

Waste Landfill Training in Palau

Reported by Toshikazu Mito, NPO SWAN-Fukuoka Advisor

A five-day on-site training was conducted in Koror, Palau on the 5th to 9th of February 2018 coordinated by JICA Kyushu Center. The main participants were ex-participants of the Fukuoka Method training in Japan and counterparts of J-PRISM Phase II in the Micronesia region. The training covered both the theoretical and practical aspects of the Fukuoka Method based on the Micronesia region's conditions.

After a half-day classroom lecture, which began with a welcoming speech by Hon. Minister Charles I. Obichang of the Ministry of Public Infrastructure, Industries and Commerce, Dr. Matsufuji from the Fukuoka University (one of the members who pioneered the Fukuoka Method), led the

practical training session conducted at the landfill in Koror, which is the biggest landfill in Palau. The training program included various aspects: such as access road improvement, installation of gas ventilation pipes, leachate collection system, embankment formation using old waste, soil cover using local materials such as low-quality compost, assembly and installation of low-cost water purification system called 'ECO-FAN' (which agitates water by using natural wind power and enhances aerobic decomposition of organic matter in leachate), simple water quality testing and daily incoming waste management.



After constructing a sample leachate collection system

After lot of sweating and muscles fatigue, the 20 participants that attended the training enjoyed a strong feeling of fulfillment with the acquired hands-on knowledge and skills on improving their dumpsites in a feasible way.

Remarks from Prof. Kouji Matsufuji



I am very pleased that all training activities were conducted on time, despite occasional severe sudden showers. Many Pacific Islands face similar challenges such as very limited space for landfill construction, and lack of soil and rocks for landfill management. However, by applying the Fukuoka Method, these

challenges can be overcome by utilizing locally available materials such as discarded low-quality compost, which can be used for soil coverage of a landfill main body or its embankments. I strongly hope that the participants will fully digest what they have learnt and apply the Fukuoka Method in their own context.

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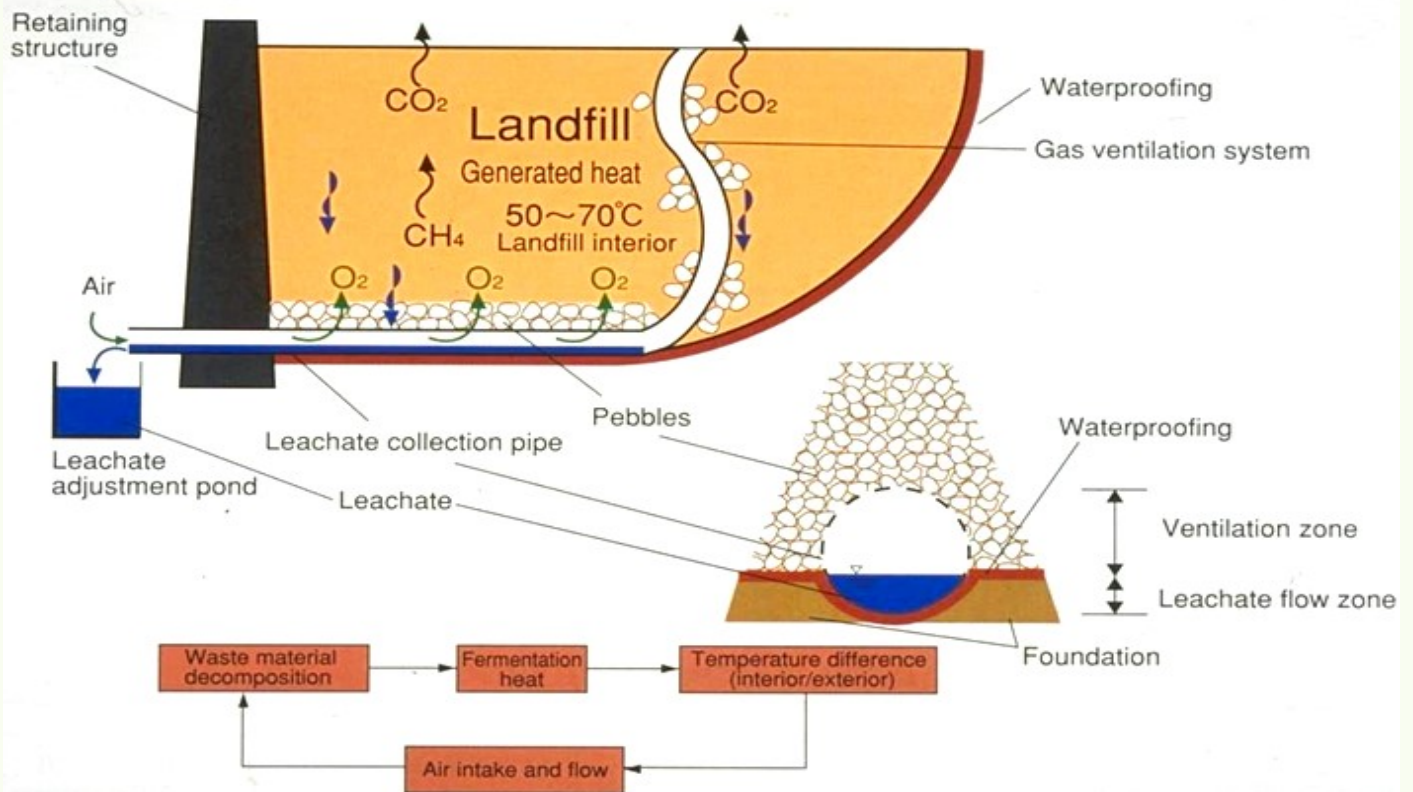
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What is the Fukuoka Method?



