Technical Assistance for Implementation of the Agence Française de Développement (AFD)

Regional Solid Waste Management Initiative for the Pacific

Inception Report

17th May 2012

HYDEA

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ACRONYMS

AFD	Agence Française de Développement
DoE	Department of Environment
EIA	Environmental Impact Assessment
EMA	Environment Management Act
EPR	Extended Producer Responsibility
EU	European Union
EUR	Euro
FMS	Fiji School of Medicine (Now FNU)
FNU	Fiji National University
GEF	Global Environment Facility
GEFPAS	Global Environment Facility Pacific Alliance for Sustainability
JICA	Japan International Cooperation Agency
MoH	Ministry of Health
NGOs	Non Government Organisations
NSWMS	National Solid Waste Management Strategy
PICTs	Pacific Island Countries and Territories
PNG	Papua New Guinea
PO	Project Officer
PPA	Pacific Power Association
PS	Product Stewardship
SPREP	Secretariat of the Pacific Regional Environment Programme
SWM	Solid Waste Management
TA	Technical Assistance
ToR	Terms of Reference
UNEP	United Nations Environment Programme
*u*POPs	Persistent Organic Pollutants released unintentionally
USP	University of the South Pacific

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AFD REGIONAL SOLID WASTE MANAGEMENT INITIATIVE - PROJECT SUMMARY

Project Name:	AFD Regional Solid Waste Initiative
Implementation Partners:	Agence Française de Développement (AFD) Secretariat of the Pacific Regional Environment Programme (SPREP)
Project Member Countries:	Cook Islands, Federated States of Micronesia, Republic of the Fiji Islands, Republic of Kiribati, Republic of Marshall Islands, Republic of Nauru, Niue, Republic of Palau, Independent State of Papua New Guinea, Independent State of Samoa, Solomon Islands, Kingdom of Tonga, Tuvalu and Republic of Vanuatu
Project Member Territories:	French Polynesia, New Caledonia, Wallis & Futuna
Beneficiary PICs:	Project Member Countries and Territories
Type:	Grant
Budget:	1 million Euros (approximately 1.4 million USD)
Duration:	4 years (October 2011 – September 2015)
Location of Project Office:	SPREP Headquarters Vailima, Samoa
Overall Goal:	Solid waste management in the Pacific Region is improved
Purpose:	1. SPREP is recognised internationally as a qualified organization, able to design and manage projects and work with partners to support Pacific Island Countries and Territories (PICTs) to improve their solid waste management programs. 2. The technical capacity of Pacific islanders to manage solid waste is enhanced. 3. The environmental impacts of inappropriate disposal of waste oil is minimised in Pacific Island countries.
Outputs and Activities:	1. A regional waste management training program is developed and delivered according to an approved work program. 2. A sustainable waste oil collection system and export arrangements from Pacific island countries is implemented. 3. The French Territories are involved in the project from the beginning. 4. Partnerships are developed and strengthened and co-financing secured. 5. Pacific island countries are supported to develop future country activity proposals.
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EXECUTIVE SUMMARY

Pollution and the growing volumes of solid and hazardous wastes are major threats to the environments and sustainable development of the Pacific Islands. Globalisation is accelerating the transition of Pacific communities towards consumer economies, with increasing urbanisation, migration and participation in international trade. This is resulting in an escalation in solid and liquid wastes, more shipping and land transport and more infrastructure and industry throughout the region, which increase the risk of coastal and marine pollution. The lack of controls on imported goods, together with the lack of capacity to manage wastes threatens to undermine the quality and health of vulnerable island ecosystems on which Pacific Islanders depend. Groundwater is particularly vulnerable in atolls, low lying islands, and coral-based islands, where the permeable substrate increases the risk of pollution from leachates and other waste discharges.

The Agence Française de Développement (AFD) and the United Nations Environment Programme (UNEP) have jointly prepared an initiative to support the implementation of the Regional Solid Waste Strategy and national solid waste management strategies of SPREP Member countries. SPREP is the implementing agency for this AFD initiative and has contracted HYDEA S.p.A (the Consultant) to execute the initiative as well as provide further support to SPREP in coordination of improved regional waste management. The AFD Project will be completed across 3 broad components:

1) Component 1 supports the development and delivery of a vocational training program in waste management through regional institutions (€300,000);

2) Component 2 contributes to the reduction of the negative impacts of waste oil on the Pacific environments of participating PICTs through the development of appropriate frameworks for waste oil collection and disposal (€150,000); and

3) Component 3 provides support to PICTs to prepare country activity proposals that will be considered subject to additional funding being secured (€50,000).

This Inception Report outlines the proposed strategy to implement the three components, which have been renamed as Activities 1, 2 and 3.

Activity 1: Training Program

The Training Program will entail the development of 2 training modules, with each module being delivered to 14 participants annually over a two-year period, through a service contract with Fiji National University, with possible collaboration from the University of the South Pacific. The first delivery of the two modules will be over the period December 2012-January 2013. The second delivery will be over the period December 2013-January 2014.

The training modules will be Waste Management Techniques (Module 1), and Waste Disposal Site Management (Module 2), both of which will encompass several subjects including hazardous waste management, and environmentally sound and practical waste management techniques. Further, there will be elements common to both modules covering areas such as train-the-trainer principles, and project management.

Relevant activities, demonstration sites, and experiences from JICA (based on their regional J-PRISM project) will be incorporated into the Training Program along with case studies from French Polynesia and New Caledonia will be incorporated into the design and delivery of the training program. Potential case studies that will be developed further include Extended Producer Responsibility Implementation,

Sustainable Financing in New Caledonia and French Polynesia, Vehicle Dismantling for End-of-Life Vehicles, Leachate Management, and Power Generation from Waste Oil.

A key component of the trainee selection process will be the requirement for the applicant to submit a project concept that he/she wishes to develop and implement. Assistance will be provided through Activity 3 (National Project Support), to develop project concepts into full implementation plans during the Training Program. On returning home, trainees may then be eligible for further technical and financial support under Activity 3 to implement their projects.

A variety of measures will be pursued to help establish sustainability of the training program beyond the end of the AFD Project, including but not limited to:

a. Approval and implementation of the UNEP/GEFPAS Pacific POPs Release Reduction Project. The AFD Project was intended to co-finance the UNEP/GEFPAS Project; however it is now being implemented in isolation due to uncertainty regarding an approval date for the UNEP/GEFPAS Project. When the UNEP/GEFPAS Project is approved it will provide additional funds to continue training for at least a further 2 years and to support the trainees through in-country mentoring.
b. Partnering with other regional counterparts such as JICA to implement long-term training hosted entirely or partly at FNU.
c. Securing regional funding from other agencies such as AusAID or the New Zealand Aid Programme through their on-going bilateral training programmes.
d. Countries securing bilateral funding to support future participants. The success of the training program in the early years will go a long way towards convincing national agencies to prioritise the training and provide scholarships for their citizens.
e. FNU offering the course on a fee-paying basis. FNU has already indicated interest in this regard.

Activity 2: Waste Oil Management

The underlying goal of this activity is to reduce the negative impacts of waste oil on the environment while maximising any economic opportunities for Pacific communities without requiring continued external financing.

This activity will involve the establishment of waste oil collection systems in three countries (Fiji, Samoa, and Vanuatu), with arrangements put in place to export waste oil from Samoa and Vanuatu to Fiji, where it will be used by Fletcher Pacific Steel Fiji Limited.

Samoa and Vanuatu were chosen because of their proximity to, and direct shipping routes with Fiji. Both countries are also of a comparable size in terms of population, it will therefore be interesting and useful to compare volumes of oils imported and waste oils generated.

The specific activities will include:

- Conducting waste oil audits in Fiji, Samoa, and Vanuatu to establish waste oil sources, quantities, collection and disposal arrangements, and storage requirements;
- Establishment of waste oil collection programs in Fiji, Samoa and Vanuatu to ensure the safe capture, and storage of waste oil;
- Facilitating one shipment of waste oil each from Samoa and Vanuatu to Fiji;
- Preparation of education & awareness materials for Samoa, Vanuatu, and Fiji;
- Preparation of a Waste Oil Management Plan and Model Stewardship Legislation to support regional waste oil management.

The sustainability of the Waste Oil Activities in each participating country will be enhanced through the development and adoption of the stewardship program, which will be developed in this AFD Project. The countries participating in the project will be required to formally commit to adopting the stewardship program as a mandatory pre-requisite to participation.

Activity 3: National Project Support

This Activity of the AFD Project was initially intended to provide support to PICs in the preparation of national grant proposals which would then become eligible for funding under the small grant allocation of €50,000.

We recommended that the Activity 3 (National Project Support) budget allocation of €50,000 be used to provide successful applicants from the first tranche of the training program (December 2012 - January 2013) with technical assistance and financial support, to develop country project concepts to a full project implementation plan. It is further proposed that a portion of this budget be used to support the implementation of worthwhile projects assessed against pre-determined criteria and guidelines. The applicant's performance in the training programme could be one criterion, which would also serve as an incentive for doing well.

Detailed guidelines and eligibility criteria for project support as described above will be developed in consultation with SPREP and relevant partners (such as JICA). Possible criteria will include project sustainability, benefits to the environment, conformity with waste hierarchy and national policy, and cost/benefit. The role of the AFD TA will also include providing technical support and guidance on proposal development and implementation, and identifying and mobilising additional funding for implementation.

Activity 4: Co-Financing

The AFD TA is required to add value to this AFD Project by identifying, coordinating and mobilizing co-financing on behalf of SPREP to support implementation of further project activities. Our strategy to achieve this will involve searching available funding databases for relevant opportunities and developing funding concept that responds to those opportunities, and actively seeking linkages between ongoing projects throughout the region. We will utilise our network in the Pacific region as well as internationally to identify suitable resources. We will proactively contact Regional Offices for relevant organizations to define a common strategy that maximises funding from their Headquarters. Organizations that will be contacted include: Global Environment Facility, European Union, Asian Development Bank, World Bank, AusAID, New Zealand Aid Programme, and non-governmental organizations in the region.

Activity 5: Assist UNEP/GEFPAS Project

The UNEP/GEFPAS Pacific POPs Release Reduction Project aims to reduce the emissions of unintentional POPs (uPOPs) from waste incineration, uncontrolled combustion, and other sources. This is to be done in order to comply with the Stockholm Convention on POPs. However, at the time of writing this Inception Report, the UNEP Project had yet to be approved for implementation.

