

ROM report

<i>Type of ROM review</i>	Projects and Programmes
<i>Project title</i>	Pacific Hazardous Waste Management (PacWaste)
<i>Project reference</i>	D-22937
<i>Delegation in charge</i>	Fiji
<i>Status</i>	Draft
<i>Report date</i>	02/11/2015

Project - Key Information	
Domain (instrument)	FED - European Development Fund
DAC Sector	14050 - Waste management /disposal
Zone Benefitting from the Action	Pacific Region
Type of Project/Programme	Geographic
Geographic Implementation	Multi-country
Entity in Charge	DEVCO H
OM in Charge	MIRITESCU ILEANA

Project - Financial data on 29/09/2015	
Total budget	8,000,000 €
EU contribution	8,000,000 €
Contracted Amount	7,850,000 €
Paid Amount	2,118,873 €

Project - Dates	
Signature Date of Financing Agreement by Beneficiary Country (FA date)	04/04/2013
Final Date for Contracting (FDC ILC)	04/04/2016
End Date of Operational Implementation Period (LMO/EOI)	04/04/2017

ROM review - Key information				
Reason for ROM review	Problematic			
Countries visited	Marshall Islands, Fiji			
ROM expert(s) name(s)	KRAJCOVIC Roman			
Field phase	Start Date	06/10/2015	End Date	16/10/2015

Project Synopsis

Context

Poor waste management is a major threat to sustainable development in Pacific Island Countries and Territories (PICTs), as it has negative impacts on the region's environment, as well as on public health, water resources quality, fisheries, agriculture, tourism and quality of life in general. Significant progress is underway in the management of solid waste generated by households in many Pacific island communities, but hazardous solid waste such as asbestos, e-waste and healthcare waste, remains essentially unmanaged.

Note: start of the Description of the Intervention Logic

The overall objective of the European Union funded Pacific Hazardous Waste Management - PacWaste - project is to contribute to building a healthy, economically and environmentally sustainable Pacific for future generations.

The specific objective or purpose is to assist Pacific ACP countries' efforts to adopt cost-effective and self-sustaining priority waste management systems by focusing on three hazardous waste streams: asbestos, e-waste and healthcare waste that are considered as the top three priorities for undertaking interventions in the region and for which insufficient resources have been mobilized so far, by either local and regional authorities or international donors. As the fourth component an integrated waste management system will be established in the Republic of the Marshall Islands (Majuro Atoll).

Description of the intervention Logic

The above mentioned objectives are in line with those of the Pacific Regional Solid Waste Management Strategy 2010-2015, which the overall goal of: "Pacific Island Countries and Territories will adopt cost effective and self-sustaining Solid Waste Management Systems to protect the environment, in order to promote a healthy population and encourage economic growth. The project's objectives could be reviewed, if necessary, in light of the adoption of the new comprehensive Pacific Regional Waste and Pollution Management Strategy 2016-2025 (Cleaner Pacific 2025).

The main activities encompassed by the project are grouped into the four result areas:

Result Area 1: Assessment and prioritisation of Pacific hazardous waste status and management options.

Result Area 2: Implementation of best available practices in priority hazardous waste management in demonstration countries and in integrated waste management in atoll countries.

Result Area 3: Enhanced capacity and appropriate policies and regulatory frameworks in place to mitigate and better manage hazardous waste streams achieved in Pacific island countries.

Result Area 4: Improved regional collaboration and information exchange on hazardous and atoll waste management practice.

The main indicators and targets that were developed later on are as follows:

RA 1: Assessment report with a priority list of actions and more specific indicators, including baselines and target values completed;

RA 2: Appropriate medical waste solutions in place by 2016 in priority hospitals in 15 countries;

Asbestos-containing materials stabilized in prioritized occupied dwellings in 3 countries by 2017;

Port reception facilities upgraded to use best practices in 7 countries by 2016;

E-waste and asbestos-containing waste stockpiles collected and stored for safe disposal (by 2016) in 7 countries;

Model integrated waste management established in one demonstration atoll country (2017).

