



Good Practices on Solid Waste Management throughout the FSM

"Managing Waste is Everyone's Business"

FSM Department of Environment, Climate Change, and Emergency Management in collaboration with State EPAs/KIRMA & PW/Transportation & Infrastructure and J-PRISM



Highlights of 2017-2019

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J-PRISM in Micronesia

The need to address proper management of increased amount of waste in today's society should not be taken lightly as it has become one of the issues to tackle. Throughout the FSM, the four states continue to tackle waste management issues through policy development, awareness campaigns, landfill management, collection and disposal systems, and recycling efforts. In the past, our ancestors did not produce much waste. In fact, the waste produced then was organic such as coconut woven baskets, banana leaves, and taro leaves which naturally withered away. However, today people have been throwing away more waste than ever before. Our current lifestyle of living has changed which has led to the use of non-refillable products and an increase in packaging. In fact, the amount of non-biodegradable waste generated has skyrocketed since the advent of modern goods and services. With this, FSM has responded to the need to address waste management by collaborating with its regional partner, JICA. Through JICA, a five year project was implemented and its purpose was to enhance sustainable solid waste management. The project was called "The Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in the Pacific Island Countries" or JPRISM for short. The first phase of JPRISM was called JPRISM 1 and it ran from 2011-2016; phase II of JPRISM is in progress and will run until 2022.

The Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in the Pacific Island Countries Phase II was launched in 2017. JPRISM II is a regional project that will run for five years from 2017 to 2022 which will target "Human and Institutional Capacity base for Sustainable Solid Waste Management" in the Pacific Region through the implementation of the Cleaner Pacific 2025 Strategy.

Birth of JPRISM

In the year 2000, JICA began efforts assisting Pacific Island Countries in regards to solid waste management through collaboration with the Secretariat of the Pacific Regional Environment Program (SPREP). This was an outcome of the Government of Japan's commitment to assist in waste management efforts.

Hence, the birth of a JICA/SPREP Solid Waste Initiative was implemented through various activities which included the following:

- 2000- JICA Experts were assigned to SPREP
- 2001-2007 - Various Regional SWM Trainings were conducted in Okinawa and Samoa
- 2002-2005 -Samoa's dumpsite was rehabilitated
- 2005-2009 -A Regional SWM Strategy was developed and implemented
- 2005-2008 -Bi-lateral technical cooperation Project was implemented in Palau
- 2006-2008 -Bi-lateral technical cooperation Project was implemented in Vanuatu
- 2008-2011 -Bilateral technical cooperation Project was implemented in Fiji
- 2011-2016 -JPRISM I was implemented in 11 countries including **FSM**
- 2017-2022 -JPRISM II currently under implementation in 9 countries including **FSM**

Outline of the Project	PHASE 1	PHASE 2
Project Title	JPRISM 1	JPRISM II
Donor Agency	JICA	JICA
Partner Organization	SPREP	SPREP
Period	February 2011 -February 2016	February 2017- February 2020
Budget	940 million Yen (US: 11 million)	
Member Countries	FSM, RMI, Kiribati, Fiji, Palau, Papua New Guinea, Samoa, Solomon, Tonga, Tuvalu, and Vanuatu	FSM, RMI, Fiji, Palau, Papua New Guinea, Samoa, Solomon, Tonga, and Vanuatu
Beneficiary Countries	Cook Island, Nauru, Niue	

Overview of Solid Waste Management through “Waste Flows” in the FSM

States/Areas	Yap	Chuuk	Pohnpei	Kosrae
Waste generation by source	65% of waste generated is from household, while 35% is generated from other sources— there is an emphasis on managing household waste	63.5% of waste generated is from household, while 36.5% is generated from other sources	64.6% of waste generated is from household, while 35.4% is generated from other sources	69.6% of waste generated is from household, while 30.4% is generated from other sources
3R	20.6% of generated waste is recycled on site	20.2% of generated waste is recycled on site	25.3% is of generated waste is recycled on site; 0.7% of generated waste is aluminum cans.	23.6% of generated waste is recycled on site.
Waste Collection	13.7% of the generated waste is collected by a private company contracted by Public Works	28% of waste generated is collected by DPWT	13.3% of waste generated is collected by paid collection services of local governments, while 9.6% of waste generated is collected by private companies	16.6% of waste generated is collected by municipal collection service
Final Disposal	23% of incoming waste to public landfill is brought by collectors, while 77% is brought directly by households and businesses	48% of incoming waste is collected by DPWT, while 52% is brought directly from households and businesses	46% of incoming waste disposed at public landfill is collected by local government and private operator, while 54% is brought directly by households and businesses	29.3% of incoming waste to the public landfill is collected by municipal collection services, while 70.7% is brought directly from households and businesses

**Source: State Solid Waste Management Strategies*

**A Message from the
Secretary, Department of Environment, Climate Change, and Emergency Management
Honorable Andrew R. Yatilman
(Project Director-FSM)**



This third edition of the "Good Practices booklet" which covers the years 2017-2019 focuses on the good practices demonstrated by each of the four states in relation to the five components of the J-PRISM project. These five components are a) Policy, b) Awareness, c) Landfill Management, d) Collection and Disposal, and e) Recycling.