Should the UNEP/GEFPAS project be approved for implementation over the duration of the AFD Project, the AFD TA will assist that project by providing technical review of uPOPs prevention strategies prepared by PICs.

The AFD TA will further identify key players in waste management to be targeted for outreach and incorporation of sustainable approaches in waste management (general public, municipal and industrial waste generators and management).

The AFD TA will also provide a review of existing legislation/regulation relating to uPOPs (based on the PICs' Stockholm Convention National Implementation Plan) and consult with counterparts on potential options for legislative/regulatory review. In consultation with participating PICs, the TA will develop draft "model" legislation/regulations on uPOPs that may be integrated by government counterparts into PIC legislative frameworks.

1. INTRODUCTION

1. This inception report describes HYDEA's approach for implementing the AFD Project. The report summarises the strategies to achieve the AFD Project objectives as specified in the Terms of Reference (ToR), taking into account the information available and progress made up to 30th April 2012. The inception report is divided into four sections:

- Introduction
- Detailed Project Work-Plan and Budgets
- Project Implementation Arrangements
- Assumptions and Risks relevant to project completion

2. The Inception Report was first prepared in December 2011, and was initially based on the project being co-financed by the UNEP/GEFPAS Pacific POPs Release Reduction Project. Since the first submission, the Inception Report has gone through several iterations due in part to the delay in approval of the UNEP/GEFPAS Project and with inputs from SPREP and AFD to ensure a robust approach to achieve the Project Objectives. Various amendments to the budget and work plans have also been required as a result of comments received from AFD.

1.1 Background

3. Pollution and the growing volumes of solid and hazardous wastes are major threats to the environments and sustainable development of the Pacific Islands. Globalisation is accelerating the transition of Pacific communities towards consumer economies, with increasing urbanisation, migration and participation in international trade. This is resulting in an escalation in solid and liquid wastes, more shipping and land transport and more infrastructure and industry throughout the region, which increase the risk of coastal and marine pollution. The lack of controls on imported goods, together with the lack of capacity to manage wastes threatens to undermine the quality and health of vulnerable island ecosystems on which Pacific Islanders depend. Groundwater is particularly vulnerable in atolls, low lying islands, and coral-based islands, where the permeable substrate increases the risk of pollution from leachates and other waste discharges.

4. A number of initiatives have been undertaken to address the threat from poor waste management practices in Pacific island countries. These include Japan International Cooperation Agency (JICA) technical and financial assistance to the region to develop the first Regional Strategy for Solid Waste Management for the Pacific Region, which was endorsed by the 16th Annual SPREP Meeting, held in Apia, Samoa in September 2005, and further revised in 2009. JICA is also implementing a 5-year regional solid waste management project (J-PRISM) in conjunction with SPREP, which began in February 2011. This 5-year project focuses on providing on ground technical assistance to improve solid waste management in the Pacific.

1.1.1 AFD Regional solid Waste Management Initiative

5. The Agence Française de Développement (AFD) and the United Nations Environment Programme (UNEP) have jointly prepared a further initiative to support the implementation of the Regional Solid Waste Strategy and national solid waste management strategies of SPREP Member countries. Joint AFD-UNEP missions to countries and territories in the Pacific occurred in 2005 and 2006. Drawing on meetings with multilateral and bilateral partners, and inspections of waste management initiatives an original AFD initiative was originally conceived as a 5 million Euro project, but was subsequently approved as a 4-year, 1 million Euro project with three sub-components as follows:

a. **Component 1** supports the development and delivery of a vocational training program in waste management through regional institution(s);
b. **Component 2** contributes to the reduction of the negative impacts of waste oil on the environment of participating PICTs through the development of appropriate frameworks for waste oil collection and disposal;
c. **Component 3** is essentially an AFD Fund, which provides support to PICTs to prepare country activity proposals that will be considered subject to additional funding being secured.

6. SPREP is the implementing agency for the AFD initiative, which will contribute to the implementation of national solid waste management strategies, the Regional Solid Waste Management Strategy, and by extension, the SPREP Strategic Plan and the 2005 Pacific Plan, which is the regional sustainable development strategy.

1.1.2 UNEP/GEFPAS Pacific POPs Release Reduction Project

7. In parallel to the AFD initiative, a project which is to be funded by the Global Environment Facility as part of the Pacific Alliance for Sustainability (GEFPAS) programme and implemented by the United Nations Environment Programme (UNEP) was developed, entitled: *Pacific uPOPs Release Reduction through Improved Management of Solid and Hazardous Wastes*.

8. The overall objective of the UNEP/GEFPAS project is to reduce unintentional POPs (uPOPs)[1] releases in the Pacific Island states through the introduction of integrated whole-system approaches to the environmentally sound management of solid and hazardous wastes. The project has the following eight components:

i) Development of national and regional uPOPs prevention and management strategies
ii) Training and awareness raising in solid and hazardous waste management
iii) Enhanced, post-NIP2 inventory, stockpile management and safe disposal strategy for unwanted pesticides (including POPs) and school laboratory chemicals
iv) Waste oil export and reuse in Polynesia and Melanesia
v) National technical assistance for country-specific post-NIP activities
vi) Legislation enforcement and promotion of low risk alternatives in agriculture and wood treatment in PICs with significant reliance on pesticides
vii) Impact monitoring and evaluation, lessons learned, knowledge management, project planning and administration, and future project identification
viii) Project management

9. There are two major co-finance partners to this initiative: the AFD and the Food and Agriculture Organisation (FAO). The Implementing Agency for the project is UNEP, and SPREP is anticipated to be the Executing Agency for the project. At the time of writing this Inception Report, the UNEP/GEFPAS Project was yet to be approved for implementation, and there was no certainty of the approval date. Until such time that the project is approved (anticipated to be mid-2012), the AFD Project will be implemented as a stand-alone project. Consequently this Inception Report is written on the basis that the AFD Project is being implemented as a stand-alone project.

10. Should the UNEP/GEFPAS Project be approved, the alignment of complementary activities between the AFD Project and the UNEP/GEFPAS Project will need careful discussion and agreement to

[1] The term uPOPs is used throughout the project documentation to refer to those Persistent Organic Pollutants known to be formed and released unintentionally from anthropogenic sources, as listed in Annex C of the Stockholm Convention.

avoid duplication, while simultaneously taking into account commitments already made in implementation of the AFD Project.

UNEP/GEFPAS Project Consultation Workshop

11. A consultation workshop was held in Nadi, in April 2011 to assist with the detailed design of the UNEP/GEFPAS Project, and to reach stakeholder agreement on the recommended activities for inclusion in the final GEF-PAS Project Document (Pro-Doc) to be submitted for GEF approval.

12. The workshop mainly covered UNEP/GEFPAS Project components 1 to 4, and 6. Component 5 was not discussed because it covers work that will be delivered in response to specific country requests with funding provided by AFD. Components 7 and 8 were only discussed in relation to the general aspects of project management and delivery. A summary of the key workshop outcomes under each component is summarised in Appendix 1.

13. Components 1, 2 and 4 of the UNEP/GEFPAS Project are part of the AFD initiative, while Component 5 is a follow on to AFD Activity 3. Component 1 of UNEP/GEFPAS is Activity 5 of the AFD Initiative (see Table 1) and will assist UNEP.

1.2 Project Objectives

14. The objectives of this AFD Regional Solid Waste Management Initiative are to:

a) Develop and deliver a regional vocational training program in collaboration with regional partners;
b) Develop a waste oil collection and export system from PICTs;
c) Support SPREP in administering the AFD Fund for national solid waste management projects;
d) Coordinate and collaborate with other funding agencies to secure co-financing on behalf of SPREP to further support project implementation and strengthen SPREP's capacity to assist PICTs; and
e) Strengthen capacity within SPREP for implementing the waste and pollution prevention work programme.

1.3 Specific Tasks

15. The specific tasks that will be undertaken to achieve the objectives are summarised in Table 1, along with the referencing system (i.e., Activities 1- 6 inclusive) that will be used throughout this Inception Report and in all subsequent reports.

TABLE 1: SUMMARY OF PROJECT ACTIVITIES

Reference	Description	AFD Budget (Euros)
Activity 1 – Training Program	Design and develop a regional vocational training program for Pacific islanders	300,000
Activity 2 – Waste Oil Management	Waste oil collection system In PICs and export to a waste oil reuse company In Fiji	150,000
Activity 3 – National Project Support	Support PICs In developing proposals for national SWM projects	50,000
Activity 4 – Co-Financing	Identify, coordinate and mobilize co-financing on behalf of SPREP	Component of HYDEA's Technical Assistance Contract
Activity 5 – Assist UNEP/GEFPAS Project	Assist UNEP in the coordination and execution of relevant components of the regional UNEP/GEFPAS Project	Component of HYDEA's Technical Assistance Contract
Activity 6 – Strengthen Capacity with SPREP	Strengthen capacity within SPREP for implementing the waste and pollution prevention work programme	Component of HYDEA's Technical Assistance Contract

2. DETAILED WORKPLAN AND BUDGETS

16. Draft budgets were prepared in 2011 as part of the UNEP/GEFPAS Project preparation, although it was recognised that the UNEP/GEFPAS funds would not be available (if at all) before 2012. AFD Funds were allocated against specific project items as part of this process.

17. Given the uncertainty of the allocation of GEFPAS funds at this time, the AFD work programme and budget has been developed in isolation taking into consideration the AFD TA ToR.

18. In summary, the overall AFD Budget is €1,000,000 with €500,000 available for Activities 1, 2 and 3 as follows:

- Activity 1 - Training Program (€300,000);
- Activity 2 - Waste Oil Management (€150,000);
- Activity 3 - National Project Support (€50,000);
- Activity 4 - Co-Financing (No specific budget);
- Activity 5 - Assist UNEP/GEFPAS Project (UNEP/GEFPAS budget); and
- Activity 6 **-** Strengthen Capacity with SPREP (No specific budget).

19. The following sections discuss the strategies, and present a detailed work plan and budget for each Activity in order to achieve the objectives of the AFD Project.

2.1 Activity 1: Training Program

2.1.1 Strategy

20. Based on the preparation work that was done during the AFD Project preparation phase, and on our further review of training course developers including the University of Papua New Guinea, we recommend that the training program be developed and delivered under contract to the Fiji National University (FNU) Suva campus, with possible collaboration with the University of the South Pacific (USP).

