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SPREP promotes evidence-based strategic planning within countries to develop strategies that address emerging priorities and opportunities in locally appropriate ways. In assisting Pacific island countries and territories to build capacity to implement waste, chemicals, and pollutants programmes, SPREP continues to focus on in-country human resource support, technical cooperation, and a learn-by doing approach for longer-term self-sufficiency.



Coral reef Samoa. Photo: © Stuart Chape

Managing Persistent Organic Pollutants in PNG

One of the most prevalent persistent organic pollutants (POPs) in Papua New Guinea (PNG), with links to cancer in humans and which is also extremely toxic to fish and marine invertebrates, was targeted during a scoping mission.

The scoping mission for the pesticide Dichlorodiphenyltrichloroethane (DDT) in PNG was funded through the Project Preparation Grant of the Global Environment Facility (GEF) Implementing Sustainable Low and Non-Chemical Development in SIDS (ISLANDS) Programme.

To prevent further exposure of people to the dangers of POPs, the Stockholm Convention requires all Parties to develop National Implementation Plans (NIPs) on managing these hazardous chemicals. PNG developed its NIP in 2006 which identified

stockpiles of obsolete POPs around the country but could not implement it due to lack of funding.

To help PNG prepare for ISLANDS, SPREP led a scoping mission in 2019, supported by UNEP. The fieldwork covered five provinces and seven towns including Goroka and Yonki in the Eastern Highlands Province; Lae in Morobe Province; Rabaul in East New Britain Province; Alotau and Misima in Milne Bay Province; and Port Moresby in the National Capital District.

The mission was tasked to verify stockpiles of POPs as reported in the PNG NIP and to safeguard them in preparation for removal and disposal under ISLANDS.

All reported stocks of DDT in Goroka and much of the Highlands region were found to be missing. Provincial

authorities reported instances of theft which saw the DDT sold to farmers for use in gardens. However, the team was able to verify and safeguard PNG's largest stockpile of obsolete DDT in Rabaul. Two 20-foot containers filled with 1,400 boxes of DDT were discovered. Knowing the dangers of DDT, an initiative resulted in the purchase of two shipping containers by the East New Britain Provincial Government to store all repacked DDT. Unfortunately, the containers were raided by thieves with some of the DDT being stolen.

Over time, the contents of the containers were spilled around the area, leaving the surrounding communities exposed to DDT. The SPREP-led mission team and members of a village cleaned up the spilled stockpile of DDT and repacked an estimated 12 tons back into



Managing POPs in PNG.

the two containers which were securely locked with welded bars and padlocks.

The mission team also delivered four DDT Safeguard Training sessions in Alotau, Goroka, Kokopo and Misima, based around the principles of Workplace Hazards, Hazards Identification and Risk Assessment at the Workplace. All 40 participants of the training will be called upon to assist with the removal of POPs when the GEF ISLANDS Project is implemented.

About DDT in Papua New Guinea

The pesticide DDT was once a popular method of controlling vector borne diseases such as malaria, which was identified by the World Health Organization in 2017 as a major cause of mortality in PNG, with 94% of the population at high risk of infection.

DDT was also widely used across the agricultural and industrial sectors in PNG. As a hazardous chemical, the use and disposal of DDT was regulated by the PNG Government under its environmental management regime and then under the Stockholm Convention on Persistent Organic Pollutants.

The Stockholm Convention is a legally binding international instrument, designed to gradually decrease the presence of POPs in the environment. When the toxic effects of DDT on humans and animals were discovered in the early 1970s, most countries started to ban production and use. PNG, as a Party to the Stockholm Convention, officially banned the use of the DDT in 1983. All DDT stocks in PNG were abandoned in warehouses and sheds around the country when the ban came into effect. Despite the ban, people still use DDT for farming, fishing and even lice treatment and control in children.



About PCBs in Papua New Guinea

The other most prevalent POPs chemical in PNG to come under the 2020 scoping mission, funded through the GEF ISLANDS Programme, was Polychlorinated biphenyl (PCB).

PCBs are often found in used oil drained from electrical equipment such as transformers and capacitors during maintenance. PCB-containing oils are also banned under the Stockholm Convention and PNG Power Limited has since ceased using it.