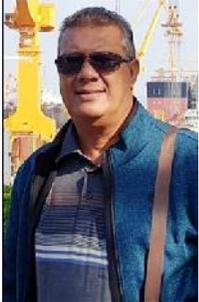
As usual, the National Government stands in collaboration with its regional partner in waste management, JICA, to assist the states in their efforts to address waste management in the FSM, as waste management activities are primarily implemented at the state level.

**A Message from the
Resident Representative of the JICA-Micronesia Office
Mr. Shinji Shibata**



As the JICA-Micronesia Resident Representative from 2016-2020, I was fortunate to have worked with national and state government and non-government counterparts involved in the area of waste management throughout the FSM. Our Volunteers and J-PRISM experts have worked along- side them and have achieved the outputs set forth through the JPRISM project. The outputs that have been achieved throughout the four FSM states have led the states to consider cost efficient and sustainable approaches to manage waste. As I depart FSM, I wish to congratulate each state for having achieved good practices in solid waste management whether in the area of recycling, disposal, or landfill management.

State Environmental Protection Agencies/KIRMA and Public Works/Transportation and Infrastructure

<p>State of Yap <i>EPA Director -Ms Christina Fillmed</i></p> 	<p>State of Chuuk <i>EPA Acting Director-Mr. Jason Poll</i></p> 
<p>State of Pohnpei <i>EPA Director-Mr. Henry Susaia</i></p> 	<p>State of Kosrae <i>KIRMA Director -Mr. Blair Charley</i></p> 
<p>State of Yap <i>DPWT Acting Director-Mr. Theo Thinnifel</i></p> 	<p>State of Chuuk <i>Public Works Director-Mr. Tosiwo Nakayama, Jr.</i></p> 
<p>State of Pohnpei <i>T&I Administrator-Mr. John Adolf</i></p> 	<p>State of Kosrae <i>Public Works Director-Mr. Hairom Livaie</i></p> 

FSM DECEM and JPRISM II/JICA

FSM DECEM

Mrs. Cynthia Ehmes

**Assistant Secretary, Division of
Environment and Sustainable
Development**

Project Assistant Director -FSM



JICA

Ms. Emy Teshima

Project Formulation Advisor



J-PRISM II: Team Leader



Ichiro Kono

Project Team Members/Consultant/DECEM Waste Management unit

 Misa Oishi	 Koji Kusunoki	 Shinsuke Okamoto	 Ai Akami	 Patti Pedrus, DECEM	 Natasha Nakasone, DECEM	 Alice Lenney, Consultant for JICA
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Highlights of the year 2017

The launch of the JPRISM II Project took place on September 27, 2017. A Project management unit was established with a Coordinator and the induction of experts for the three sub regions of Micronesia, Melanesia, and Polynesia. In the FSM, Mr. Kono and his team were dispatched as J-PRISM experts for FSM. Their roles included providing technical assistance to the four states in the relevant project components: Policy, Awareness, Landfill Management, Collection and Disposal, and Recycling. Prior to the commencement of the project, it was agreed among the four FSM states and JICA that the relevant components that needed to be addressed during the phase II of the JPRISM project included 1) the revision/update of the Solid Waste Management Strategies; 2) Expansion of Collection and Disposal systems; 3) Recycling, and 4) Landfill Management.

Furthermore, during the month of September on Pohnpei, Federated States of Micronesia, State counterparts such as the Directors of EPA/KIRMA and Transportation/Public Works were brought together to discuss their proposed activities in Solid Waste Management and the results of the recent Waste Survey that was conducted in all the states.



*JCC Meeting: September 28, 2017

RECYCLING EFFORTS in Yap State

The on-going collaborative work between Yap State EPA and the Recycling Operator, Island Paradise Company has engaged the community to support and participate in their efforts to keep Yap island clean. This is an example of good practices in the area of collaboration and engagement among the relevant stakeholders.



**Yap State Recycling Program
Dec 2017 Info Sheet**

- Yap State Recycling Program is operated by local, private company Island Paradise Metal Company since 2007;
- The Recycling Center is located at the end of the Colonia Peninsula, passed YFA located at the former YFTI building;
- On average, Yap State recycles 2.8million total containers every year for a total yearly refund of \$162,000.00;
- This equals to 233,000 containers recycled every month for an average total monthly refund at \$13,500.00.