21. We propose that two (2) training modules be developed and delivered: Waste Management Techniques (Module 1), and Waste Disposal Site Management (Module 2), with the content as described in Table 3. Between these two modules, subjects including hazardous waste management and environmentally sound and practical waste management techniques as specified in the SPREP/HYDEA ToR will be incorporated. Final module content will be discussed and agreed with SPREP and JICA.

22. We further propose that the two training modules be delivered annually beginning over the period December 2012 - January 2013, to a maximum of 14 participants per module. FNU has a residential campus in Suva, and is well placed to provide suitable accommodation and meals to trainees. We therefore recommend that FNU be given the responsibility (under contract) for trainee welfare in terms of accommodation, meals, and other incidental costs. The second delivery of the training program under the AFD Project will occur over the period December 2013-January 2014.

2.1.2 Sustainability

23. The sustainability of the training programme must be considered to ensure that the course continues past the end of the AFD Project. We propose to pursue the following measures to help establish sustainability of the training program:

a. **Approval and implementation of the UNEP/GEFPAS Project**. While the UNEP/GEFPAS Project is experiencing delays, there are positive indications that the project will be approved for implementation. These project funds will provide sufficient resources to continue the delivery of the training programme for at least a further two years and to support the trainees through in-country mentoring. The additional time will also allow for other sources of support to be identified in order to sustain delivery of the training programme by the AFD TA.

b. **Partnering with other regional counterparts**. FNU can partner with regional counterparts such as the Japan International Cooperation Agency (JICA) in the training programme development and delivery. JICA currently has an on-going bilateral training programme for professionals in Pacific island countries, which involves a few weeks of training in Japan. The AFD TA will discuss and develop the possibility of JICA and FNU collaborating to host the training entirely or partly at FNU. As the JICA programme is on going (long-term), success in these discussions will contribute to the sustainability of the AFD Training Programme.

c. **Securing regional funding from other agencies such as AusAID or the New Zealand Aid Programme**. We have recently (May 2012) been made aware that AusAID is funding a course on waste management at Griffith University in Australia, through the "International Partnership for Expanding Waste Management Services of Local Authorities (IPLA)". Griffith University is the Sub-Regional Secretariat for IPLA covering Australia and New Zealand. SPREP is also a Sub-Regional Secretariat for Pacific Small Island Developing States (SIDS) in IPLA, and already has in place an MOU with Griffith University for cooperation on waste management. In the coming months the AFD TA will pursue this relationship further and discuss the possibility of collaboration between FNU, Griffith University and AusAID, with a view to securing additional funding support and partners for continuation of the training programme.

d. **Countries securing bilateral funding to support future participants**. Many countries have strong relationships with bilateral donors. We will strongly encourage the relevant national government agencies to designate waste management as a national training priority, and to fund their own participants on this training programme using the available bilateral funding support. The success of the training programme in the early years will go a long way towards convincing national agencies of the merits of the training program, and could increase the likelihood of national funding.

e. **FNU to offer the course on a fee-paying basis.** FNU has indicated that they are interested in offering the training programme on a permanent, fee-paying basis, and also using it as a complement or pre-requisite to a more extensive diploma course. The success of this approach will depend on FNU's ability to secure scholarship funding through their own network, and also on the interest of Pacific islanders in attending this course. The AFD TA will seek to secure a commitment from FNU in this regard and provide support as required to identify suitable funding sources for FNU.

2.1.3 Specific Tasks

24. This section outlines the major individual tasks that will be undertaken to achieve the objectives of Activity 1 Training Program. A breakdown of the sub-tasks can be found in Table 4 in Section 2.1.4.

TASK 1: Identify key stakeholders from the waste sector in each participating PIC to be trained.

25. Various workshops have identified the key stakeholders from the waste sector in each PIC, but not the actual trainees. Appendix 2 provides a list of key stakeholders in each PIC who attended the UNEP/GEFPAS Project consultation workshop in April 2011, and includes additional contacts in Kiribati, the Marshall Islands, PNG, and Niue that might be useful. It should be noted that these lists are constantly changing due to staff turnover.

26. The trainee selection process will entail the development of selection criteria and establishment of a 5-member selection panel involving close partners. Ideally, selected trainees will be nominated by SPREP's National Focal Points, and will be working in the waste management sector. They could include participants from Environment Departments and Ministries, Health Ministries, Municipal Health Inspectors, NGOs, government corporations, and private companies**.** Private companies should be encouraged to participate in the training modules as they have a Duty of Care for the management of their waste. Private companies would not be funded but would be required to pay to participate in the training program, as a means of offsetting some of the ongoing funding requirements.

27. Trainee selection criteria will be developed and applied by the AFD TA (in consultation with SPREP) by July 2012. One of the criteria will be for applicants to submit proposals or concepts for solid waste management projects or case studies that they have identified and wish to develop during the training programme, and implement on returning home.

28. It is recommended that the Activity 3 (National Project Support) budget allocation of €50,000 be used to support successful applicants from the first tranche (December 2012 - January 2013) with technical assistance and financial support, where possible, to develop their project concept to a full project implementation plan. It is further proposed that a portion of the Activity 3 budget be used to support the implementation of worthwhile projects assessed against pre-determined criteria and guidelines. The applicant's performance in the training programme could be one criterion, which would also serve as an incentive.

29. A detailed work plan and budget for Activity 3, which incorporates the recommendations above, will be put forward for consideration by 30th June 2012. The detailed design will consider the most equitable approach for project support, to ensure as many countries as possible benefit.

30. The AFD TA will also review and develop detailed guidelines and eligibility criteria for project support under Activity 3 as described above by 31st July 2012 in consultation with SPREP and relevant partners (such as JICA). Possible criteria will include project sustainability, benefits to the environment, conformity with waste hierarchy and national policy, and cost/benefit. The role of the AFD TA will also include providing technical support and guidance on proposal development and implementation, and identifying and mobilising additional funding for implementation.

TASK 2: Identify training course developers, and suitable counterparts in the region such as Fiji School of Medicine FSM, University of the South Pacific (USP), Japan International Cooperation Agency JICA and potential contributors of case studies from French Polynesia and New Caledonia.

31. In exploring training course developers, we contacted the University of Papua New Guinea (Dr Frank Griffin, School of Natural and Physical Sciences) to enquire whether UPNG would be interested in assisting and collaborating in some way with the development and delivery of the training program. However, the option for delivery in PNG is not cost-effective as shown in Table 2, which approximates

the cost of airfares, accommodation, meals and other incidental costs in three training locations (Nadi (Fiji), Suva (Fiji), and PNG), based on 1 module being delivered over a 2-week (14 day) period

TABLE 2: ESTIMATED PARTICIPANT COSTS FOR THREE TRAINING LOCATIONS

Country	Cost of Airfare (US$ per participant)			Cost of accommodation, meals & incidentals (US$ per participant per day)		
	Nadi, Fiji	Suva, Fiji	PNG	Nadi, Fiji	Suva, Fiji	PNG
Cook Islands	1,950	2,999	4,298	138	105	367
Fiji	0	0	2,102	0	0	367
FSM	4,450	4,620	4,105	138	105	367
Kiribati	1,425	1,590	4,500	138	105	367
Marshall Islands	3,950	4,450	4,028	138	105	367
Nauru	3,750	4,105	4,325	138	105	367
Niue	2,350	3,025	4,100	138	105	367
Palau	4,025	3,850	3,102	138	105	367
PNG	2,322	2,310	0	138	105	0
Samoa	708	990	2,105	138	105	367
Solomon Islands	1,150	1,310	2,986	138	105	367
Tonga	870	890	2,563	138	105	367
Tuvalu	1,520	1,390	3,990	138	105	367
Vanuatu	1,085	1,240	1,956	138	105	367
TOTAL	**29,555**	**32,769**	**44,160**	**1,794**	**1,365**	**4,771**
Estimated total cost for 14 participants over 14 day training						
Total	**29,555**	**32,769**	**44,160**	**25,116**	**19,110**	**66,794**
Total estimated cost by training location for 14 participants over 14 days						
Nadi, Fiji	**US$ 54,671**					
Suva, Fiji	**US$ 51,879**					
PNG	**US$ 110,954**					

32. FNU (Suva Campus) is therefore the preferred partner for developing and delivering the Activity 1 Training Program. It already has courses on Solid Waste Management, but there are many gaps in the current course, particularly in the areas of composting, hazardous waste management and train-the-trainer methods, where the AFD Project will add significant value.

33. Through missions to French Polynesia and New Caledonia in March 2012, we have identified potential contributors of case studies that could be incorporated into the training courses, specifically: Extended Producer Responsibility Implementation, Sustainable Financing in New Caledonia and French Polynesia, Vehicle Dismantling for End-of-Life Vehicles, Leachate Management, and Power Generation from Waste Oil. These will be developed further and a final selection made on the case studies that will be incorporated into the course delivery.

34. A potential training partner is the Japan International Cooperation Agency (JICA), which currently has specific training programmes under the J-PRISM project on the 3R's (reduce, reuse and recycle), landfill operation and management, composting and recycling. We will therefore ensure that the Activity 1 Training Program and the JICA training complement each other to avoid duplication.

TASK 3: Contribute to the design and development of technical training manuals in environmentally sound and practical waste management techniques.

35. It is proposed that the Training Modules will be aimed at the level of middle management/graduate level for those that are actually engaged in operational activities at a hands-on or regulatory level. Establishing the course content and developing the training manuals are necessary aspects of developing the course, which in turn has to consider other factors such as training frequency, location, and number of participants.

36. We have assumed for each module there will be a training manual developed that covers all the topics within the module. The training manual will be used as an aid for the participants to deliver the various elements when subsequently carrying out training in their home country. Each element within each module can be designed as stand-alone so that the Modules can be configured to the requirements of the participants.

37. Participants at the UNEP/GEFPAS Project Consultation Workshop made several recommendations about the training program contents:

a) The general aspects of waste management (waste economics, legislation, regulation and control and waste audits) should be taught across all courses.
b) Include leachate treatment and the semi-aerobic Fukuoka method.
c) Ensure national action planning is included in each training module.
d) Ensure the principles of training are included in each training module (given that this is a train-the-trainer course).

38. In response, a list of possible training module elements has been compiled (Table 3). The final content and configuration of each module will be agreed with SPREP.

39. An additional element of each training module will require each participant to develop a waste management proposal to be implemented in his or her country. Waste oil projects for trainees from Fiji, Samoa, and Vanuatu would be encouraged given the links to Activity 2. In addition, each participant is expected to use their training as trainers to deliver in-country training workshops. We would request commitment from the trainees' employers to make the trainee available (with sufficient resources) to deliver the training after returning to their home country within six (6) months.