However, PCB contaminated oils were detected by the mission team across the country. The team collected 122 samples of used oil from transformers, capacitors, storage drums and tanks and tested them for PCB using Dextil test kits. The results indicated possible PCB contamination in 11 samples. This translates to approximately 612,000 litres of potentially PCB contaminated oils that were present in the provinces visited.



31



About GEF Islands Programme in PNG

With assistance from the ISLANDS Programme, the United Nations Environment Programme (UNEP) and SPREP are working with PNG and other SPREP Members as part of this latest global initiative aimed at improving management of chemicals and wastes.

The ISLANDS Programme is a USD 450 million, five-year initiative backed by the Global

Environment Facility (GEF) and partners for implementation in all Small Island Developing States (SIDS) in the Caribbean, Indian Ocean and Pacific.

The Pacific Child Project that falls under the ISLANDS Programme is worth USD 20 million. It is implemented by UNEP with SPREP as the executing partner for Pacific SIDS.

Working with PacWastePlus

The PacWastePlus programme is a 64-month project funded by the European Union and implemented by SPREP across 14 Pacific island countries and Timor-Leste, which is now in its implementation phase. The programme addresses both the cost-effective and sustainable management of waste and pollution in the priority waste streams of hazardous wastes including asbestos, healthcare waste, and e-waste; solid



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wastes including organic waste, disaster waste, bulky waste, and recyclables; and related aspects of wastewater.

The PacWastePlus programme is implemented in the Cook Islands, Federated States

of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Papua New Guinea, Republic of the Marshall Islands, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu and Vanuatu.

PacWastePlus Steering Committee confirms national waste management priorities

Pacific island countries, supported by PacWastePlus, held an intensive three-day programme steering committee meeting, acknowledging that waste management is a serious issue of concern, especially hazardous e-waste, asbestos and solid wastes, specifically recyclables.

The delegates confirmed specific national priorities for waste management project support and highlighted a number of challenges they face. These include strengthening legislation, enhancing awareness and education initiatives, and providing appropriate capacity building opportunities for the region, amongst others.

The link between waste management and climate change was discussed. This covered the risks, associated costs, and challenges imposed by climate change as well as the opportunities that good waste management offers in reducing greenhouse gas emissions.

To provide support and strengthen regional cooperation, the PacWastePlus programme is assisting countries to share experiences and best practice in the sector. It is also linking countries with agencies and donors who can provide strategic assistance to develop and implement in-country activities.



Country delegates acknowledged that PacWastePlus provided a timely opportunity to leverage support from the European Union, and other regional

projects, as well as the SPREP-coordinated, Clean Pacific Roundtable. This will help to enhance national actions and implement innovative waste management solutions.

A COVID-19 Medical Waste Alert developed for the Pacific islands

SPREP, through the PacWastePlus programme, was one of the first agencies of the Council of Regional Organisations of the Pacific to develop a COVID-19 Medical Waste Alert for the effective management of healthcare waste during the current pandemic.

As COVID-19 continued to spread, governments

were urged to treat waste management, including of medical, household, and other hazardous waste, as an urgent and essential public service in order to minimise possible secondary impacts upon health and the environment.

The easy-to-read practical guide for the Pacific has links to more resources. Some countries were advising

citizens with recent travel history to self-quarantine at home or in hotels. It is important to note that any waste from a facility housing a COVID-19 patient, or a person exposed to COVID-19, including decontamination materials, should be treated as medical waste.



Engagement with countries using innovative resources

PacWastePlus has actively engaged with Pacific island Members to develop close to 100 publications now on the SPREP website.

These publications include project management tools to guide participating PacWastePlus countries to develop their in-country projects.

There is a basic guide on SMART Objectives to assist country focal points in developing in-country concepts for PacWastePlus projects and activities.

A Decision Support Tool was also created to support a high-level self-assessment to influence decision-making. This was based on questions about political, environmental, social, technological, legal and economic factors affecting the initiative in question.

The team also developed publications on building monitoring and evaluation plans, project logic and investigative questioning for PacWastePlus country projects. These can be applied as a resource tool during the development of other donor-funded country projects.

Specific publications were produced from the Assessment of Small-Scale Technology Suitable for Waste Management in the Pacific and Timor-Leste report. This provided details of small-scale waste management technology options suitable for use in remote communities to manage waste and the viability of each technology in the project countries.