And It's Started...  



We've already begun to see an increase in recyclables turned in to the Recycling Center starting in November. The last week of November saw total refunds paid out for the week at est \$4,500.00. This is a little over 2x the average weekly refund total of est \$2,000.00.

Yap EPA and Recycling Operator, Island Paradise Company, asks everyone for their patience as we enter this busy season and thank you for your continued support and participation in our Program in helping to keep our island home clean! #Kammagar #Hosa Hachigchig #Thank You!

*Yap State Recycling Program: Source: Yap State EPA

Hajioji Project in Chuuk State

As part of efforts to improve solid waste management in the state of Chuuk, a project entitled Hajioji Project was developed. This project was named after Hajioji City in Tokyo, Japan where the amount of waste generation was reported to be the least among cities in Japan.

In collaboration with the JPRISM Project, the Hajioji project was made possible through a JICA partnership program to support grass-root activities such as environmental education and garbage collection services for residential areas.

The purpose of the project included the following objectives:

- 1) To raise awareness and promote the concept of the 2R (Reduce and Reuse) principle
- 2) To consolidate the waste collection system
- 3) To promote organic waste recycling scheme to communities

Chuuk participants from the relevant departments and offices participated in a week long activity in Japan where they engaged first-hand in waste collection and waste composition activities. This engagement allowed them to experience Hajioji City's active waste management efforts. After their training, they returned to Chuuk and engaged the communities in 2R campaigns, collection disposal activities, and a "No Plastic Day" event. *Thanks to former JICA Volunteer Kenichi Maikawa.* This project is certainly an example of a good practice of waste management efforts.



*Source: Kenichi Maekawa: (Chuukese woman with a handmade bag)

Highlights of the year 2018

In the year 2018, JPRISM II activities in the Federated States of Micronesia centered on State Joint Coordinating Committee (JCC) meetings in Yap, Chuuk, Pohnpei, and Kosrae respectively. Each state conducted its own meeting where presentations on the progress of activities were delivered to experts and relevant stakeholders in waste management. The following table highlights their outcomes of activities.

POLICY

STATE	<i>New SWMS and its action prepared in line with the Cleaner Pacific are developed</i>	<i>Good Practices of Solid Waste Management are promoted in country and the region</i>	<i>Waste Collection is improved</i>
<i>Yap State</i>	Revised version published in 2018	In progress	Waste Collection system has improved; Container Deposit Legislation mechanism was explored
<i>Chuuk State</i>	Under Revision	In progress	"Horn Collection" system of 2015 is on-going
<i>Pohnpei State</i>	Under Revision	In progress	Waste Collection systems in municipalities
<i>Kosrae State</i>	Revised version published in 2018	In progress	Waste Collection Plan was specified from which arose an Inter Municipal collection system (IMCS)

STATE SWM STRATEGIES

[\[https://www.sprep.org/j-prism-2/home\]](https://www.sprep.org/j-prism-2/home)



*Source: JPRISM II



State Solid Waste Management Strategies (SSWMS) and action plans were formulated through the following steps.

Step 1: Understanding the current SWM situation qualitatively as well as quantitatively

SWM officials of each state along with J-PRISM II experts conducted a series of SWM baseline surveys, such as waste amount and composition survey (WACS), incoming waste amount survey at landfill sites, time and motion survey, public opinion survey, etc., in 2017. Followed by the surveys, SWM situations were summarized in the Waste Flows of each state which were understood technically as well as quantitatively. Finally, the critical SWM issues and challenges each state faced were identified and shared among key stakeholders.

Step 2: Formulating strategies to tackle SWM issues and challenges identified

Based on the common understanding and perception of urgent waste issues and challenges, the key stakeholders formulated SSWMSs in each state. All of SSWMSs were endorsed by the respective governors. (PDF files of all SSWMSs are available on the SPREP Web site.)

Highlights of the Year 2019

POLICY:

