

Empowering Pacific Island Countries (PICs) through sustainable training and capacity building programmes in 3R areas

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SPREP

Specific Problems in PICs

- Increase in waste generation
- Availability of land for landfills (atolls)
- Remoteness of Islands
- Limited institutional and human capacity
- Rapid urbanisation
- Changing weather patterns and rising sea levels



Waste Management Training Needs

- Mainstreaming integrated and sustainable waste management strategies such as ISWM
- Knowledge about institutional, business and financial models that have been successful in addressing specific waste problems
- Awareness raising and capacity building programs targeting LAs and other stakeholders
- Knowledge about innovative projects, appropriate technologies, accessing expertise, promoting waste exchange and waste-resource related opportunities
- Developing Public Private Partnerships

PACIFIC POPS RELEASE REDUCTION PROJECT

Reducing Persistent Organic Pollutants (POPs)
in the Pacific region through the improved
management of solid and hazardous waste.



SPREP
Secretariat of the Pacific Regional
Environment Programme



Regional Vocational Training Program on Solid and Hazardous Waste Management

Partners

- *SPREP*
- *Agence Française de Développement (AFD)*
- *Global Environment Facility – Pacific Alliance for Sustainability (GEFPAS)*
- *United Nations Environment Programme (UNEP)*
- *Japan International Cooperation Agency (JICA)*
- *Fiji National University (FNU)*
- *Griffith University, Brisbane, Australia (GU)*

Methodology

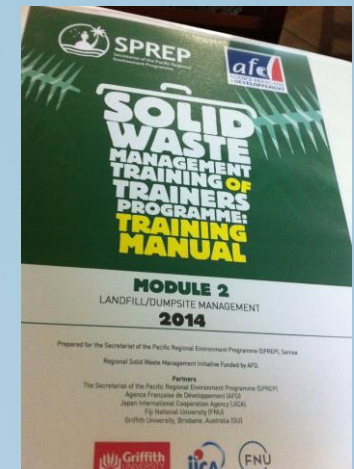
2013- 2014

**(Development stages
through AFD)**

Two modules

- 1)Waste Management Techniques**
- 2)Landfill/Dumpsite Management**

Technical and Non-technical



Non -Technical Considerations:

Policy, Strategy, Financial Sustainability etc

Technical Considerations:

- **Waste Management Techniques**
- **Landfill/Dumpsite Site Management**

- Formal Lectures (opportunity to learn)
 - Case Studies
- Daily presentations by participants
- Field Visits
- Project development and presentations



Program Outcomes

■ Technical Aspects

■ Policy Aspects

■ Sustainability of the Program



2015 – 2016 GEF funding

- 3 Modules developed with a total of 22 units:
 - **Module 1: WASTE MANAGEMENT TECHNIQUES**
 - **Module 2: LANDFILL MANAGEMENT**
 - **Module 3: HAZARDOUS WASTE MANAGEMENT**

(Currently Under Independent Review)

MODULE 1: WASTE MANAGEMENT TECHNIQUES

- **Unit 1 Introduction to waste management**
- **Unit 2 Waste to resources**
- **Unit 3 Policy and strategic approaches to waste management**
- **Unit 4 Waste characterization**
- **Unit 5 Collection, transfer and transport**
- **Unit 6 Recycling and Return**
- **Unit 7 Composting**
- **Unit 8 Waste to Energy**
- **Unit 9 Cleaner production and green growth**
- **Unit 10 Awareness communication and education**
- **Unit 11 Project Management**

MODULE 2: LANDFILL MANAGEMENT

- **Unit 12** **Introduction to waste disposal sites**
- **Unit 13** **Landfill site selection**
- **Unit 14** **Sanitary landfill Design and Construction**
- **Unit 15** **Fukuoka (semi-aerobic) landfill design and construction**
- **Unit 16** **Landfill monitoring and closure**

MODULE 3: HAZARDOUS WASTE MANAGEMENT

- **Unit 17** **Hazardous waste management**
- **Unit 18** **Disaster Waste Management**
- **Unit 19** **Hazardous waste collection, storage and disposal**
- **Unit 20** **Emerging hazardous waste streams**
- **Unit 21** **Hazardous waste regulations**
- **Unit 22** **Regional waste management**

Program Delivery

- Learning & Teaching Activities
(Relevant Pacific Case Studies)
- Formal lecture followed by a case study presentation from a participant followed by Q&A
- Participants requested to be prepared with at least one case study prior to arrival
- Site Visits
- Final presentation of Return-to-Work plan
- First Course to be run in November 2nd-13th 2015

SUSTAINABILITY OF PROGRAM

COURSE ACCREDITATION

- Course to be accredited by June 2016
- Second (accredited) course to be run in July 2016
- Third and final (accredited) course to be run in November 2016

FUTURE DEVELOPMENTS

- Majority of the students will not have formal degree qualifications but will have significant work experience (possibly with non-degree level qualification)
- Masters degree is not feasible given the above
- Graduate Certificate/Graduate Diploma possible
- Students completing the Graduate Certificate or the Graduate Diploma from FNU would be eligible to articulate into the Master of Environmental Engineering on-line program offered by GU, thus, allowing the students to complete further studies while working in their home country.

CURRICULUM

- As per requirements of a Graduate Certificate Program, 4 courses will be offered
- 2 of these courses to be ‘taught’ courses and the remaining 2 to be ‘project based’ courses.
- Taught courses will be offered in both semesters and will be ‘block taught’ similar to the current training program.

COURSE ACCREDITATION

Title of the course will be ***"Graduate Certificate in Waste Management for Small Island Nations"***

- Course 1 - Solid waste management concepts and applications
- Course 2 – Special topics in waste management
- Course 3 – Waste management project 1
- Course 4 – Waste management project 2

Course 1 – Solid Waste Management Concepts

- Concepts and applications of solid waste management practices in small island nations.
- Topics covered include:
 - Introduction to solid waste management in small island nations, waste to resources(3R+Return), policy and strategic approaches to solid waste management, managing waste management projects, solid waste data collection and characterisation, collection, transfer and transport, recycling and composting, sanitary landfilling basics, and case studies of best practice from small island nations

Course 2 – Special topics in waste management

- Special topics related to waste management which have high priority for small island nations.
- Topics covered include:
 - rehabilitation of open dumps (using Fukuoka method), sanitary landfill siting, design, construction, operation, management and closure, management of landfill leachate and landfill gas, environmental monitoring in landfills, waste disposal in atolls, regulations related to hazardous waste management, management of special wastes such as e-waste, medical waste, asbestos waste and waste oil, waste and climate change, financial sustainability of waste management projects, and case studies of best practice from small island nations.

Course 3- Waste management Project 1

- Project based at home-country
- Topic to be relevant to Course 1, which is a pre-requisite
- Students are responsible for sourcing the funds (if required) to undertake the project.
- FNU academic staff members will provide primary supervision with associated supervision from GU, JICA and SPREP.

Course 4 - Waste management project 2

- Project based at home-country
- Topic to be relevant to Course 2, which is a pre-requisite
- Students are responsible for sourcing the funds (if required) to undertake the project.
- FNU academic staff members will provide primary supervision with associated supervision from GU, JICA and SPREP.

Sustainability & Financial Viability

- The program will be delivered as a full fee-based training program at FNU.
- It is expected that a fee structure will be developed to cover FNU tuition fees, accommodation and logical support for site visits.
- Other expenditures such as flight costs, DSA allowances etc will become the responsibility of the student.
- Future Funding opportunities currently explored by SPREP, with lobbying to be made through Regional Bodies, FNU website.

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