RA 3: Twinning-like arrangements between similar Pacific ACPs and Overseas Countries and Territories established.

RA 4: Personnel are trained for routine and emergency hazardous waste handling.

Relevant personnel manage medical waste, e-waste according to best practices and operates facilities successfully

Model institutional financial measures to prevent the recurrence of e-waste stockpiles are available

National officers are applying the requirements of the Basel and Waigani Conventions.

The Financing Agreement is signed between the European Commission and the Pacific Island Forum Secretariat. The project is implemented by joint management with an International Organisation - the Secretariat of the Pacific Regional Environment Programme (SPREP). Stakeholders identified and consulted in the first stage of this project, through a call for expression of interest to identify a first range of potential priorities, have been national environment departments, national health departments, hospital managers, disaster response offices, and public works departments. Proposed target non-government participants involved in waste management, public health, local government administration and planning, conservation activities, as well as members of local communities, the private sector and other relevant stakeholders have been consulted at the commencement of the project as a key regional assessment task.

The project is managed primarily through a SPREP team consisting of a senior Project Adviser (project manager and technical expertise) and a Project Officer (project administration and technical support). The Project Adviser is assisted by a Technical Advisory Panel that meets quarterly. The Project Steering Committee takes place annually and is responsible for overseeing and validating the overall direction of the project. It reviews the outcomes of the previous year and reviews/modifies the Logical Framework, if needed. It also agrees on the work programme for the following year.

Establishment of National Focal Points and in-country management by involving relevant government and non-government stakeholders are also critical to the success of the project and are an important project governance and implementation component.

The PacWaste project is operating in the following 15 countries: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands (Majuro Atoll), Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu.

Findings

1. Relevance

(Good / Very good) 

PacWaste (Pacific Hazardous Waste) is a €7.85 million, four year project funded by the European Union and implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP) that aims at improving regional hazardous waste management across the Pacific in the priority areas of healthcare waste, asbestos waste, E-waste and integrated atoll waste management.

The present PacWaste project builds on lessons learned from the previous programmes implemented, particularly with respect to the gaps identified in the available data on hazardous waste, their responsible management in line with international best practices, the adoption of specific policies and regulations and the limited exchange of information and collaboration among the countries in the region. According to the Regional Solid Waste Strategy 2010-2015 there is a need for further improvement of the waste management in the Pacific island countries and territories with a specific focus on the hazardous waste.

The healthcare waste strategy aims at the provision of cost-effective systems for treatment and final disposal of wastes, compliant with applicable standard (e.g. World Health Organisation) and the relevant obligations under international conventions (Stockholm Convention). Training of operators of health care waste systems to an adequate capacity level is also foreseen. Challenges are related to, inter alia, ineffective segregation of medical wastes at the source, persisting technical problems at existing incinerators. In addition, some of the incineration plants provided by donors in the past are not compliant with current international best practices, as specified by the Stockholm Convention. In many cases, incinerators are located at hospitals, i.e. in densely populated areas, with a potentially significant negative impact on public health and the environment. Improper management of healthcare waste can result in contamination of water supplies or aquatic environments, release of toxic pollutants to the air, and infection risks to communities and animals living near landfills.

The selected interventions include the purchase and commissioning of appropriate technology for healthcare waste treatment (incinerators), disposal and the provision of adequate training to local staff, including training of trainers.

Pacific island countries have a history of use of asbestos-containing building materials. Natural disasters and building deterioration lead to increased concentrations of airborne asbestos fibres, which inhalation can cause serious lung disease or cancer. Asbestos-containing materials (roofings and claddings) are removed in prioritised occupied buildings in demonstration countries, with the demonstrable objective of minimising long-term community health impacts. Priority is given to public buildings (e.g. schools and hospitals), account is also taken of occupation factors.

Electrical and electronic equipment, the use of which is increasing rapidly in Pacific island countries, contain a range of hazardous materials, including heavy metals, bromated flame retardants and other toxic substances. Therefore, improperly managed discarded electrical and electronic equipment (e-waste) poses significant environmental and human health risks. Appropriate waste management through coordinated collection (and stabilisation in case of asbestos), storage and disposal of these hazardous waste streams are thus essential for protection of human health and the environment.

