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Regular quantitative solid waste management data collection work by municipal councils in Fiji

Ms. Laisani Lewanavanua, Senior Technical Assistant

On 24 and 31 of May 2022, divisional workshops were conducted on Quantitative Solid Waste Management (SWM) data collection for promoting 3Rs. The workshops brought together health inspectors, environment officers and other responsible officers involved in solid waste management from the 13 municipal councils.

Participants learned about how regular quantitative SWM data is used for preparing and implementing a plan to promote 3Rs. This includes characteristics of municipal solid waste data, methods of data collection as well as data



analysis on the amount of waste collected and disposed. In addition, they learned about how recycling and composting rates are calculated and how to set realistic indicators. Moreover, there were inputs from key speakers from 3 municipal councils, who are the pioneers on market waste composting and recyclables collection program. The councils shared their experience on data collection work and results of data analysis of the past several years.

The five municipal councils that operate a disposal site without using a weighbridge went through an one-on-one training, follow-up sessions, trial run and now continue on the recording of the amount of Municipal Solid Waste (MSW) collected and disposed using a modified log sheet. The log sheet includes information on waste types, waste sources, collection areas, name of clients, name of contractors, vehicle specifications and its loading capacity, estimation of garbage filling rate of open trucks (%). The results of data analysis were shared during the workshop, particularly the total number of collection vehicles and the total collected MSW in volume by waste source, waste type and month.

The quantitative data collection work supports Fiji's project output 1 on the development, implementation, and monitoring of Solid Waste Management Masterplan of municipal councils.

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Municipal councils involved in the waste amount and composition survey in Fiji

A waste amount and composition survey (WACS) was conducted in Fiji in April 2022. This is the second WACS for Fiji carried out under the technical cooperation project. The first WACS was done in 2008.

The major objective of the survey was to obtain the current weight and composition of household wastes in both urban and rural areas sampled in the two main cities: Lautoka and Suva. The results of the survey provide updated baseline data and information on the current situation of solid waste management in the two cities. This data represents national household solid waste flows.

WACS includes: 1) pre-survey questionnaire; 2) waste collection, sorting and weighing; and 3) data analysis. The project had engaged a local environment consulting company to carry out the work.

The highlight of this exercise was the involvement of health inspectors from municipal councils during the waste segregation and weighing activity. The officers had the opportunity to sort and weigh the wastes according to its composition such as green, food waste, cardboard, papers, PET bottles, other plastic containers, diapers, glass, ceramic, steel, aluminum, textile, rubbers, and others.





WACS data is available at: Waste Composition Survey Report Final

Papua New Guinea activities

Mr. Junji Anai, JICA Expert (Co-team leader in charge of Melanesian region)

I traveled to PNG from February 14th to April 30th, 2022 (travel restrictions for COVID-19 were lifted there in April 2020). I was active in the field for the first time in two years. The main activities during my visit were technical assistance to the City of Port Moresby (National Capital District Commission (NCDC)) on the implementation of the Waste Management Plan and support to the Conservation & Environment Protection Authority (CEPA) in holding regional consultations workshop on the National Waste Management Policy. In addition, the 4th Joint Coordinating Committee (JCC) was held on April 26th. It was organized by me and Mr. Hamada, the officer in charge of our projects in PNG, and Ms. Nakamura, the officer in charge of capacity building. Below is the outline of the technical assistance that I provided during my visit.



Technical assistance to NCDC in the implementation of waste management plans

A waste flow of the NCD was prepared based on data on the amount of incoming waste obtained from the weighbridge installed at the Baruni disposal site. From this waste flow, it was confirmed that the collection rate for the amount of municipal waste generated in NCD is gradually but steadily increasing, and that the amount of illegal dumping is decreasing.

Baruni disposal site is a sanitary landfill that operates using the Fukuoka method. It was constructed by NCDC with their own funds with technical support from J-PRISM I. The two landfill plots started functioning in September 2017, and after four years of operation as of April 2022, their remaining capacity proves to be limited. Therefore, J-PRISM



Il made a decision to construct a new plot. The preliminary design drawings were prepared in Japan, and NCDC finalized tender documents based on these drawings. NCDC signed the construction contract based on these documents on 12th April 2022, and construction of the new plot will start soon.



Support in organising regional consultation workshops on the National Waste Management Policy

The fourth and final regional consultation workshop on National Waste Management Policy was held in Goroka on 16-18 March 2022. Municipalities in the highland region, industrial waste generators and hazardous waste treaters participated in the workshop, where they exchanged views and shared their experience.











The 4th JCC was held on 26th April 2022. The progress of the project was reported by CEPA, 4 Urban Local Level Governments (ULLGs), NCDC waste management officers and JICA experts respectively. There were no changes to the Project Design Matrix (PDM), but an amendment to the Plan of Operation (PO) was proposed and approved due to the extension of the project duration till the end of September 2022. In addition, the following ceremonies were held in conjunction with the JCC.