The publications developed from this report included individual resources on waste technology management



options for organic material, plastic material and healthcare waste.

Clear and concise information is provided on the various Multilateral Environmental Agreements (MEAs) which aim to reduce the impacts of waste and chemicals.

In an effort to help Pacific islands prepare for disaster waste management, three

specific resources were published – Asbestos Contaminated Material – Guide for disaster debris removal; Managing Disaster Waste: A guide for communities (Factsheet); and National Disaster Waste Management Plans: Benefits of Having Disaster Waste Management Plans and Planning to Pacific Islands.

Tropical Cyclone Harold Response

Following a request from the Vanuatu Government to provide support for clean-ups of disaster waste from Tropical Cyclone Harold, the PacWastePlus Programme, in consultation with the Vanuatu Department of Environmental Protection and Conservation (DEPC) implemented a disaster recovery project in nine communities on the islands of Aore, Malo, Pentecost and Santo.

The project aided in the removal of approximately 239m³ of disaster waste; facilitated community training on disaster waste management and commenced the development of Disaster Waste Management Plans for these communities.

The community training taught participants how to safely handle disaster waste; collect and collate waste management data, and how to best manage and protect the health and safety of waste collection volunteers. It was based on a manual introduced by SPREP through the Canadian Funding for Local Initiatives (CFLI) in collaboration with the JPRISM II Project and the University of Newcastle in November 2019.

The training sessions assisted communities to develop draft Disaster Waste Management Plans. These plans outline key activities for action by the community, Provincial Government and National Government. They were provided to the DEPC for refinement prior to implementation.



Trained volunteers mobilise for disaster waste collection in Vanuatu. Photo: SPREP/M.Taiki

The project was managed by staff from SPREP through PacWastePlus, an extension officer of the Vanuatu Department Environmental Protection and Conservation, and with support from the Luganville Municipal Council.

Recommendations from the Outcomes Report of this activity included coordination by relevant government departments to avoid duplication of efforts, as well as ensuring training materials be developed in the local dialect.

A cleaner Pacific Ocean free from single-use plastics

The Australian Government initiated the Pacific Ocean Litter Project (POLP), funded by the Australian Department of Foreign Affairs and Trade (DFAT) through the Australian Aid Programme. This supports Pacific island commitments to fast-track policies to ban single-use plastics and polystyrene packaging.

POLP will be implemented from 2021–2026.

Pacific island leaders officially endorsed the Pacific Regional

Action Plan on Marine Litter at the 2018 Pacific Islands Forum Leaders Meeting in Nauru. The POLP, a six-year AUD 16 million project complements existing SPREP waste management projects to support this plan.

In 2020 the POLP inception workshop was held in Fiji bringing together representatives from Pacific island countries and territories, as well as experts on waste management, to inform them about the project design and planning arrangements. This



Cleaner Pacific, Photo: D.McFadzien

was also an opportunity for in-depth consultations with Pacific island countries.

The workshop outlined the intended approach for the

delivery of key national and regional activities under the project to address marine litter within the Pacific.

About POLP

POLP was first introduced to Pacific representatives at the PacWastePlus inception meeting in May 2019, and also at the 29th SPREP Meeting in 2019.

It aims to achieve legislated or voluntary single-use plastic bans, levies and other instruments; increase consumer awareness and motivation to reducing single-use plastics use; having targeted sectors, companies and businesses to adopt single-use plastic reduction measures; identifying alternative, environmentally sustainable products and practices to support a reduction in single-use plastics use; and strengthening SPREP's leadership and coordination of marine plastic litter initiatives in the Pacific.

The project will be instrumental in assisting SPREP to develop a stronger picture of the gaps and opportunities that exist across the region. This will enable SPREP to advocate for further support, including at bilateral levels, with other donors beyond the Australian Government, to engage with each country and fund domestic efforts.

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Marine Litter: Did You Know?

Each year, at least eight million tonnes of plastics enter the ocean. It is estimated that there are at least 51 trillion micro-plastic particles already in our ocean, with marine litter harming over 600 marine species.

Approximately 80% of that marine litter originates from land-based sources, which inputs from shorelines or through rivers and wastewater pipelines, with the most prevalent types being plastic materials.