40. We propose that financial and technical support (from the Activity 3 – National Project Support budget) be provided to applicants from the first tranche of training (December 2012 - January 2013) to develop a full project implementation plan. It is further proposed that a portion of the Activity 3 budget be used to support the implementation of worthwhile projects assessed against pre-determined criteria and guidelines to be developed by the AFD TA.

TASK 4: Participate in the delivery of the training program to stakeholders (as appropriate to the Consultant's expertise).

41. The AFD TA ToR envisioned that training would occur twice per year (June/July & December) over a 4-year period. In contrast, participants at the UNEP/GEFPAS Project Consultation Workshop (April 2011) recommended that 3 course modules be run annually over 4 years.

42. Based on the available budget, it is recommended that two training modules be developed, and delivered annually to 14 participants per module over a two year period: December-January 2012, and December-January 2013. During this period, a total of 56 participants will therefore be trained.

TABLE 3: POTENTIAL TRAINING MODULE CONTENT

COMMON ELEMENTS TO MODULES 1 & 2

1. Definitions
2. Train-the-Trainer principles
3. Sources, types, and composition of solid wastes
4. Waste data collection (waste characterization studies, time & motion studies)
5. Health, environmental, and economic impacts of poor waste management
6. Overview of the integrated solid waste management approach
7. Policy and strategic approaches to integrated solid waste management
   - Producer responsibility – Duty of Care
   - Sustainable financing and resource mobilization
   - Legislation, regulation, control, and enforcement
   - Awareness (changing behaviours)
8. Human resource management
9. Preventative maintenance of equipment
10. Basic project management principles

MODULE 1: Waste Management Techniques

1. Techniques to reduce amount of waste generated and disposed
   - Reduce (techniques to reduce amount of generated waste, including policy-based approaches)
   - Reuse
   - Recycle (approaches to divert waste from disposal, including composting, mulching, extended producer responsibility, product stewardship, and container deposit legislation)
   - Waste collection and transport
   - Disposal (basic elements, more details contained in Module 2)
2. Community based waste management
3. Awareness raising (composting, mulching, segregation, refusing, reusing, recycling)
4. Cleaner Production Techniques
5. Hazardous waste management
   - Requirements for Transboundary shipping of waste under Basel and Waigani Conventions
   - Hazard Communication Standard (coding of stock and labelling of chemicals)
   - Medical waste management
   - Management of household hazardous wastes, waste oil, asbestos, batteries, etc.
   - Audit protocol

MODULE 2: Waste Disposal Site Management

1. Disposal methods (incineration, anaerobic landfill, semi-aerobic (Fukuoka) landfill, etc.)
2. Procedure for choosing location of new facilities
3. Landfill design and construction based on the semi-aerobic (Fukuoka) landfill method
4. Features of other landfill designs (in brief)
5. Landfill operation and maintenance (includes record keeping, control of litter and other nuisances, landfill cell creation, and other daily procedures)
6. Leachate treatment and management
7. Environmental monitoring (groundwater, surface water, landfill gas) before, during and after operations
8. Dumpsite improvement techniques
9. Closure and aftercare of waste disposal sites

43. The delivery of the modules will be at the FNU campus in Suva, Fiji, which has adequate facilities to cater for 14 participants at any one time. The design, development and presentation of each module will be agreed with the training provider. This will include lectures, presentations, field visits, practical group exercises, and trainee evaluation methods.

44. The team leader will participate in the delivery of the training program and will, if necessary, deliver individual elements in his area of expertise, which is principally landfill development, operational management, (excluding the Fukuoka method) and also the basics of transfer station/material recycling facilities development.

2.1.4 Work Plan

TABLE 4: WORK PLAN FOR ACTIVITY 1: TRAINING PROGRAM

TASKS AND MILESTONES		TIMING	COMMENTS
1.1	**Identify key stakeholders from the waste sector in each participating PIC to be trained**		
	a) Selection criteria and process for identifying participants finalised.	*July 2012*	
	b) Participants selected and confirmed.	*September 2012*	
1.2	**Identify and recruit course developers, trainers, and consultant facilitators for first round support.**		
	a) Consultancy agreement signed with Identified Training Provider.	*May 2012*	*AFD TA to coordinate with FNU, USP, and JICA, identify suitable case studies from the French Territories, and explore other alternatives as necessary.*
1.3	**Contribute to the design and development of technical training manuals in environmentally sound and practical waste management techniques.**		
	a) Content of Training Program including train the trainer content finalized	*June 2012*	*Module content to be finalised by, SPREP AFD TA and Training Facilitators.*
	b) Module 1 - Waste Management Techniques finalised	*September 2012*	*AFD TA to collaborate with FNU*
	c) Module 2 – Waste Disposal Site Management finalised	*October 2012*	*AFD TA to collaborate with FNU*
	d) Training Course Manuals finalised	October 2012	*AFD TA to collaborate with FNU*
	e) Independent Review of Training Modules and Training Manuals (prior to delivery) completed	*October 2012*	*Independent consultant to be engaged.*
1.4	**Participate in the delivery of the training program to stakeholders**		
	a) Module 1 delivered	*December 2012*	*Includes support for the development of trainee projects*
	b) Module 2 delivered	*January 2013*	*Includes support for the development of trainee projects*
	c) Training Program reviewed internally by SPREP/FNU.	*May 2013*	*Initial review conducted AFD TA with PIC personnel, FNU and SPREP.*
	d) Module 1 delivered	*December 2013*	
	e) Module 2 delivered	*January 2014*	

2.1.5 Budget

45. The Activity 1 Training Program budget in Table 5 reflects the development and delivery of two (2) training modules each to 14 participants annually over a two-year period, through a consultancy contract to FNU.

TABLE 5: BUDGET FOR ACTIVITY 1: TRAINING PROGRAM

ACTIVITY 1 – TRAINING PROGRAM			
ITEM DESCRIPTION	**TOTALS**	**TOTALS US$** (*See Note 1)*	**COMMENTS**
TRAINING DEVELOPMENT			
AFD TA Travel to Fiji to Develop Training Modules with FNU	**5,580**	**7,924**	Three missions to Fiji to finalise contractual arrangements and coordinate development of training modules with FNU. Flights: 3 flights (Apia-Suva return) @ €500 each flight. DSAs: €120 per diem for 34 days.
	9,700	**13,774**	One mission to NC and FP for 2 persons over 2 weeks to identify potential contributors of case studies. Flights: 2 persons @ €2,100 per person DSAs: 2 persons @ €2,750 per person
Development of vocational Training Modules and Training Manuals	**68,580**	**97,384**	Estimated contract price to develop Training Modules and Training Manuals, including specialist technical assistance as required. Option 1: Developed by FNU with specialist technical assistance as required Option 2: Developed by independent consultant with curriculum advice by FNU
Independent Review of Training Modules and Training Manuals prior to Delivery	**8,640**	**12,259**	Independent review of Training Modules and Training Manuals prior to delivery. Year 1 review: 12 days @ € 360/day Year 2 review: 12 days @ € 360/day
Training Development subtotal	**92,500**	**131,350**	
TRAINING DELIVERY			
AFD TA Travel to Fiji to Assist FNU with Delivery of Training Modules	**4,360**	**6,191**	Two missions to Fiji to monitor and participate in course delivery. Flights: 2 flights @ €500 each DSAs: 28 days @ €120 per day
Travel to Fiji for 56 participants	**89,600**	**127,232**	Total of 56 trainees over 2 years. Flights: 56 trainees @ €1600 per flight.
Field visits - Transport costs	**3,600**	**5,112**	4 training modules @ €900 each
FNU Delivery Contract for Training Modules	**95,000**	**134,900**	Estimated FNU training delivery contract (includes accommodation, meals and incidentals for all PIC trainees). Delivery 1 (Dec 2012): €23,750 Delivery 2 (Jan 2013): €23,750 Delivery 3 (Dec 2013): €23,750 Delivery 4 (Jan 2014): €23,750
Training Delivery subtotal	**192,560**	**273,435**	
OTHER COMPONENT			
Contingencies	**14,253**	**20,239**	Training Development contingency (5%): €4,625 Training Delivery contingency (5%): €9,628
Other Component sub-total	**14,253**	**20,239**	
Total	**299,313**	**425,024**	

NOTES:

1. The Euro to US$ exchange rate used is 1.42

2. The total Training Activity Budget of €299,313 is less than the AFD-allocated amount of €300,000. The difference is €687, of which €647 is proposed to be re-allocated to balance the Waste Oil Activity budget, leaving an unspent balance of €40.

2.1.6 Conclusions

46. Based on consideration of stakeholder opinion, available budget, critical course content requirements and potential training locations and associated transport logistics, it is concluded that the most cost effective option for waste management training provision is:

a) Preferred Training Location: Fiji (Suva)
b) Number of teaching modules: Two
c) Total number of participants per module: Fourteen
d) Course frequency: Annual
e) First course completed: 2012/2013
f) Number of years run under AFD funding: Two

2.2 Activity 2: Waste Oil Management

2.2.1 Strategy

47. The underlying goal of this Activity is to reduce the negative impacts of waste oil on the environment while maximising any economic opportunities for Pacific communities without requiring continued external financing.

48. This activity will involve the establishment of waste oil collection systems in three countries (Fiji, Samoa, and Vanuatu), with arrangements put in place to export waste oil from Samoa and Vanuatu to Fiji, where it will be used by Fletcher Pacific Steel Fiji Limited. Samoa and Vanuatu were chosen because of their proximity to Fiji, and direct shipping routes with Fiji. Both countries are also of a comparable size in terms of population, it will therefore be interesting and useful to compare volumes of oils imported and waste oils generated. Fiji was chosen as the recipient country for waste oil because of the potential large waste oil market due to the presence of Fletcher Pacific Steel.