The Fukuoka Method or the semi-aerobic landfill system is a landfill management system, developed by the Fukuoka University and the Fukuoka City in Japan in the 1970s. One of the most serious challenges of landfill or dumpsite

management is how to deal with organic waste at the site. Accumulated organic waste tends to create anaerobic environment, which causes production of harmful methane gas. The Fukuoka Method can enhance aeration in the landfill

body, by installing vertical or horizontal perforated pipes and using a natural updraft created by fermentation heat of organic waste. This reduces methane gas production in a financially and technically feasible manner.

Hisanobu Saito

Chief in Training Program Division, JICA KYUSHU



I visited and stayed in Koror, Palau from February 4th to 10th, 2018 to implement "Follow-up Seminar and On-site Training on Sanitary Landfill Design and Operation by using the Fukuoka Method".

My role was to make draft schedule of the program, procure the necessary materials for the on-site training and manage the program schedule on the site, in cooperation with Fukuoka University, JICA Palau office and other related organizations.

I believe that about 20 participants had acquired not only the technical knowledge of Fukuoka Method but also the idea of "Step by Step" (=Go forward calmly), and "Safety First" (Think the safety of the workers first) in the landfill site.

Even though this program was done in a short period of time, of only 5 days, the training could become a turning point for the participants in their careers. Good luck to all the participants!

Tos Nakayama

Director of Department of Transportation and Public Works (DTPW), Chuuk State, FSM

During the training in Palau, I have gained knowledge in the operation and maintenance of solid waste landfill by utilizing the Fukuoka method. Impressive aspects were, reusing of available materials which were easily salvage from the dumpsite to construct slopes and the ECO-FAN for the leachate pond, as well as used tyres for the ventilation system, for the existing stockpile of rubbish. The other aspect was the uniqueness of working together to learn the technique for construction of the access road, used tyres for leachate flow demonstration with minimal mortar placed inside as a way to hold them together to serve the purpose.

I feel that practical training is the best method to convey the skill & knowledge to the trainees, considering the different environment we all encounter at our respective island countries. Being part of the physical work, made it clear to me that working together during the training was the main contributor to the successful accomplishment of the training.

With the skills and knowledge gained, I plan on doing all the improvements for both Marina Dumpsite and the existing dumpsites, which are presently under the jurisdiction of the Division of Public Works within my department.



The plan is to mitigate the Marina Dumpsite prior to actual closure and reopening the existing, with improvement of access road and expansion of the property to accommodate the influx of rubbish utilizing the Fukuoka method.

Vernon Basilius

M-Dock Landfill Supervisor, Division of Solid Waste Management, Bureau of Public Works, MPIIC

The training was a great opportunity for us in landfill works, especially for us in Palau. It gave us, as participants a chance to meet others from the rest of Micronesia, who are in this type of work and learn first-hand from instructors of Fukuoka.