Review of Pilot Project Implementation Plan on Plastics and Waste Oil in Samoa

In 2020, Samoa Recycling and Waste Management Association and J-PRISM II, in collaboration with the Samoa Ministry of Natural Resources and Environment and SPREP, developed a plan for the implementation of a plastics and waste oil pilot project.

The target waste is PET bottles, the plastic parts of home appliances such as air conditioners, and waste oil. The pilot project will be carried out from 2021 to 2022 to test the efficient collection, storage system and treatment method of these target wastes.



Committing to Sustainable Waste Actions in the Pacific (SWAP)

2020 ended with the virtual inception meeting for the upcoming Committing to Sustainable Waste Actions in the Pacific (SWAP) project in December.

This meeting was well-attended with country and territory representatives identified as intervention areas for this project. Regional partners who are initiating waste actions in the Pacific

region also participated in the meeting.

Five countries and two French territories, and four ongoing and pipelined project teams expressed interest in the project.

Funded by Agence Française de Développement (AFD) and implemented by SPREP, SWAP is one of several projects underway across the Pacific islands region to help achieve

the regional goals set out in the Cleaner Pacific 2025: Pacific Regional Waste and Pollution Management Strategy.

'Cleaner Pacific' is the long-term strategy for integrated sustainable waste management and pollution prevention and control in the Pacific islands region until 2025.

Through a feasibility study, AFD and SPREP were able



A cleaner ocean for our Pacific – sharks and reef fish in Solomon Islands. Photo © Stuart Chape

to identify specific activities to carry out in countries and territories through SWAP. This led to the signing of the funding agreement for SWAP in February 2020 of Euro 3 million, with the opportunity to upgrade it to Euro 5 million.

About SWAP

SWAP aims "to improve sanitation, environmental, social and economic conditions in Pacific Island Countries and Territories through proper waste management".

The project goals are to develop good practices on waste management in the Pacific region. SWAP will help communities and local authorities to develop capacity and institutional mechanisms for the targeted waste streams

of used oil, disaster wastes and marine debris, and to promote sustainable financing mechanisms. This will be achieved through a regional training programme and the implementation of pilot projects.

SWAP also seeks to disseminate outcomes across the region through a Community of Practice.

The sustainable waste actions will be linked to the

conservation of biodiversity, climate change mitigation and adaptation, gender inclusiveness and the health and wellbeing of Pacific island communities.

The project is for four years with a Euro 3 million budget covering Fiji, Samoa, Solomon Islands, Tonga and Vanuatu; and two French Territories – French Polynesia and Wallis and Futuna. The project engaged a Project Support



Sorting waste collected during a clean up

Officer for the management and administration of the SWAP Project, as well as a French-speaking Technical Waste Project Coordinator to provide technical assistance and project coordination.

35

Supporting further capacity building to manage disaster waste in Vanuatu

A training workshop in Vanuatu to manage disaster wastes was held in March for representatives from different cities, municipalities and provinces in the country.

The workshop was organised and funded by J-PRISM II in partnership with SPREP.

The overall purpose was to develop contingency plans for the management of waste at the national and local government levels, when a natural disaster strikes. The plans provide guidance at the national and provincial levels during emergency and recovery operations, which will contribute to the quick

restoration of normal life of the affected communities.

A draft Disaster Waste Management contingency plan was submitted to the Department of Environment Protection and Conservation (DEPC) for approval.

J-PRISM II, in collaboration with SPREP, provided support to DEPC for the development of a Proposal to Establish an Environmental Cluster under the National Disaster Management Plan, with disaster waste as one of the sub-clusters, along with other environmental areas under SPREP.

Assistance to enhance Vanuatu's capacity on Disaster Waste Management

In April 2020, Vanuatu was hit by Category 5 Tropical Cyclone Harold, causing widespread damage.

J-PRISM II, in collaboration with SPREP and PacWastePlus, provided technical support to Emergency Responses with the collection and analysis of disaster waste information and data.

To conduct this analysis, J-PRISM II with SPREP developed a pilot Mobile Data Collection System for Vanuatu, Fiji and Tonga for using the Kobo Toolbox Application. Virtual training will be conducted for Vanuatu with the potential involvement of Fiji, Samoa and Tonga in how to use this application.

