- Bottom clean-out waste from virgin fuel storage tanks, virgin fuel oil spill clean
  - o ups, or other oil

The step-by-step methodology will include the following used oil life cycle stages:

- Generation
- Short-term storage for collection
- Collection and transportation
- Bulk storage
- Regulation and transport to end use
- Final disposal

Satisfactory disposal of used oil (particularly in the short term) is expected to be mainly to off-shore destinations although some local end uses may be deemed acceptable. Investigations will include identifying any industrial operations where heat is part of the process and where suitably treated used oil could be used as a fuel source (i.e. steam boilers). It is not expected that any such operation would be likely to use all the used oil generated in the Solomons. Off-shore disposal is generally a viable option throughout the Pacific, provided that an effective shipping route is available. Experienced and environmentally sustainable facilities in Fiji and New Zealand have provided used oil

management services for Pacific Island countries including New Caledonia and French Polynesia for many years.

Another option may exist in the future in Papua New Guinea. This option will be investigated and reported on in the next stage of the project.

A series of questions will be developed that will gather detailed information about the above life cycle stages to inform project reporting and examine ways to:

- Increase and expand collection systems
- Improve transport and containment methods
- Seek satisfactory disposal methods
- Assess means for improvements
- Assess costs for improvements
- Assess training and capacity-building needed
- Target needs to each country's requirements.
- Determine potential pathways to develop Advance Disposal Fees for lubricating oils
- Review existing waste legislation and relevance to waste oil

The questions will be prepared electronically, and information can be recorded electronically or transferred as soon as possible from notes. Photos will be used extensively to supplement the data gathering and will be numbered and identified with care so they can be traced to sources.

### 9.0 Government Responsibilities.

An outcome of the Inception Meeting with MECDMM, was that the MECDMM will assign one of their personnel to accompany the local consultant to meetings with stakeholders during the analysis and information-gathering phase of the project. The presence of the government during these meetings will enhance the understanding by stakeholders that the project is fully supported by the government. Stakeholders will be expected to provide complete and accurate information in respect of those aspects of the project that relate to the stakeholder's activities.

The local consultant will interview those government organizations that have specific legislative responsibilities for enforcement and compliance of existing laws and regulations. Those organizations will be expected to provide complete and accurate information on enforcement and compliance activities, and provide the local consultant with access to enforcement officers.

There has been no further discussion with MECDMM on what the Solomon Islands government sees as its other responsibilities under the programme. It is anticipated that these discussions will occur at the beginning of the next phase of the project.

## Appendix 1 – Inception Meeting Minutes

SPREP Contract 2021/064 AP\_6/15 – Technical assistance to conduct a feasibility study and develop a National Used Oil Management Plan for Samoa, Solomon Islands, Tonga, and Vanuatu.

Solomon Islands Inception Meeting with Ministry of Environment Climate Change Disaster Management & Meteorology (MECDMM)

Zoom meeting on Friday 4<sup>th</sup> March 2022 at Noon (NZ/Samoa Time), 10.00 am (Solomon Islands Time)

#### Attendees:

Debra Kereseka:	DKereseka@mecdm.gov.sb, (Project Focal Point MECDMM)
Wendy Beti:	WBeti@mecdm.gov.sb (MECDMM)
Julie Pillet:	<pre>juliep@sprep.org&gt;; (SWAP Project Co-Ordinator SPREP)</pre>
Gaylyn Puairana:	gayepuai13@gmail.com (Project Consultant S.I.)
Boyne Drummond:	boyne@popservices.co.nz (Project Consultant N.Z.)
John O'Grady:	<pre>iogrady@actrix.co.nz (Project Manager N.Z.)</pre>

#### Minutes & Actions.

- 1. Introduction of meeting participants, Debra will delegate day to day Ministry activities for the project to Wendy. Wendy will liaise directly with Gaylyn. Debra will oversee activities.
- 2. BD presented a Power Point used oil project presentation that described the project and the background issues regarding used oil. This Power Point will also be presented at the Inception Workshop.
- 3. Wendy and Gaylyn will prepare the list of attendees for the Inception workshop.
- 4. Ministry will draft a letter to attendees and send out the invitations. Gaylyn will follow up the invitations to ensure full attendance.
- 5. Analysis phase, visits to stakeholders. Wendy will accompany Gaylyn to meetings with Stakeholders.
- 6. Response to question from Julie, options for plastic used oil containers to be discussed by the team. BD to include plastic used oil containers in the powerpoint for discussion.