49. The strategy for achieving the objectives of the Waste Oil Management Activity involves:

a) Completion of a material-flow analysis for waste oil (waste oil audit) in Fiji, and an audit of the operations and collection system of one of the users of waste oil in Fiji (Fletcher Pacific Steel Fiji).
b) Completion of a material-flow analysis for waste oil in Samoa and Vanuatu in order to assess potential volumes and specific storage requirements for shipment of waste oil from Samoa and Vanuatu to Fiji.
c) Implementation of waste oil collection programs in Fiji, Samoa, and Vanuatu, and export programs for Samoa and Vanuatu. This will involve:
    (i) Purchase and use of sufficient numbers of intermediate bulk containers (IBCs) for waste oil storage (with other fixed storage capacity) to allow for an uninterrupted cycle of in-country waste oil collection (at permitted locations), export of full IBCs, decanting of waste oil at final destination, cleaning and refilling with fuel (diesel), shipping of fuel-filled IBCs back to Samoa or Vanuatu, decanting of fuel, and re-deployment of empty IBCs at permitted locations for waste oil collection;
    (ii) Facilitating one shipment of waste oil each from Samoa and Vanuatu to Fiji. Future shipments will be enabled through the development and adoption of the stewardship program to be developed under the AFD Project. In order to improve sustainability of waste oil management, it is strongly recommended that the countries be required to formally commit to adopt the stewardship program as a mandatory requirement to participate in the project.
d) Preparation of education & awareness materials for Samoa, Vanuatu, and Fiji.
e) Preparation of a Waste Oil Management Plan and Model Stewardship Legislation to support regional waste oil management.

2.2.2 Sustainability

50. The sustainability of the Waste Oil Activity in each participating country will be enhanced through the development and adoption of the stewardship program, which will be developed in this AFD Project. Specifically, this will entail the development of Model Stewardship Legislation and adoption and implementation of the legislation by the countries. The countries participating in the project will be required to formally commit to adopting the stewardship program as a mandatory pre-requisite to participation, and the outcomes from this project will inform the development of similar systems in other PICs.

2.2.3 Specific Tasks

51. This section outlines the major individual tasks that will be undertaken to achieve the objectives of the Waste Oil Activity. A breakdown of the sub-tasks can be found in Table 6 in Section 2.2.4.

TASK 1: Develop an oil stewardship program with the Governments of Fiji, Samoa, and Vanuatu.

52. The HYDEA ToR included the following three tasks:

a) Prepare a brief Background Paper for governments on the implementation of an Extended Producer Responsibility (EPR) system for waste oil, which outlines the expected role of participating PICTs and the assistance available;
b) Develop a product stewardship and collection system with the Government of Fiji (where EPR legislation has already been passed) as a first phase, with a plan to include any other PICT that may be in a similar state of readiness as Fiji; and
c) Develop a drafting template for EPR legislation, guidance on the use of the Waigani instrument, and model contracts for use by Fletcher Pacific Steel (Fiji) Ltd and the waste oil exporters from participating PICTs.

53. We suggested (and it was accepted) that these three tasks could be condensed into the main task identified above (TASK 1), with subsequent implementation activities as discussed below.

54. Extended Producer Responsibility (EPR) and Product Stewardship (PS) are two different concepts. EPR typically requires producers to pay the cost of managing their post-consumer waste, whereas PS does not target producers specifically, but relies on all the stakeholders along the product chain including consumers, retailers, etc. During the project implementation, we aim to recommend a preferred scheme (EPR or PS) suited to PICs. However, until then, we will refer to a "stewardship program" instead of EPR or PS specifically.

55. To achieve the redefined task (*i.e.,* Develop an oil stewardship program with the Governments of Fiji, Samoa, and Vanuatu), we will undertake the activities described below.

56. HYDEA will prepare a brief background paper for the governments on the implementation of the stewardship program as it applies to waste oil. This paper will compare EPR and PS, outline the roles of the governments and various agencies and groups in the selected PICs, and outline the assistance available under the AFD Project. This will initially be targeted at Fiji, Samoa, and Vanuatu (due to budget limitations); however it will be made available to other PICs who may wish to participate in the project at their own cost.

57. The background paper will consider whether a stewardship program is applicable in all PICTS, consider similar existing frameworks (e.g. container deposit legislation) and identify how it could best be applied. In preparing this paper, all available information will be reviewed, including, but not limited to:

- AFD Regional Initiative for Solid Waste Management in the Pacific Region, Feasibility Study (Phase I, Component 2) September 2008;
- AFD Regional Initiative for Solid Waste Management in the Pacific Region, Feasibility Study (Phase II, Component 2: Scoping Studies) April 2009;
- UNEP/GEFPAS POPs Release Reduction Project documents;
- Applicable PICTS National Solid Waste Management Strategies and legislation;
- Waigani Workshop (July 2011) material; and
- Pacific Waste Oil Study (March 1996).

58. In preparing the background paper, we will also review the status of any relevant legislation in the PICTs, New Zealand, and Australia and elsewhere (especially in Small Island Developing States), to assess how appropriate the legislation is to the PICs and in particular to waste oil, and will consult with all stakeholders including the Pacific Power Association - an inter-governmental organization that represents all the power utility companies in the PICTs. We will compare PS and EPR measures, look at the benefits of each approach, and make specific recommendations for the Pacific islands context (especially Fiji, Samoa, Vanuatu).

59. HYDEA will also facilitate consultation with relevant stakeholders on the recommendations in the background paper and seek agreement from the relevant governments for the adoption and implementation of the stewardship program.

60. A drafting template for stewardship program legislation will be developed, which can be used as a model for all PICTs in developing country-specific stewardship legislation. A cost benefit analysis will be included as part of this process.

61. The Waigani Convention, which governs the transboundary movement of hazardous waste, is a critical environmental agreement, which must be adhered to when undertaking waste oil shipments during and after implementation of the Waste Oil Activity of the AFD Project. All countries have indicated a need for training and guidance on the approval and reporting procedures required under the Waigani Convention, and we will develop a brief guidance document on the use of the Waigani instrument.

62. As an extension of the Waigani guidance document, we will develop model contracts for use by Fletcher Pacific Steel (Fiji) Ltd and the waste oil exporters from participating PICTs**.** If required, we will also prepare Memoranda of Understanding between PICTs at the Ministerial level to allow the export and import of waste oils between PICTs.

TASK 2. Develop a waste oil management program involving reuse in Fiji by the waste oil reuse company, and in-country waste oil collection and storage systems in conjunction with the lubricant importers, major users and relevant government agencies.

63. A waste oil collection system has already been established within Fiji, and is expected to grow over the next few years. This has been partly driven by the waste permitting system under the 2005 Environment Management Act, but is largely due to the efforts of Fletcher Pacific Steel who provide a collection service to all of the local oil companies. In addition, Fletcher Pacific Steel has provided storage tanks (at their own cost) and a collection service to 20 of the larger Fiji oil users (e.g. bus and truck depots) and they also provide drums to smaller operators. Eventually they expect to have supplied storage tanks to about 100 waste oil producers.

64. Fletcher Pacific Steel is looking to expand their waste oil collection by installing a large storage tank in the Western Division to act as a collection depot in that area. However, they are concerned that a private operator has entered the market. This operator is currently buying the waste oil at FJ$0.05 per litre and selling it to Emperor Gold Mine in Vatukoula, Fiji.

65. Fletcher Pacific Steel does not currently purchase waste oil, although they provide storage tanks to waste oil producers and collect the waste oil at their own costs. Fletcher Pacific Steel is concerned that if they have to buy waste oil, then it may become less viable for them financially to continue with their current scheme. There will be a limit to what Fletcher's are prepared to do financially, we do not yet know what this limit is so we need to consider other options should Fletcher's Steel lose interest in using waste oil from the region.

66. An audit of the operations and collection system of Fletcher Pacific Steel (the likely recipient of waste oil under this project) will be undertaken. The audit will be carried out against the permit that has been issued by the Fiji Department of Environment under the Environment Management Act and in reference to international emission standards from New Zealand and Australia.

67. With the assistance of the Fiji Department of Environment, we will review the permits of the larger oil users (e.g. bus, truck depots vehicle service agents, etc.) and provide guidance on a pre-notification system to be provided by the producer or transporter notifying the regulator of the transfer/movement of hazardous waste (i.e. waste oil).

68. A summary of key data on waste oil in the PICTs was completed by Dr Bruce Graham (see Table 6). However, it is missing vital information, which would enable the design of a waste oil management system. Material-flow analyses for waste oil (waste oil audit) will therefore be conducted in Fiji, Samoa, and Vanuatu to determine: the quantity of oils imported into each country, the consumers of these oils, the amount of waste oils generated annually by various users, the current mode of disposal of waste oils, any current and potential waste oils re-use, and specific storage requirements.

69. Samoa and Vanuatu were chosen as the participating countries because of their proximity to Fiji, and direct shipping routes with Fiji. Both countries are also of a comparable size in terms of population, it will therefore be interesting and useful to compare volumes of oils imported and waste oils generated.

70. Local consultants will be utilised primarily in Fiji and Vanuatu, to provide project implementation support. Each country's allocation will depend on actual needs, as determined by quarterly evaluation of each country's progress. The AFD TA based in Samoa will coordinate the local consultants and provide project additional support in Samoa.

71. We will also review the movement of both new and waste oils in the Pacific region, taking into consideration the delivery points and redistribution hubs such as Fiji. We will look at who the main players are and their presence in each of the PICTS and the extent of their distribution networks. We will include Pacific Power Authority in our review to ensure that their views and possible proposals are incorporated.

72. On behalf of the entities involved, we will develop the contracting arrangements necessary to implement the collection and export of waste oil from Samoa and Vanuatu to Fiji, and the reuse of waste oil in Fiji, with due consideration for the requirements of the Environment Management Act permits in Fiji.

TASK 3: Develop a generic public education program on waste oil collection, disposal and pollution effects to be trialled in Fiji

73. In collaboration with the Government of Fiji we will develop an education programme on waste oil collection, disposal and pollution effects. It is important to raise awareness of the effects of poor disposal practices relating to waste oil such as dumping and burning. The aim of the public awareness-raising programme will be to:

- Raise public awareness of the benefits of improved waste oil collection and disposal;
- Engage stakeholders to ensure their co-operation and participation in the waste oil collection and disposal systems; and
- Provide information and manage expectations.

74. Depending on the messages and the target audience, a combination of various awareness-raising methods could be instigated, including community meetings, newspaper advertisements, poster campaigns including billboards, education activities in schools (e.g. plays, school competitions), use of local TV and radio, and recognised logos. It will be essential that the disposal facilities are made accessible for the public, in tandem with these awareness-raising activities.

75. To launch any awareness campaign, a press conference will be organised where all of the stakeholders involved in the project will be invited to attend. Advertising and media companies will broadcast the locations of collection points and these will be illustrated in newspapers, on posters and on billboards. Oil distributors, petrol forecourts, and other associated businesses will be requested to display awareness material, and provide oil recycling information with all oil sold. Initially the targeted audience for the awareness campaign will include mechanical workshops, bus/hauler companies, oil depots, and service stations.