End-of-life electrical and electronic goods (e-waste), ULABs (Used Lead-Acid Batteries) and asbestos-containing materials (ACM) stockpiles are treated as appropriate (including immobilisation of friable asbestos fibres), collected and stored in safe, dedicated medium-term storage facilities prior to recycling or export for safe disposal, according to IMO (International Maritime Organisation) dangerous goods requirements. Ongoing shipments will be managed at the national level based on approved regional asbestos and e-waste management strategies that devolve down to a national level with a national strategy (which mirrors the regional strategy). Regional oversight of hazardous waste shipments will be maintained via the Basel and Waigani Conventions which are coordinated by SPREP.

An integrated waste management system will be established in the Republic of the Marshall Islands (Majuro Atoll).

2. Efficiency

(Good / Very good)



The chosen implementation mechanisms, i.e. selection of implementation modalities, entities and contractual arrangements are conducive for achieving the expected results. SPREP effectively leads in the planning of the action including capacity development beyond formal endorsement. Generally, it could be stated that the resources correspond to the needs of the actions within the smaller islands. This is not valid for the bigger countries (Papua New Guinea, Timor Leste), where the elaboration of the Asbestos Baseline Study was cancelled, due to insufficient resources. The local partner provides the human, as well as physical inputs that are required to enable the effectiveness of the actions, including those on capacity building.

The project is managed primarily through the Secretariat of the Pacific Regional Environmental Programmes (SPREP) team, consisting of a senior Project Adviser (manager and technical expertise) and a Project Officer (administration and technical support), both recruited for the project. The Project Adviser is assisted by the Technical Advisory Panel that meets quarterly. The Project Steering Committee takes place annually and is responsible for overseeing and validating the overall direction of the project. It reviews the outcomes of the previous year and reviews/modifies the Logical Framework, if needed. It also agrees on the work programme for the following year.

Establishment of the National Focal Points and in-country management by involving relevant government and non-government stakeholders are also critical to the success of the project and are an important project governance and implementation component. In the majority of the demonstration countries this model is well functioning and promises to bring the expected results.

PacWaste has commenced with a series of baseline surveys that collected and collated information about the current status of all three hazardous waste streams targeted (healthcare waste, asbestos, e-waste) and its management in the South Pacific region. The project identified best practice options for interventions that are cost-effective, sustainable and appropriate for Pacific island communities. These remedial interventions will be implemented in priority countries identified through the baseline survey. Taking into the consideration that such a broad scope and focused surveys have never been done in this region, it could be stated that cost effectiveness is in place.

The project monitors the development from the initial condition identified by the regional priority hazardous and solid waste status and management options assessed, through documentation of implementation of identified best available practices in demonstration Pacific countries. Associated indicators include annual monitoring programme results from demonstration sites, as well as from participants on training and capacity building activities. SPREP elaborates also regular quarterly progress reports.

Key indicators have been established in the Logical Framework. More detailed indicators, baselines and targets became available after the completion of the initial assessment, i.e. Surveys of the Regional Distribution and Status of Asbestos- Contaminated Construction Material and Best Practice Options for its Management in Pacific Island Countries; Baseline Studies for the Pacific Hazardous Waste Management Project - Healthcare Waste;

The project is monitored by the Steering Committee in compliance with standard procedures and using a pre-established monitoring system, tracking deliverables under each result area. At the 2nd Project Steering Committee Meeting held on 01/10/2014 the review of activities showed that all results had been achieved and those in progress were on track in terms of timeliness and quality of intermediate outputs.

Regional consultative meetings including the annual SPREP meeting provides another strong platform for information exchange on project progress.