7. Re Nufuels: BD to invite Simon Arnold to the Inception Workshop and send Julie the Rotary DownUnder article about Nufuels. (Nufuels have a technology to convert plastic waste into fuel and this may be useful for disposing of empty oil containers. This technology is already under trial in Solomon Islands.)

# Appendix 2 – Inception Workshop Minutes, Attendees and Chat File

#### Appendix 2.1 Minutes for Solomon Islands Inception Workshop.

## Zoom meeting on Wednesday 16<sup>th</sup> March 2022 at Noon (NZ/Samoa Time) 10.00pm (Solomons Time)

The attendees are listed in Appendix 2.2

The workshop was facilitated by Boyne Drummond with assistance from Gaylyn Puairana and John O'Grady. The list of attendees, who were identified as key stakeholders for the project, were invited to the workshop by MECDMM. The list was compiled by Ms Wendy Beti (MECDMM) and Ms Gaylyn Puairana (Project Team). There were 33 participants at the workshop.

#### Session 1.

The meeting commenced at 10am (SIT) with a welcome by Boyne Drummond on behalf of the project team. This was followed by the formal welcome given by Mr Joe Horoko, Director of the Environment and Conservation. Joe gave a short address outlining the current state of Waste Management in the Solomon Islands and the importance of this project to the Solomons government. He thanked SPREP and SWAP for initiating this project, the outcome of which will benefit the environment and community.

#### Session 2.

Wendy Beti, Senior Environment Officer with the Environment & Conservation Division, gave an outline of the project and its objectives, linking the National Programme with the SWAP project. The presentation, which was supported by a Powerpoint on shared screen, covered an overview of existing national programmes, linkages between national programmes and the SWAP project, and the significance of this workshop. Particular references were made to the following:

- The Environment Act 1998
- National Waste & Pollution Control Strategy 2017 2026
- Solomon Islands National Development Strategy
- Democratic Coalition for Change (DCCG) policy statement for ensuring protection and conservation of Solomon Islands resources, people and priorities.

An important outcome of the workshop is that government line ministries, private sector stakeholders and NGO's are all informed and consulted as the project proceeds. Consensus and discussion should be undertaken at all stages of the feasibility study and development of the Used Oil Management Plan.

Boyne Drummond, Project Consultant, NZ based, gave a detailed outline of the project to stakeholders, supported by a Powerpoint on shared screen. The Powerpoint has subsequently been shared with stakeholders who requested a copy.

The Powerpoint addressed all aspects of the project and emphasized the importance of stakeholder involvement at all stages, in particular the completeness and accuracy of information provided to the project consultants during the information and data collection stage.

#### Session 3.

On completion of the presentation a number of questions were taken from stakeholders they were logged via the Chat function on Zoom. The Chat report with facilitator replies is included as Appendix 2.3. Julie Pillet replied regarding the question on managing oil spills that SPREP may take up this issue as a special project.

#### Session 4.

John gave a short presentation on the timeline for the project, completion of the final Used Oil Management Plan to be achieved by the end of 2022.

**Session 5**. Any other business is covered in Appendix 4. In conclusion on behalf of MECDMM Debra Kereseka thanked the stakeholders for their attendance. On behalf of the project team Boyne Drummond thanked the stakeholders for their attendance.