Currently in M-Dock Landfill, we are facing some challenges, such as the increasing amount of waste at the landfill and management of waste disposal sometimes become difficult. This training was very helpful to me and the rest of the M-Dock

Landfill crew, by learning new and better ways of waste management, we now have a clearer view of how to tackle the problems we are facing.

I really believe that the instructors from Fukuoka, JICA and J-PRISM II will continue to offer us technical assistance on our daily challenges. I want to take this opportunity on behalf of Division of Solid Waste Management, Bureau of Public Works participants, to thank you all, and hope you all enjoyed the time at M-Dock Landfill.



Finally, to the participants from the rest of Micronesia, it was great to meet you all. We really enjoyed the time we had during the training and learning new things together.

Hiroyuki Negoro

Project Coordinator/3R+Return (Micronesia Region), Project Office

First, I appreciate all the support from Professor Matsufuji, his professional team from Fukuoka, participants from FSM, RMI and Palau, JICA Kyushu Center, the Project Office members and staffs in Bureau of Public Works in Palau, in holding this on-site training successfully.

I was pleased to see all the people climbing up the mountain of trash and handed small rocks to each other to construct venting pipes. I believe this training provided a lot of measures to improve each landfill in Micronesia region. I hope to visit all the countries in the region to see the work improvements.



Samoa Recycling & Waste Management Association Event

Reported by Mahmoud Riad, 3R+Return Expert



On 15th March 2018, Samoa Recycling and Waste Management Association (SRWMA) officially launched their association during a one-day event hosted by J-PRISM II. The event drew over 80 participants from government ministries, NGOs, donors, private companies and diplomatic missions. The Patron of SRWMA, Honourable Prime Minister Tuilaepa Dr. Sailele Malielegaoi gave the keynote address, congratulating

the association members for forming the first recyclers association in the South Pacific, and challenging them to develop solutions to overcome the waste issues in Samoa. JICA Samoa Office’s Representative Tanaka explained the legislation enacted in Japan to strengthen recycling.

In the afternoon, the participants held a workshop, facilitated by Solid Waste Management Adviser in SPREP,

Mrs. Ma Bella Guinto and J-PRISM II Assistant Chief Advisor, Mr. Faafetai Sagapolutele, to brainstorm on the priorities of SRWMA and the development of the association’s capacity. Identified priorities included the need for public awareness, the association’s role as the voice for waste minimization in Samoa and the Pacific, and support to enacting recycling legislation.

Disaster Waste Management Workshop in Samoa

Reported by Faafetai Sagapolutele, Assistant Chief Advisor

A workshop was conducted in Samoa on the 19th and 20th of March, which was attended by government staff from the Ministry of Natural Resources and Environment (MNRE), Disaster Management Organization (DMO), Land Transport Authority (LTA), Samoa Fire and Emergency Services Agency (SFESA), Samoa Water Authority (SWA), Planning and Urban Management Agency (PUMA), Ministry of Health (MoH), Electric Power Cooperation (EPC) and Ministry of Women and Community Development (WMCD) on Disaster Waste Management (DWM).

The workshop was coordinated and conducted by J-PRISM II in collaboration with MNRE and DMO. The workshop key objectives were to review Samoa’s responses to Cyclone Gita and other past disasters by various sectors and to discuss further strategic measures to guide Samoa in the management of DW when natural disasters strike. The information gathered from the two day workshop provides the basis for the development of the Natural DWM Guidelines for Samoa in order to address the raised issues by the stakeholders and provide a

coordinated approach during the different stages of disaster management (Preparedness, Emergency Response, Recovery and Monitoring) in the occurrence of future disasters. This gives an assurance of better preparation for emergency responses to manage the generated DW, as well as post recovery works by the government for the reconstruction and maintenance of waste management infrastructure and facilities damaged and follow up monitoring to ensure the implementation of these recovery needs.



Activities in Melanesia and Polynesia, reported by Junji Anai

Improvement of Baruni Disposal Site in PNG

Improvement work of Baruni disposal site was done in J-PRISM I (2012-2016), and Cell 1 and 2 were developed to operate landfill management by the Fukuoka Method. In addition, the J-PRISM II inherited the improvement plan of Baruni Disposal Site initiated in Phase 1 and plans to install a weighbridge at the entrance of the disposal site.