- Personal protective equipment (PPE) procured under the COVID-19 infection control measure 'Improvement of occupational health and safety of waste management workers through infectious waste control' was handed over to NCDC Mayor Mr. Frank by Mr. Koinuma, Chief Representative of the JICA PNG Office.
- Following Kokopo and Goroka, a Memorandum of Understanding for inter-city cooperation in the field of waste management between NCDC and Alotau and Lae was signed in the presence of CEPA and JICA.



On 25th of March, Japanese Ambassador to PNG Mr. Watanabe visited the Baruni disposal site at the invitation of the NCDC. From the Japanese side, embassy staff and Mr. Koinuma, chief representative of JICA PNG Office and his staff accompanied the ambassador. On the NCDC side, Governor Parkok, Acting City Manager Mr. Frank and others welcomed the ambassador, while their counterparts briefed the ambassador on the operation of the sanitary landfill site.

The ambassador's visit reaffirmed the importance of proper management of the Baruni repository for all NCDC stakeholders.

DWM assistance for Tonga volcano-tsunami disasters

Mr. Faafetai Sagapolutele, Assistant Chief Advisor, J-PRISM II

Since the occurrence of the major volcano eruption and the subsequent tsunami disaster on 15th January 2022, J-PRISM II has been supporting Tonga's disaster waste management recovery effort. In collaboration with JICA offices in Japan and Tonga, J-PRISM II coordinated the provision of the needed disaster waste support for Tonga. The first support was requested through JICA headquarters in Japan and was delivered to Tonga by one of Japan's Air Force aircrafts along with the humanitarian relief supplies from the government and people of Japan. This support provided specific equipment tools, and materials for disaster waste management purposes - 130 water blasters (electric & petrol operated), 200 wheelbarrows, 2,000 shovels, 4,000 dustproof masks, 2,500 goggles, 1000 gloves, etc. These equipment, tools and materials intended to support the management of the generated volcano ashes.

The second part of J-PRISM II assistance was provided directly to the Waste Authority Ltd (WAL) for supporting the maintenance of the government waste disposal sites to ensure sufficient spaces are available for the overwhelming generated disaster waste. About 16 full drums of diesel were provided to WAL. In addition, J-PRISM II coordinated an online donation initiative through the Regional Disaster Waste Technical Working Group Facebook page, which raised 1,800 reusable masks. These masks were given to the Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC) and WAL to support the staff and workers who are directly involved with the ongoing disaster waste management operations.







Public consultation on User Pay System in Samoa

Mr. Hiroshi Tsuruta, JICA Expert



Feasibility study on user pay system is one of country outputs in Samoa under the J-PRISM II. Since March 2019, the project conducted data collection, study tour to Vanuatu, Tonga and Fiji and the steering committee meeting. Due to the outbreak of COVID-19, the next activity - public consultation - was postponed until 2022 when it finally took place in Samoa (3 – 20 May). The consultation was an important opportunity for the Ministry of Natural Resources and Environment (MNRE) to obtain feedback from the community on the initiative.

In consultation with an Internal Affairs Division of the Ministry of Women, Community and Social Development (MWCSD), considering the situation with COVID-19 and restrictions on large gatherings, public consultation was planned to be conducted by distributing questionnaire trough village mayors. Three teams were formed to run the survey, distribution, explanation, collection and follow-up of the questionnaires.



As a result, 677 forms were collected from the whole country with a collection rate of 84 percent that indicates a high interest of the community in the initiative. The feedback indicates both positive and negative aspects on the initiative as well as current issues in waste management and collection service for the community.

The results were presented and discussed during the Steering Committee Meeting on User Pay System on 22nd June 2022. The meeting was attended by representatives of government ministries, agencies and associations related to waste management. There was a very active discussion, and based on it, recommendations and the future direction of the user pay system will be determined.

The country activity under J-PRISM II will be completed by the end of September 2022, but it is expected that the discussion and implementation of user pay initiative in Samoa will continue.

Scholarship in Japan

Ms. Bhavana Sanele Ta'avilli, one of J-PRIMS II's counterparts who works as a waste planning and policy officer at MNRE, has received the scholar-ship under the "Clean Cities Scholarship Program" through JICA.

"I would like to convey my sincere gratitude to JICA and Toyo University for this extremely useful and essential opportunity to further enhance and develop myself in becoming an ambassador and an asset to the development of Waste Management in Samoa.

It is indeed a dream come true and a great pleasure, being the first recipient of this scholarship under the JICA KCCP Long-Term Training "Creating Leaders for Clean Cities" Master's Program. As a young determined individual from the waste section of the En-



vironment and Conservation Division. This is an opportunity to motivate us, waste champions to look into ways to minimize, mitigate and combat impacts of waste on the environment and people.

Waste is a disaster! An obstacle to developments and a serious issue that everyone needs to prioritize, as it is everyone's responsibility. I believe that, our people needs to consider changing their old habits, inconsiderate lifestyle and mindset so that we could achieve the overall functional targets and sustainable development goals for waste management.