Ref	Names	Organizations	Position	Phone Contact	Email
	PRIVATE SECTOR	RS			
1	Charles Meke	Win Win Investment Ltd	Director	36013	<u>cmeke.nvlsi@gmail.com</u>
2	Tatiana Wickham George Leong	GTL Holdings		38091	sales@gtss.com.sb
3	Connie Wong	Pan Pacific Machinery & Parts Ltd, Ranadi		39888/39898/720 6613	cw.ppmp@gmail.com
4	Vincent	Automate/ Hans Group			
5	James Kim	Kosol			jkim@kosol.biz

#### Appendix 2.2 List of Inception Workshop Attendees.

Ref	Names	Organizations	Position	Phone Contact	Email
6	Ketty Ramokoloa	South Pacific Oil Ltd	Chief Operations Officer	21838/21839	Ketty.Ramokoloa@spo.com.sb
7	Harriet Suri	Solomon Tobacco Ltd	Quality Manager	44410	jennifer_anisi@bat.com and harriet_suri@bat.com
8	Regina Gatu	Guadalcanal Plains Palm Oil Ltd		21003	rpokana@gppol.com.sb
9	John Vollrath/Bevan Vollrath	Solomon Soap/Solomon Tropical Products		38557	bevan@solomon.com.sb
10	Zahrariah Nikavka	Gold Ridge Mining Ltd			<u>Zachariahnikavaka214@gma</u> <u>il.com</u>
11		Tongs Corporation	General Manager	38159	<u>sales@tongscorp.com/</u> jsika@tongscorp.com
11	Freddy Kaoa Crocker	United Auto	Manager- Parts & Operations	38182/81	andyf@ua.com.sb / fcrocker@ua.com.sb
12		TradCo Shipping Ltd		22588	operations@tradco.com.sb
13	John Belande	Soltuna Ltd	Manager Engineering Maintenance	21664/21665/610 12	jbelande@soltuna.com.sb
	SOEs				
1	Pesi Biliki	Solomon Ports Authority	Harbour Master -	22646/42373-eps	pbiliki@sipa.com.sb
2	Allen Kisi Ofea	Solomon Islands Maritime Authority		21535	contact@sima.gov.sb/
3	Ray Andresen	Solomon Water	Operations Manager	23985	randresen@solmonwater.com.sb
4	Christian Siota	Solomon Power	Manager Health, Safety, Security & Environment	42410	<u>Christian.Siota@solomonpower.co</u> <u>m.sb</u>

Ref	Names	Organizations	Position	Phone Contact	Email
	Winston Lapo		Coordinator Mechnical Engineering Environment Officer, Capital Works HSSE Officer		
	Academic Institutions				
1	Solomon Pita	SINU	Acting Dean	42600/42744	solomon.pita@sinu.edu.sb
	Government & Provincial Government				
1	David Natogga	Energy Division, MMERE	Director Petroleum	21525	DNatogga@mmere.gov.sb
2	Terence Titiulu	Min of Forestry & Research	PS UST	22250-eps	Terence.Titiulu@mofr.gov.sb
3	David Natogga	MMERE	Director Petroleum	21521/21522	DNatogga@mmere.gov.sb
4	George Bogese	Director, Waste Management Division, Honiara City Council		44159	georgebgs59@gmail.com
5	George Titiulu	D/D EHD DEHD		28166/20830	
7	Stephen Dekyi Anthony Kivolyn	Ministry of Police	D/Fire & Rescue Director Policy	22208- switchboard	<u>AKivolyn@mpnscs.gov.sb</u> <u>Stephen.Dekyi@rsipf.gov.sb</u>
8	Sylvester Tiki	MPGIS	PS	28606-EPS	SPirione@mpgis.gov.sb EPS- Suzie Iro

#### Appendix 2.3 Inception Workshop Zoom Chat File.

Log of the Zoom Chat function. Replies from the Facilitators are in *Italics*.

12:25:51 From Gaylyn Puairana : Please if you have any questions, pls drop them here.

13:00:34 From Gaylyn Puairana : If you have questions, you can put them here. Or you can ask during Q&A

13:09:57 From Gaylyn Puairana : He asked how about Bitumen waste?