76. Service stations that sell engine oils could also be targeted as a means for waste oil returns by providing a storage tank that is accessible to the public. The capital cost for providing these storage tanks could be borne by the oil companies and priced into the cost of the new oil. At present Fletcher Pacific Steel provide at their cost storage tanks at larger facilities that use greater volumes of oils.

77. Earlier documentation identified the need for regional guidance on oil management practices at the user (i.e. waste producer) level. The proposals were to be developed through the use of external consultants and to include preparation of several manuals on oil management, including one specifically for power stations (in conjunction with the Pacific Power Authority), another for oil companies and large industrial users, and a third for vehicle workshops and service stations. It was identified that Papua New Guinea already has a Code of Practice for vehicle workshops that may serve as a suitable model for the latter.

78. All international companies follow strict codes of practice for management of oil transportation, and waste oil storage facilities. A regional guide or code of practice could be developed such that all companies transporting and storing oil and waste oil operate to the same standards.

79. Dr Bruce Graham's consultancy report[3] suggested the establishment of a Technical Advisory Committee in the Pacific Power Association to liaise with the AFD TA and assist as appropriate with project activities, including funding options and drafting of the oil management manual for power stations. We will pursue this recommendation and liaise with the Pacific Power Association for the preparation of the proposed oil management manual for power stations, and provide assistance throughout the course of the AFD Project to develop the manual.

TASK 4: Conduct annual environmental audits of the waste oil collection and disposal facilities in the participating PICTs to be also used as a training exercise

80. Initial Waste oil audits will be carried out in Fiji, Samoa, and Vanuatu. It is envisaged that these waste oil audits will be carried out by in country consultants where possible to build capacity and as a training exercise with local stakeholders.

[3] *Organic Waste and Waste Oil Strategy Enhancement*, Consultancy Report contributing to the detailed design document for the UNEP/GEFPAS Pacific POPs Release Reduction Project, prepared by Dr Bruce Graham under contract to SPREP, August 2011.

81. The current AFD budget does not provide sufficient funds to conduct environmental annual audits of the waste oil collection and disposal facilities (using technical experts) as required in the HYDEA ToR. We therefore propose the following measures to fulfil this task.

82. We propose establishing a waste oil audit pro-forma that we will develop from the information gained from the materials flow analysis for Samoa and Vanuatu. This reporting system can be replicated in each PICT, such that information can be assessed and compared between PICTs.

83. Where large facilities are to be audited, an audit protocol will be developed, this protocol would include a pre-visit questionnaire, an introductory meeting, a detailed tour of the facility, data collection and collation, discussions with the facility's management, a report back meeting, and a final close out meeting.

84. We also propose including an element within Activity 1 (Training Program) for environmental audits, utilising the waste oil audit pro-forma developed in paragraph 81. This will enable the trainees to carry out audits of the waste oil collection and disposal facilities in their home countries.

TABLE 6: SUMMARY OF KEY INFORMATION ON NEW AND USED OIL

COUNTRY	ANNUAL OILIMPORT VOLUME (LITRES/YEAR)	ANNUAL WASTE VOLUME ESTIMATE (LITRES/YEAR)	CURRENT STOCKPILE ESTIMATE (LITRES)	ORGANISED COLLECTION?	DIRECT CONTAINER SHIPPING ROUTE TO FIJI?	SHIPPING COSTS (APPROX. FOR A 20FT CONTAINER) AND DESTINATION	CURRENT REGULATORY DRIVERS?	PARTY TO BASEL/WAIGANI?
Cook Islands	unknown	15 - 30,000	50,000	Oil depot drop-off	No (only to NZ)	US$3500 Destination - NZ	None	Yes/Yes
Fiji	unknown	>2 million	none	Fletcher collects from main sources	not applicable (n/a)	n/a	Permitting system under EMA 2005	No/Yes
FSM	unknown	unknown	unknown	unknown	unknown	unknown	unknown	Yes/Yes
Kiribati	unknown	unknown	none	Oil depot drop-off	Yes	US$4500 Destination to be checked	unknown	Yes/Yes
Marshall Islands	unknown	unknown	~ 1.5 million	None	unknown	unknown	None	Yes/No
Nauru	unknown	unknown	unknown	unknown	unknown	unknown	unknown	Yes/No
Niue	unknown	18,000	14,000	Yes (Public Works)	No (only to NZ)	~US$3500 Destination to be checked	None	No/Yes
Palau	unknown	unknown	unknown	unknown	unknown	unknown	unknown	Yes/No
PNG	unknown	*X* millions	*y* millions	None	No	unknown	None	Yes/Yes
Samoa	unknown	15 – 50,000	18,000	None	Yes	To come	Could regulate under Waste Act	Yes/Yes
Solomon Islands	unknown	unknown	unknown	unknown	Yes	unknown	unknown	No/Yes
Tonga	unknown	unknown	unknown	unknown	Yes	unknown	Existing Regulations	Yes/Yes
Tuvalu	unknown	unknown	unknown	unknown	Yes	unknown		No/Yes
Vanuatu	unknown	unknown	none	unknown	Yes	To come	Currently under development	No/Yes
New Caledonia	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown
CNMI	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown
American Samoa	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Guam	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Wallis and Futuna	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Tokelau	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown
unknown	Denotes missing information, we will endeavour to find this information.							
	Denotes confirmed shipping routes to Fiji							

Source: *Organic Waste and Waste Oil Strategy Enhancement*, Consultancy Report prepared by Dr Bruce Graham under contract to SPREP, August 2011.
(Note: Palau is now a Party to Stockholm so is eligible to participate in the UNEP/GEFPAS project)

2.2.4 Work Plan

TABLE 7: WORK PLAN FOR ACTIVITY 2: WASTE OIL MANAGEMENT

TASKS AND MILESTONES		TIMING	COMMENTS
2.1	**Develop an oil stewardship program with the Governments of Fiji, Samoa, and Vanuatu.**		
	a) Brief background paper on implementation of a stewardship program for waste oil prepared	June 2012	
	b) Consultation with relevant stakeholders completed and agreement sought for adoption of stewardship program.	July 2012	
	c) Drafting template for stewardship program legislation prepared	December 2012	
	d) *Guidance document on the use of the Waigani instrument developed*	December 2012	
	e) Model contracts for use by Fletcher Pacific Steel and waste oil exporters in participating PICs developed	December 2012	
	f) Memoranda of Understanding between PICs at the Ministerial level prepared as necessary to allow transboundary movement of waste oil	February 2013	
2.2	**Develop a waste oil management program involving reuse in Fiji by the waste oil reuse company, and in-country waste oil collection and storage systems in conjunction with the lubricant importers, major users and relevant government agencies.**		
	a) *Commitment of countries confirmed, and designated contact personnel and stakeholder liaison group for in-country implementation established.*	June 2012	Local consultants will be engaged as required to provide technical in-country support.
	b) Waste oil audit in Fiji and audit of the Fletcher Pacific Steel oil management activities completed	August 2012	Includes support for remedial actions if necessary and budget available.
	c) Waste oil audits in Samoa and Vanuatu completed.	August 2012	
	d) Formal agreement from Fletcher Steel to accept first shipments obtained.	September 2012	Country personnel, through AFD TA.
	e) In-country requirements for a first oil shipment completed (collection systems established, shipping logistics finalised)	November 2012	AFD TA and in-country consultant to develop oil collection system in conjunction with stakeholders.
	f) Waigani approvals for waste oil shipment obtained.	July 2013	Country personnel, assisted by AFD TA.
	g) One shipment of waste oils each from Samoa and Vanuatu completed.	July 2013	Managed by country personnel, shipping companies and Fletcher Pacific, with all reporting to AFD TA as necessary.
2.3	**Develop a generic public education program on waste oil collection, disposal and pollution effects to be trialled in Fiji.**		
	a) Public awareness of the benefits of improved waste oil collection and disposal conducted.	May 2013 to September 2015	Country personnel with assistance from AFD TA and in-country consultant.
	b) Stakeholders engaged to ensure cooperation and participation in waste oil collection/disposal systems.	September 2012	
	c) Information programmes developed and published	September 2013	
2.4	**Conduct annual environmental audits of the waste oil collection and disposal facilities in the participating PICTs to be also used as a training exercise**		
	a) *Final* programme *report and review.*	September 2014	Disseminate through region via AFD and SPREP.

2.2.5 Budget

TABLE 8: BUDGET FOR ACTIVITY 2: WASTE OIL MANAGEMENT

ACTIVITY 2 – WASTE OIL MANAGEMENT SYSTEM			
ITEM DESCRIPTION	**TOTALS €**	**TOTALS US$** *(see Note 1)*	**COMMENTS**
PROJECT PERSONNEL			
AFD Technical Assistant	**3,660**	**5,197**	Three missions to Fiji to coordinate development of stewardship program Flights: 3 flights (Apia-Suva return) @ €500 each flight. DSAs: €120 per diem for 18 days.
Local Consultants in Fiji, Samoa, and Vanuatu	**42,460**	**60,293**	Local consultants primarily in Fiji and Vanuatu, to provide project implementation support. Each country's allocation will depend on actual needs, as determined by quarterly evaluation of each country's progress. The AFD TA will coordinate the local consultants and provide additional project support in Samoa. Estimated as 386 days @ €110/day (over the project duration)
Project Personnel sub-total	**46,120**	**65,490**	
WASTE AUDITS			
Waste Oil Audits for Fiji	**8,900**	**12,638**	Based on quotations and includes all travel, site visits and reporting. Fiji Oil Audit: US$ 6,550 US$/€ exchange rate of 1.42 is €4,680 Fletcher Pacific Steel Audit: Consultant fees: €280/day for 10 days. Flight: Assumes flight cost covered by Fiji waste audit. DSA: €120 for 6 days. Equipment for emissions testing: €700.
Waste Oil Audits for Samoa and Vanuatu	**7,100**	**10,082**	Samoa: €2,600 Vanuatu: €4,500
Waste Audits sub-total	**16,000**	**22,720**	
WASTE OIL STORAGE & SHIPMENTS			
Waste oil storage facilities for Samoa	**16,200**	**23,004**	Based on purchase of Intermediate Bulk Containers. Actual storage volume required will be determined from the waste oil audits.
Waste oil storage facilities for Fiji	**20,000**	**28,400**	Based on installation of fixed storage facilities. The actual volume of waste oil storage required will be determined from the waste oil audits.
Waste oil storage facilities for Vanuatu	**16,200**	**23,004**	Based on purchase of Intermediate Bulk Containers. Actual storage volume required will be determined from the waste oil audits.
One (1) oil shipment from Samoa to Fiji	**6,920**	**9,826**	Based on an assessment of shipping and insurance from completed Samoa Waste Audit Report
One (1) oil shipment from Vanuatu to Fiji	**6,920**	**9,826**	Based on an assessment of shipping and insurance from completed Samoa Waste Audit Report
Waste Oil Storage & Shipments sub-total	**66,240**	**94,061**	
Stewardship Legislation			
Consultant for drafting model Stewardship Legislation	**7,675**	**10,899**	Consultant: €325/day for 15 days. DSA: @ €120/day for 15 days. Flight: One flight at €1000.
Stewardship Legislation subtotal	**7,675**	**10,899**	
TRAINING AND AWARENESS			
Education & awareness materials	**10,500**	**14,910**	€3,500 each for Fiji, Samoa, and Vanuatu
Training & Awareness sub-total	**10,500**	**14,910**	
OTHER COMPONENT			
Contingency	**4,112**	**5,839**	Waste Audits (5%): €800 Waste oil storage & shipments (5%): €3312
Contingency sub-total	**4,112**	**5,839**	
Total	**150,647**	**213,919**	

NOTES:

1. The Euro to US$ exchange rate used is 1.42

2. The total Waste Oil Activity budget is €150,647 which exceeds the AFD allocation of €150,000. The difference of €647 is recommended to be diverted from the Training Activity Budget which is currently €299,313.