Delays in project staff recruitment and starting dates delayed some start-up activities, but all activities are now generally on track following the recruitment of the PacWaste Project Manager in November 2013 and the PacWaste Project Officer in January 2014. There were considerable time delays in signing the Memorandum of Understanding (MoU) between SPREP and RMI for the PacWaste project and for the agreeing to the ToR for the RMI National Co-ordination Committee. There has been a mixed follow up by the Majuro Atoll Waste Company (MAWC). Activities in some areas could have commenced earlier, such as scrap steel removal and compaction planning for the existing landfill site. The April 2015 National Co-ordination Committee meeting was co-ordinated with the visit to Republic of the Marshall Islands by the EU Ambassador.

3. Effectiveness

(Good / Very good)



The PacWaste projects achievements in gathering information and planning regional actions on asbestos, e-waste, healthcare waste and atoll integrated solid waste management were presented at the Pacific Environmental Forum (PEF) on 30th September 2014, in Majuro, Republic of the Marshall Islands. The overview of current regional waste and pollution management initiatives; national solid and hazardous waste management initiatives have been provided along with identified priority areas for future targeted waste management interventions at the regional and national levels; and identified regional and national recycling priorities for the next 5 years.

Objectively Verified Indicators correctly describe and reflect outputs.

Healthcare Waste (HCW) Management Intervention - only one HCW management technology has been demonstrated to be effectively treat all categories of HCW in accordance with best practice. This technology is high temperature incineration, with sufficient waste combustion residence time and appropriate air pollution control equipment.

For residential buildings estimates were given for the numbers of houses that could contain asbestos (roofing and/or cladding) in the islands that were surveyed. PacWaste surveyed approximately 24 islands in 13 countries (Asbestos Baseline studies were cancelled, due to insufficient resources in Timor Leste and Papua New Guinea), so the situation in many outer island is unknown. The most impacted countries identified (having the largest amounts of asbestos, representing the greatest risks to human health) included Nauru, Kiribati (Banaba Island), Tonga and Cook Islands. Smaller amounts were found in Samoa, Fiji, Vanuatu, the Solomon Islands and Tuvalu. Very minor amounts of asbestos were found in Federal State of Micronesia, Republic of the Marshall Islands and Palau. The survey contains a risk ranking methodology adapted from a UK standard, which gives a value for 0 to 27 (the higher value being the higher risk), using a combination of the type of asbestos, the condition and the location (proximity to people).

The costing for different scenarios are also given, which includes access to different disposal paths that varies as some countries have access to on-island landfill disposal, whereas others prefer export, some inter-island (Tonga), others international (Cook Islands and Niue).

Best practice for disposal includes a variety of responses, including land filling (incountry), sea disposal and international export (for landfill disposal in Australia or New Zealand). Best practice was centered much more on removal and replacement, given that much of the asbestos contaminated materials (ACM) in the cladding, roofing and other building components are in poor condition.

There is also a preference to remove asbestos in those Pacific Islands, which frequently experience natural disasters, due to the extra complications and hazards this then adds to the clean-up, which is now a problem in Vanuatu post Cyclone Pam, as well as for clean-ups in Tonga, Niue and the Solomon's.

The regional e-waste project has been hampered by difficulties in securing an experienced trainer in e-waste processing/ management. This is now being rectified and PacWaste will sign e-waste pilot agreements with Kiribati, Palau, Tonga and RMI over the next two months. Other countries will follow early 2016.

For the Atoll Integrated Solid Waste component the second National Co-ordination Committee (NCC) meeting for 2015 was held in Majuro on August 2015 to monitor progress over the previous 3 months (May-July 2015) and to plan for next three month period (Aug-Oct 2015). In relation to progress over the last 3 months in April the NCC had endorsed the first round of activities which included: a) procurement of and equipment shed, b) repair of critical land-filling and waste collection equipment, c) site clearance of scrap metal and d) preparation for a compaction plan.

4. Sustainability

(Serious deficiencies)



The Governments of the Pacific Islands Countries and Territories (PICTs) give sufficient importance to the management of hazardous waste. Despite this fact the risks associated with the project sustainability are related to the capacity of PICTs government officers, trained in hazardous waste management best practices. Their availability to undertake the tasks into the future is limited, given the often competing priorities of other duties and high rates of staff turnover. The other questionable issue is the Governments' availability, and this seems essential, to fund long-term operational costs and maintain capacity to operate installed healthcare waste incinerators, and to maintain capacity to manage stabilised asbestos-containing infrastructure into the future. Sustainable management of hazardous waste will certainly require the introduction of national import tariffs that will be held in trust to finance ongoing collection and disposal of e-waste.