On September 19, 2017 the cell 1 landfill work started, with the contract for the construction of Weighbridge signed and installation work

began on October 6th.

On the other hand, Melanesian Landfill Management Training was held at Port Moresby from 30th October to 1st November 2017 as part of a Regional Training conducted by the Project Office. The trainees inspected the landfilling work at Cell 1 which operation newly started at



First landfill operation at Cell 1

Baruni repository on the 31st of October.

Expansion of Solid Waste Management Service to Vava'u Island

In Tonga, Waste Authority Limited (WAL) became a responsible agency of Solid Waste Management and the responsibility for waste management in outer islands has been transferred from the Ministry of Health to WAL. Along with this change, WAL aimed to expand the waste management service to Vava'u Island at the beginning. The short-term expert team supported WAL to prepare an operation plan from a technical point of view.

WAL first investigated the population, number of households, accessibility etc., if all villages are subject to service

provision in the Vava'u main island and prepared the necessary equipment plan to provide the service. At the same time, WAL decided to apply the waste fee system which was introduced in Togatapu Island to Vava'u Island, in order to secure the financial resources necessary for providing service. Community meetings were held to obtain, understand and cooperate from stakeholders.

A launching of waste management service to Vava'u service was delayed due



Regular meeting of WAL

to the effect of Cyclone Gita in February 2018 but the opening ceremony took place on April 18th and the service is ongoing from that day.

Clean Pacific Roundtable will be held in 20-24 August 2018 in Suva. Steering Committee Meeting of J-PRISM II event, will be associated with the roundtable held on the 24 August.

Upcoming
Event

Update News
from Dec
2017– May
2018

Emergency Assistance on Disaster Waste Management in Samoa and Tonga, February 2018

The Tropical Cyclone Gita hit Samoa and Tonga in February 2018, causing grave damage to each country. Due to strong winds and heavy rain, many houses were destroyed, trees fell down and the people suffered from the flood and landslide, which produced a lot of disaster

waste, especially with trees and wood. J-PRISM II organized a chain saw team to cut the waste logs and tree branches to manageable sizes with MNRE in Samoa and implemented urgent collection of green waste with WAL in Tonga.

JICA President Shinichi Kitaoka visit to SPREP in Samoa, April 2018

JICA President, Dr. Shinichi Kitaoka visited Samoa from the 8th to the 10th of April. Dr. Kitaoka came to SPREP and was introduced to the regional

activities of J-PRISM II's Project Office on 9th. His comments were made on the importance of public awareness in Solid Waste Management and careful

planning for successful collaboration between J-PRISM II activities and those of other donors under the guidance of SPREP.

New long-term experts dispatched in Solomon Islands and Samoa

New long-term expert, Mr. Tomoyuki Kogawa was dispatched to Solomon Islands on 4th of January 2018.



He is coordinating activities of Melanesia region covering Solomon Islands, Vanuatu and Papua New Guinea and

contributing to promote 3R+Return. Already he is actively engaged in supporting the establishment of a recycling society in the Solomon Islands.

Another long-term expert, Ms. Ayako Yoshida was dispatched to the Project Office of J-PRISM II in Samoa. She is

enhancing the regional cooperation and is coordinating the regional activities. She was one of the project coordinators

for 1st phase of J-PRISM and her experience in phase I will ensure that she will provide useful insights to phase II activities.



End of Contract



3R+Return Expert, Mr. Mahmoud Riad has completed his contract with J-PRISM II Project Office. Mr. Riad was

responsible for Output 4 of J-PRISM II Project. He has worked closely with SPREP and

donors to build strong relationship, set indicators for CP2025, developed a return system concept for the Pacific and instrumental in the setup of the Samoa Recycling Association, which is the first in the Pacific. During his one year assignment, he has made great achievements with some on-going initiatives to

be followed up by J-PRISM II during the remaining years of the project. The Project Office along with SPREP's Waste and Pollution Management Division, wish to thank Mr. Riad for all his great contributions and hard work in the Pacific. He will be greatly missed and we wish him the best in future endeavors.

J-PRISM II BUZZ

For the Sustainable
Cooperation on Waste
Management among Pacific
Island Countries

J-PRISM II Project Office SPREP
Apia, Samoa



J-PRISM II

Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries Phase II

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J-PRISM II always stands beside you to promote and support PICs initiatives!