2.3 Activity 3: National Project Support

2.3.1 Strategy

85. This activity of the AFD Project was initially intended provide support to PICs in the preparation of national grant proposals which would then become eligible for funding under the small grant allocation of €50,000.

86. We recommended that the budget allocation of €50,000 for Activity 3-National Project Support, be used to provide successful applicants from the first tranche of the training program (December 2012 - January 2013) with technical assistance and financial support, where possible, to develop country project concepts to a full project implementation plan. It is further proposed that a portion of the Activity 3 budget be used to support the implementation of worthwhile projects assessed against pre-determined criteria and guidelines. The applicant's performance in the training programme could be one criterion, which would also serve as an incentive for doing well.

87. A detailed work plan and budget for Activity 3, which incorporates the recommendations above, will be put forward for consideration by 30th June 2012. The detailed work plan will consider the most equitable approach for project support, to ensure as many countries as possible benefit.

88. The AFD TA will also review and develop detailed guidelines and eligibility criteria for project support as described above by 31st July 2012 in consultation with SPREP and relevant partners (such as JICA). Possible criteria will include project sustainability, benefits to the environment, conformity with waste hierarchy and national policy, and cost/benefit. The role of the AFD TA will also include providing technical support and guidance on proposal development and implementation, and identifying and mobilising additional funding for implementation.

2.3.2 Specific Tasks

89. A detailed work plan and budget, which incorporates the recommendations above, will be put forward for consideration by 30th June 2012. The detailed work plan will consider the most equitable approach for project support, to ensure as many countries as possible benefit.

2.3.3 Work Plan

90. A detailed work plan will be developed by 30th June 2012.

2.3.4 Budget

91. The budget for this activity is €50,000. A detailed breakdown for this budget will be provided by 30th June 2012, to ensure as many countries as possible benefit from project activities.

2.4 Activity 4: Co-Financing

2.4.1 Strategy

92. In the SPREP/HYDEA ToR, HYDEA is required to add value to this project by identifying, coordinating and mobilizing co-financing on behalf of SPREP to support implementation of further project activities. Our strategy to achieve this will involve searching available funding databases for relevant opportunities and developing funding concept that responds to those opportunities, and actively seeking linkages between ongoing projects throughout the region. We will utilise our network in the Pacific region as well as internationally to identify suitable resources.

2.4.2 Specific Tasks

TASK 1: Identify partnerships for SPREP to form, with agencies such as JICA, for the implementation of this project.

93. During the course of the implementation of this project, we will review previous feasibility studies that identified further project activities and seek to identify partnerships to form on behalf of SPREP. We will seek partnership opportunities internationally and regionally, using HYDEA's network.

TASK 2: Leverage funding from Global Environment Facility (GEF), European Union (EU), Asian Development Bank, World Bank, Australian Agency for International Development (AusAID), and New Zealand Agency for International Development (NZAID), Non-governmental Organizations, and others to support the implementation of this project.

94. The Consultant will add value to this project by identifying, coordinating and mobilizing co-financing on behalf of SPREP to support further project activities as identified in previous feasibility studies. This will include (but is not limited to) developing and submitting project concepts through SPREP, in order to potentially leverage funding from the following:

a) Global Environment Facility (GEF)
b) European Union (EU)
c) Asian Development Bank
d) World Bank
e) Australian Agency for International Development (AusAID)
f) New Zealand Aid Programme
g) Non-governmental Organizations

95. The AFD TA will contact the Regional Offices of the above organizations to define a common strategy to maximize funding from their Headquarters. Regional offices include:

- European Union: Delegation of the European Union for the Pacific
- World Bank
- Asian Development Bank

96. The Consultant, with the assistance of SPREP, will define a first list of organizations to be contacted in the first half of 2012.

2.4.3 Work Plan

97. This activity will be ongoing throughout the project duration, and specific activities (such as developing project concepts) will depend on donor timelines. Any meetings with potential funding

agents would be arranged to coincide with any other travel required by other project Activities, and the AFD TA support will be available for the duration of the project.

2.4.4 Budget

98. There is no specific budget for this particular activity; however should meetings with any potential funding agents be required outside of Samoa, we would arrange these to coincide with any other travel required by other Activities and covered by other budgeted items.

2.5 Activity 5: Assist UNEP/GEFPAS POPs PROJECT

2.5.1 Strategy

99. The UNEP/GEFPAS Pacific POPs Release Reduction Project aims to reduce the emissions of unintentional POPs (uPOPs) from waste incineration, uncontrolled combustion, and other. This is to be done in order to comply with the Stockholm Convention on POPs. However, at the time of writing this Inception Report, the UNEP Project had yet to be approved for implementation.

100. Unnecessary uPOPs releases are common in all PICs through the combustion processes of open and incomplete burning. Cook Islands, Tuvalu, Samoa, Niue, PNG, Fiji, Marshall Islands and Kiribati highlighted in their NIPs that the major releases of uPOPs are from waste incineration and uncontrolled combustion (through open and uncontrolled burning).

101. While uPOPs emissions occur at the household level through burning of domestic waste, they also occur at government run facilities such as incinerators. To significantly reduce uPOPs emissions, a national-level strategic approach is required to address the issue. Such an approach must be integrated with awareness campaigns to ensure community members, the private sector and government staff understands the danger of, and the need to prevent, uPOPs generation.

102. Should the UNEP/GEFPAS project be approved for implementation in the duration of the AFD Project, the AFD TA will assist that project by providing technical review of uPOPs prevention strategies prepared by PICs.

103. The AFD TA will further identify key players in waste management to be targeted for outreach and incorporation of sustainable approaches in waste management (general public, municipal and industrial waste generators and management).

104. The AFD TA will also provide a review of existing legislation/regulation relating to uPOPs (based on the PICs' Stockholm Convention National Implementation Plan) and consult with counterparts on potential options for legislative/regulatory review.

105. In consultation with participating PICs, the TA will develop draft "model" legislation/regulations on uPOPs that may be integrated by government counterparts into PIC legislative frameworks.

106. In assisting with the implementation of the UNEP/GEFPAS POPs Project, it is envisaged that the AFD TA will provide technical input only, while the UNEP/GEFPAS Project will engage managerial staff.

2.5.2 Specific Tasks

Task 1: Analyse actual and potential uPOPs activities at the national level, through consultations with key players in the waste stream.

Task 2: Work with government counterparts in PICs to develop national strategic guidance to address uPOPs.

Task 3: Review existing legislation/regulation relating to uPOPs.

Task 4: Provide model legislation/regulations that may be used by government counterparts.

2.5.3 Work Plan

TABLE 9: WORK PLAN FOR ACTIVITY 5: ASSIST UNEP/GEFPAS POPS PROJECT

TASKS AND MILESTONES		TIMING	COMMENTS
5.1	Analysis of actual and potential uPOPs activities at the national level, through consultations with key players in the waste stream.	October 2012 to September 2014	AFD TA assisting UNEP/GEFPAS PO in consultation with in-country personnel over the life of the project.
5.2	Working with government counterparts in PICs to develop national strategic guidance to address uPOPs.	October 2013 to September 2014	AFD TA assisting UNEP/GEFPAS PO to work with PIC personnel.
5.3	Review of existing legislation/regulation relating to uPOPs.	October 2013 to February 2014	AFD TA assisting UNEP/GEFPAS PO in consultation with interested PICs, using the NIP as a basis.
5.4	Provision of draft "model" legislation/regulations that may be used by government counterparts.	February 2013 to October 2014	AFD TA assisting UNEP/GEFPAS PO in consultation with in country personnel.

2.5.4 Budget

107. The AFD contribution to assisting the UNEP/GEFPAS project is an in-kind contribution through the allocation of the AFD TA's time. Any funding required for physical tasks (e.g. in-country missions) will be budgeted under the UNEP/GEFPAS Project.

3. ASSUMPTIONS AND RISKS

108. This project is subject to various assumptions and risks; the Team Leader having spent 18 months based in the Department of Environment in Fiji is well aware of the lack of resources throughout the region, which could hinder the timely progress of the project.

109. One particular risk that isn't specific to individual activities or tasks but which could have significant effect and impact on the overall project is the current volatility of the Euro. The AFD funds are in Euros and should there be a significant reduction in its value, this would impact hugely on the budgeting and certain deliverables. The level of risk is low, but will be present until such time that stability in the value of the Euro is achieved.

110. In general, activities have been scheduled on the assumption of favourable and timely responses from stakeholders including relevant government departments. However, the project could be delayed because of delayed decisions or lack of a decision(s) from key stakeholders.

111. Table 10 identifies the risks in each Activity, their effects or impact and potential mitigation or alternative actions to reduce each risk.