So far, only few of the relevant authorities in the beneficiary countries made the budgetary provisions for the financial sustainability of the project results and achievements, so most probably the financial sources will be requested from other donor/s. The financial sustainability of the project is doubtful, because financial support will be required to operate further dismantling of the asbestos containing building, to improve temporary stockpiles and to ship asbestos containing materials overseas.

Sea-level rise may result in the flooding of coastal dump-sites and increase the pollution of coastal waters. In small and low-lying atolls, solid waste containment will also be a real challenge, often requiring the construction of costly seawalls. Increased numbers and intensities of storms and cyclones could damage infrastructure and result in increased quantities of asbestos-containing disaster waste that must be managed. Mitigation measures including a shift towards renewable energy technologies will create new or enlarged hazardous waste stream, such as lead acid batteries, which Pacific Island Countries and Territories (particularly in atoll nations) will have to manage.

Conclusions

N°	Conclusion
C1	Regulations specifically concerning the management of solid waste are in force in five of Pacific island countries and territories and have been drafted in another three. Each country has enacted other pieces of legislation relevant to the management of solid waste, particularly concerned with the effect of solid waste management on public health. However, their practical implementation is often neglected and enforcement is not in place.
C2	PacWaste project addresses some of the common and important challenges to the management of solid waste with the specific accent on the hazardous waste. These include increases in waste generation caused by economic and population growth, limited availability of suitable land (on small islands and atolls) for waste disposal, the remoteness of many countries, resulting in higher waste management costs and the small and sparse populations, which limit potential economies of scale.
C3	There are several remarkable achievements reached by PacWaste so far, such as the completion of baseline studies for main dangerous waste streams in the demonstration countries, progress achieved in the integrated atoll waste management, health care waste and asbestos removal etc.). The weakest point so far seems to be the e-waste sector.
C4	The financial sustainability of the project is doubtful, because financial support will be required to operate further the installed healthcare waste incinerators, dismantling of the asbestos containing buildings, to improve temporary stockpiles and to ship asbestos containing materials overseas. The other doubts arise from the financially viable management of the e-waste.
C5	The situation with the dumping of biodegradable waste on the municipal landfills across the Pacific Islands seems critical.
C6	Although the overall PacWaste visibility is satisfactory, there is a room for improvements.

Recommendations

N°	Recommendation
R1	PacWaste should focus on the drafting/introduction of regulatory norms for countries/territories, where the waste management legal framework is simply absent. Enforcement of more strict fulfilment of the waste management act provisions, including the introduction of the responsibility of the waste producers for the proper handling of the waste produced, should be introduced.
R2	Differentiate the size of the country, its population and economic activities during the drafting of the Strategy for the waste management. Smaller countries/territories need a different approach, e.g. establishment of so called waste yards, which should be equipped with the compactor (mill) for construction waste, technology for biodegradable waste producing compost, several containers for recyclable items, e.g. glass, paper. The recording of the waste collected should be introduced.
R3	PacWaste could support improved storage and handling of ULABs, including them in with the e-waste collection temporary stockpiles. SPREP, in its capacity as the Waigani Convention Secretariat, should ensure that ULABs shipments have the correct Waigani (Basel) Notification and Movement documentation.
R4	PacWaste should paid a special attention for the waste components, which could bring some financial incentives (used batteries, aluminium cans, e-waste). These activities could create also several jobs that in tiny economy should bring substantial added value.
R5	PacWaste should within the component four (Integrated waste management system) include the biodegradable waste management, as it creates a noticeable part of household waste. The compost produced can be further used by local communities for their fields/gardens.
R6	The PacWaste project information panels should be placed in the beneficiary countries at/near the hazardous waste temporary stockpiles. These panels have to fulfil the EU visibility rules, as well as short explanatory text regarding the dangerous waste management should be added.