This achievement will empower and motivate our younger generations to start practicing proper waste management actions for a sustainable future. Thank You." - Ms. Sanele said.

Last trip of JICA experts to Palau: the 5th JCC meeting in the Micronesia region

Ms. Misa Oishi, JICA Expert

While it is still difficult to enter countries in the Micronesian region, JICA experts were finally able to travel to Palau and hold the fifth, and the last, JCC meeting of the J-PRISM II. The meeting took place in Palau on June 3rd 2022 in a hybrid mode and was attended by 55 participants. Amongst them were officials of Palau, as well as officials of the Federated States of Micronesia (FSM) and the Republic of the Marshall Islands (RMI) who attended the meeting virtually, together with the representatives of other donor organizations.



Fifth JCC was publicized on Facebook page of JICA Palau Office.

Owing to the tireless efforts, strong sense of responsibility, and firm commitment of all who were in charge, the Project has brought about a variety of positive results. Few examples that represent this success include the introduction of the inter-state collection system (ISCS) in Babeldaob (Palau), the inter-municipal collection system in Kosrae (FSM), and the introduction of a beverage container deposit system in RMI. Such outstanding achievements were highlighted and presented by the counterpart officials from Palau, FSM and RMI at the final JCC meeting. The expert team was greatly im-

pressed by the achievements made so far

and expressed their gratitude for being involved in this Project.

The Monitoring of Inter-state Collection System in Babeldaob (Palau)

The expert team had two tasks to complete during their visit to Palau: to organize the fifth JCC meeting, as described above, and to monitor the progress of the inter-state collection system in Babeldaob. The Bureau of Public Works of Palau (BPW) took the lead in introducing the new collection system in Babeldaob Island along with the new national landfill site in Aimeliik. As seen on the maps below, collection routes were clearly extended, and it was confirmed that the collection area was expanded. Data from the weighbridges that were installed at the new landfill site also showed that all the waste discharged by the residents of Babeldaob Island was getting collected. The successful inauguration of ISCS and its continued operation are results of the ongoing effort of many involved, including BPW officials, state officials from the 10 states of Babeldaob, and staff from the private companies responsible for the collection. Their effort is greatly appreciated.





Colored routes (=collection routes) are clearly extended and state open dumps (black dots) are closed down.

Plastics extruder machine installation and operation training in Samoa

Dr. Yoko Onuma, JICA Expert









JICA/J-PRISM conducted an online training on the installation and operation of plastic extruder machine. The training took place on 4-7 July 2022 connecting Samoa and Japanese extruder manufacturer. The training was successfully carried out with the participation of MNRE's Waste Management Unit and SRWMA, at the SRWMA recycling facility in Tafaigata.

Plastic extrusion system includes a screw in a cylinder. The heating device heats the plastic in the cylinder to raises the heat to the required temperature. Under the action of the heating system and the screw, the waste plastic forms a uniform melt and moves forward under the push of the screw.

This machine is used for processing waste plastic including pellets by molding and cooling it into various shapes. Pellets are the raw material for the manufacture of all recycled plastic products; they are shipped to the manufacturing plants and redissolved before being molded into the final plastic product. Based on that, it is expected that the "Made in Samoa pellets" will be sold to plastic recyclers and buyers in the international market.

On the first day of the training participants worked with PET bottles as a raw material, and on the second day they moved on to ABS plastic of the indoor unit of the air conditioner. It was crushed in to 10 mm pieces with a crusher, and then 5-10mm size pellets were manufactured successfully with the extruder.

On the third day of the training the participants learned how to clean the extruder and how to perform daily/periodical maintenance. On the final day of the training trainees learnt how to change the die of the extruder (mold for molding) and tried to manufacture bricks with PS plastic of the indoor unit of the air conditioner. As a result, the plastic cooled in the mold, shrunk and stuck to the mold, and could not be removed from the mold after it had cooled completely.

This training is an important step in trial and error process with the overarching goal of improving the plastic recycling, molding know-how, recycled plastic product development in Samoa. J-PRISM will continue implementing this pilot project in Samoa in collaboration MNRE, SRWMA and SPREP till December 2022. Stay tuned!

Newly published J-PRISM II documents and upcoming events

-PRISMII



















RMI



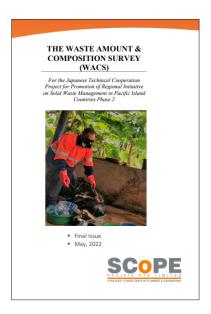






Waste Audit/Baseline Survey During J-PRISM II

Fiji (Suva & Lautoka)



Waste Amount and Composition Survey Report, May 2022

Upcoming events

13th September 2022, The 5th Regional Steering Committee Meeting (14th September 2022, Technical Session)

Website: https://www.sprep.org/j-prism-2/home

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