TABLE 10: PROJECT RISK ANALYSIS

LEVEL OF RISK	DESCRIPTION ASSUMPTION/RISK	EFFECT/IMPACT	MITIGATION & ALTERNATIVE ACTIONS
ACTIVITY 1: TRAINING PROGRAM			
HIGH	Slow responses from Stakeholders.	Delay in implementing Program.	Early inter-action with stakeholders to encourage earliest response.
	Trained trainers are not sufficiently resourced to provide ongoing training in home country.	Limited or no training from the trained trainers.	Identify at an early stage and provide support if possible.
MEDIUM	FNU/USP cannot find qualified personnel. Other specialist consultants available as required to develop specific elements of the modules where NU/USP do not have the capacity.	Delay or postponement of delivery.	Identify possible alternative specialist consultants and training suppliers.
	Limited uptake of information used in practice by the public and SMEs.	No tangible improvements in solid waste management.	Raise profile of waste management through awareness.
LOW	Contractual/MOU arrangements with SPREP/FNU delayed.	Delayed development and delivery of Training Modules.	Early negotiations to determine agreed ToR for provision of Course development.
	FNU/USP will not agree terms and sign contracts.	Delays.	Seek alternative providers, identify as a possible issue and look for other provider. Have other options in hand, other Universities etc.

LEVEL OF RISK	DESCRIPTION ASSUMPTION/RISK	EFFECT/IMPACT	MITIGATION & ALTERNATIVE ACTIONS
	FNU/USP does not perform within required time constraints.	Delays.	MOU imposes strict deliveries and non payment penalties for non-delivery
	PICs are willing to participate and make staff available for training.	If PICs are not willing to make staff available at the prescribed times then modules are delivered to fewer participants than required.	When carrying out selection process, have, if possible a number of potential substitutions.
	Insufficient trainers identified to ensure viability of running each module.	Elements of Modules reduced and structured around available trainers.	Combine training module content and deliver to all available participants.
	PIC staff available and motivated to implement action plans and train other colleagues.	Either non-attendance at training modules or under resourced in main work area to train other colleagues.	Careful selection by SPREP selection committee.
ACTIVITY 2: WASTE OIL MANAGEMENT			
HIGH	Audit of Fletcher Pacific Steel Mill works show that they are below acceptable operating standards.	Delay using Fletcher Pacific or whilst seeking alternative waste oil users. SPREP requirements in terms of operating standards could introduce.	Pre-empt this and support improvements to acceptable operating standards. Find alternative waste oil users, extend waste oil audits to include waste oil users.
	Review of waste permits by DoE in Fiji for Emperor Mines (expires Feb 2012) and Fletcher Pacific (expires Apr 2012) could impede auditing of Fletcher Pacific.	An advantage to Fletcher Pacific competitors who may not be so stringently regulated. Fiji DoE to place more stringent regulations in all permits in line with international standards.	Consider possible alternatives at an early stage during Fiji waste oil audit. Assist DoE where possible with re-permitting.
	Programs will not be started until collection, storage and disposal systems are in place.	Delays of first shipment if system not in place. First shipment is assumed from Samoa but volume might be low such it is not viable to ship for until sufficient.	Coordinate all collection and disposal. Consider alternatives for first shipment.
	Failure to agree on a strategy, and governments reluctant to impose extra costs through regulation.	No shipments.	Have contingency strategy although this will probably require additional project funds.
MEDIUM	Appointment of local consultants for Fiji, Samoa and Vanuatu are delayed.	Lack of coordination assistance for required documentation.	Build extensive list of local consultants as early as possible.
	Competitor entering the market jeopardising the	No users for waste oil other than high quality.	Possible economic instrument via Government to keep.

LEVEL OF RISK	DESCRIPTION ASSUMPTION/RISK	EFFECT/IMPACT	MITIGATION & ALTERNATIVE ACTIONS
	future viability of Fletcher Pacific operation.		Identify other potential users of waste oil in Fiji to replace Fletcher Pacific should Fletcher Pacific decide that continuing is not commercially viable.
	Availability of Fiji Revenue and Customs Authority (FRCA) and DoE to develop stewardship program and collection system with the Government of Fiji.	Delays in implementation of stewardship program.	Commence discussion at the earliest opportunity and maintain close contact with relevant agencies.
	Waste Oil Audits more costly than budgeted.	Review budget when tenders received.	Negotiate, reduce scope of work, increase budget and make savings elsewhere.
LOW	Importers and users will not sign up to the voluntary programme.	Need to develop regulations or permit systems to enforce.	But will eventually be required to by the permits or regulations).
	The systems used in the 3 countries (Fiji, Samoa and Vanuatu) may not be relevant to other PICTs.	Need to develop alternative systems for other countries.	Develop other systems for other countries.
	Fiji, Samoa, and Vanuatu do not commit to implementation of stewardship program.	Less surety of sustainability of outcomes after project ends.	Involve alternative countries that demonstrate commitment to the stewardship program. Target countries are Solomon Islands, FSM and RMI.
	Too much waste oil available for the number of users.	Storage problems/possible contamination pollution source.	Use economic instruments to incentivise using waste oil, could include a surcharge on using new oils. Ship elsewhere other than Fiji, although this might have cost constraints. Have storage facility designed and operated to industry standards.
ACTIVITY 3: NATIONAL PROJECT SUPPORT			
MEDIUM	PICs have sufficient capacity to identify and implement projects.	Either no projects to develop or they require assistance with implementation.	Monitor and provide assistance as budget allows, source funding from other budgets if possible.
	PICs lack resources to focus on specific projects.	No projects identified or project development slow.	Monitor and provide assistance.
LOW	PICs are unwilling to participate.	No projects identified.	Redistribute budget.
	No Projects identified in PICs.	No projects identified.	Redistribute budget.
	PICs are unwilling to participate.	No projects identified.	Redistribute budget.

LEVEL OF RISK	DESCRIPTION ASSUMPTION/RISK	EFFECT/IMPACT	MITIGATION & ALTERNATIVE ACTIONS
ACTIVITY 4: CO-FINANCING			
MEDIUM	The assumption is that funding and co-financing is available and can be leveraged within the period of the AFD TA contract, the risk is that these funds cannot be leveraged within the AFD TA contract period to support the implementation of this project.	Funds limited to the AFD allocation if other sources of funds not available.	Promote project as widely as possible to build interest from other agencies.
LOW	The assumption is that other agencies such as JICA do exist.	Limited to existing agencies.	Seek more involvement from existing Agencies.
	The assumption is that other agencies will actively participate.	Limited to existing participating agencies.	
ACTIVITY 5: ASSIST UNEP/GEFPAS POPS PROJECT			
LOW	UNEP/GEFPAS Project Funds are delayed or unavailable.	Fewer resources available to support waste management in the Pacific region.	AFD TA to provide additional support to the regional Waste Management and Pollution Control programme at SPREP.

APPENDIX 1: UNEP/GEFPAS PROJECT CONSULTATION WORKSHOP KEY OUTCOMES

Activity 1 – Training Program

The vocational training programme will include a train-the-trainers approach, with trainees providing further in-country training after completion of the course.

The feedback on this Activity included the following points:

1) *The document should specify how private sector trainees will be targeted.*
2) *The document should address training sustainability, for example by reference to future training funded by governments, and through donor funded projects.*
3) *Further discussions are needed with FNU and USP to identify the most appropriate arrangements for delivering the training courses.*
4) *The training and associated in-country action plans should be related to the pilot projects in countries where this is applicable.*
5) *Reference the potential link between timing in-country training (with mentor) and timing of Activity 3, in an effort to synergise activities and avoid duplication of work. (The Activity 3 trainer could act as the training mentor).*

In addition, the following comments were made on an initial draft of the course content.

- *(a) The general aspects of waste management should be taught across all courses. These should include waste economics, legislation, regulation and control, and waste audits.*
- *(b) Add leachate treatment and the Fukuoka method (semi-aerobic) to landfill design and management.*
- *(c) Ensure national action planning is included in each training module.*
- *(d) Ensure the principles of training are included in each training module (given that this is a train the trainer course).*

Activity 2 – Waste Oil Management

The Activity is based around establishing waste oil collection, storage and disposal systems for each PIC. In most cases the oil will be exported for reuse in suitable high-temperature facilities, such as a steel mill in Fiji. Assistance will also be given for the development of product stewardship systems, which could be based on voluntary, legislative, or economic approaches.

The following feedback was obtained on the proposed activities:

1) *Add a reference to the development of a regional users guide.*
2) *Power station personnel (and possibly others) need training in oil spill response procedures.*
3) *Add a reference to the need for UN rated drums to be used for shipping.*
4) *Palau is not a Party to Basel, so may have to look at exporting to the US, which is also not a Party. However, this may not be supportable under the project.*
5) *Solomon Islands, Tonga and Nauru expressed interest in being included in the audit stage.*
6) *Nauru uses waste oil in-country, so the project should assess the facility performance.*
7) *Tonga has an existing regulation but needs assistance to extend this to cover small users.*
8) *Some concerns were raised about the potential for PCB contamination of the waste oil and also the need to determine whether the facilities used for oil reuse were able to achieve the conditions necessary for minimising releases of uPOPs. These will be addressed through PCB testing of the oil and audits of each reuse facility.*

Activity 5 – Assist UNEP

The discussions for this Activity focussed on the need for national strategies for uPOPs prevention and the relationship between these and national waste management strategies (NSWMS). The following national responses were produced from a round-table review.

Vanuatu: *We haven't captured this in our national waste strategy, but it is an issue. We have a NSWMS, but would also like to deal with this.*

Tonga: *Don't need a strategy, have legislation, but would like to do awareness.*

Solomon Islands: *We could use the awareness strategies under the waste management strategy to promote reductions of uPOPs.*

Samoa: *We would like assistance with burning issues because there is a lot of uncontrolled organic burning. We don't have it in our draft NSWMS and would like assistance.*

Nauru: *We need something specific on uPOPs to strengthen the NSWMS.*

Niue: *Burning is an issue and it is not specifically covered under the NSWMS, so would appreciate assistance with developing an appendix to NSWMS.*

Marshall Islands: *the NSWMS doesn't specifically address uPOPs so would like to address it. In addition, we would like more enforcement mechanisms.*

Kiribati: *We want to do something about waste burning, especially incinerators. Not sure what's in the NSWMS, but would like with developing a strategy, regulation and legislation.*

Fiji: *Currently developing NSWMS and would like technical assistance on including uPOPs.*

FSM: *We might need help with addressing burning issues and with putting this in the NSWMS.*

Cooks: *climate change is also trying to reduce burning, to reduce emissions. We would like to incorporate uPOPs into the existing NSWMS rather than doing another strategy. We already have a regulation to ban the burning of plastics. The project outcome should be focused on strengthening uPOPs management through national strategies, where they already exist.*

APPENDIX 2: LIST OF STAKEHOLDERS

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