Reply by John – Bitumen waste requires special handling as it is more solid than liquid. Subject to receiving further information (via Gaylyn) further adce and assistance may be provided.

13:20:36 From Trevor Veo (MCA) : Thanks John

13:20:37 From James Kim : I have a question. I think steel recycle and plastic recycle should also be considered together. then local oil recycle solution may become viable. it will also solve problem in solomon for plastic, vehicle scrap, metal scrap too. my question is can the scope be broader to include steel and plastics too.

Reply by Boyne & John – Recycling of plastic empty used oil containers will be covered by the project. Metal and other scraps are addressed by other national & SPREP programmes.

Comment by Julie – Plastics other than used oil containers are not covered by the SWAP project. The SWAP project does include plastic that are part of marine debris.

13:21:06 From dean.stms : I have a question

13:21:58From dean.stms : Is there a way to refine the sand and the oil from theoil spills?

Reply by John – Separating oil from sand and other debris from the oil is very difficult, and there are very few cost effective options. Also the need for a national spill management plan.

Comment by Boyne – Managing oil clean-ups on beaches resulting from oil spills from ship groundings should in the 1<sup>st</sup> instance be the responsibility of the Salvage company who is apponted by the ship owner.

13:22:54 From Gaylyn Puairana : Thanks Kim for the question.

13:23:55From James Kim : because the used oil can fuel furnace to recycle steelor process plastic. so it solve the problem of stockpiling you mentioned before

13:24:54 From GTitiulu : in terms of storage facility and space, are we considering existing engagement with companies and are we ensuring that we do not open up to any one or is it conditional requirements.

Reply by Boyne – The capacity of existing storage capacities will be investigated during the analysis phase and discussion with stakeholders. Recommendations for infrastructure development, improvement of existing facilities and controls will form part of the Feasibility study

13:27:06 From dean.stms : I have a question I want ask in person

13:27:41 From Gaylyn Puairana : Thanks Dean and GTitiulu for the questions

13:28:04 From Jason Lunga : Question from SPO - if we can ask

*Reply by Boyne. - Outside of this workshop we can liaise directly with SI Power to address storage and stockpile issues and disposal options.* 

13:31:39 From Gaylyn Puairana : Thanks Jason for your comment and question. Very interesting.

14:05:42 From Florence Gali : Question from IBE (Island Bay Engineering), Is there any other country in the pacific that has a study case in addressing this issue of used oil? *Reply by John – Yes* 

From George: There is a lack of infrastructure in the provinces to accept Marpol wastes from cruise ships and other vessels.

Reply by Boyne – Experience indicates that vessels will shop around various ports to get the cheapest rates. Ports who do not have the infrastructure to accept Marpol waste should refuse.

Comment by John – Under the Marpol Convention countries who are parties are obliged to accept Marpol wastes from vessels. This issue should be addressed by the Used Oil Management Plan.

14:14:03 From Regina Gatu : Thanks

14:15:31 From Gaylyn Puairana : Thanks everyone for your participation. It was really good to have you all in this discussions. Looking forward to have more face to face consultations with you. Wendy and I will come around so please lookout for our meeting requests. You all have a good and safe day.

14:16:53 From Allen Ofea-SIMA : Thank you facilitators, looking forward to working with you for this project.

14:16:57 From Gaylyn Puairana : Thanks for that Debra.

14:17:08 From akivolyn : Thank you everyone

14:17:42 From Regina Gatu : Thank you all, GPPOL is looking forward to working with you all.

14:17:52 From dean.stms : Thank you to all. have a good day

14:17:55 From nkilua : Thank you everyone. look forward for another workshop.

14:18:00 From Florence Gali : thanks very useful workshop Gaylyn

14:18:41 From Mariana Nonga : Thanks all

14:18:41 From PAUL SCULF IRO : Thank you and looking forward

14:18:41 From Wendy Beti, SI : Thank you everyone for joining the workshop

today. Will be contacting you and collaborating with you all. Thank you to the facilitators for a successful workshop.