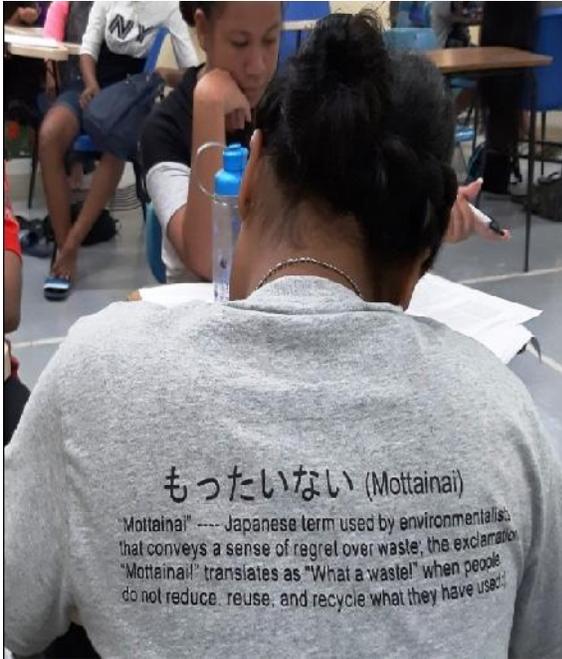
State	<i>Description of Progress made</i>	<i>Status</i>
Yap	Yap State Solid Waste Management Strategy and Action Plan	Revised and Endorsed as of 2018
Chuuk	Chuuk State Solid Waste Management Strategy and Action Plan	Revised and Endorsed as of 2019
Pohnpei	Pohnpei State Solid Waste Management Strategy and Action Plan	Revised and Endorsed as of 2019
Kosrae	Kosrae State Solid Waste Management Strategy and Action Plan	Revised and Endorsed as of 2018
National	FSM National Solid Waste Management Strategy and Action Plan	Up for Revision in 2020

AWARENESS:

State	Description of Progress made	Status
Yap	-3Rs Awareness Campaigns in schools and communities -Recycling efforts campaign	On-going On-going
Chuuk	2Rs Awareness Campaigns in schools and communities through Litterbug campaign and Hajioji Project efforts; No Plastic Day event	On-going
Pohnpei	-Environment Clubs at certain public schools established with a focus on 3Rs -Littering Awareness Campaigns	On-going since 2014
Kosrae	-3Rs Awareness Campaigns in schools and communities; regular landfill field trips	On-going
National	Through membership with the JICA ALUMNAE ASSOCIATION (JAA), the national government has participated in collaboration with state counterparts on implementing awareness campaigns on waste management concepts	On-going

The JICA ALUMANE ASSOCIATION (JAA) is a product of JICA's efforts to address waste management issues through engaging national, state governments and non-government employees to participate in trainings in Japan, and practice what they have learned through community involvement activities after they return. Each state has its own JAA Chapter with elected officers and a national JAA Chapter as overseer. State EPAs/KIRMA are involved in the chapters.





*The Japanese term "Mottainai" for "What a waste!" was shared with high school students as part of JAA's awareness efforts



Yap JAA member and Recycler Jesse Faimwau presents to participants about the importance of segregation and recycling



*Pohnpei State's "Do not Litter" sign



*Waste Segregation



***Group photo- JAA, ETS students and Former Ambassador to FSM Roiie and Mrs. Roiie (middle)**

COLLECTION AND DISPOSAL:

State	Description	Status
Yap	Expansion of collection areas	In progress
Chuuk	Regular municipal collection activities with "Horn" system	On-going
Pohnpei	Regular municipal collection services	On-going
Kosrae	Inter municipal collection system is established	In progress

Japan continues to support FSM's waste management activities. Recently, Japan **donated two new compactor trucks to Chuuk State**, which has allowed the "Horn" system to progress.



What is an Inter-Municipal Collection System? In Kosrae State, the Department of Transportation and Infrastructure in collaboration with the Kosrae Island Resources Management Agency and JPRISM has prioritized the need for a coordinated collection system around the island with four municipalities sharing a compactor truck. Residents are alerted with the "sound of music" from the compactor truck to bring their wheelie bins to the road side for pick-up. What an ingenious idea!



* KIRMA Director Charley explains the system



*IMCS in ACTION

LANDFILL MANAGEMENT

State	Type	Description of Progress made	Status
Yap	Public Landfill with Fukuoka Method applications	Maintenance of Landfill is in place with regulations to properly manage dumpsite.	On-going
Chuuk	Municipal Solid Waste Landfill site	In the process of re-constructing former dumpsite with some Fukuoka Method applications	On-going
Pohnpei	Rehabilitated Dumpsite Landfill site	Rehabilitated dumpsite has expanded its land , and is in the process of adding another cell	On-going
Kosrae	Public Landfill site with Fukuoka Method applications	Maintenance of Landfill is still intact (Fukuoka Method applications)	On-going
National		Support States efforts in managing landfills/dumpsites through leachate management guidelines/testing items procurement	On-going

RECYCLING:

State	Description	Status
Yap	CDL Activities	On-going
Chuuk	Container Deposit Legislation (CDL) revisited and submitted to legislature	In progress
Pohnpei	Amendment to add other collectibles submitted to legislature; Recycling shed under construction	In progress
Kosrae	CDL Activities	On-going

Yap Recycling Program continues to take in recyclables



2019 Christmas & New Year Holiday Schedule Yap Recycling Program



YAP EPA, IN COLLABORATION WITH RECYCLING OPERATOR ISLAND PARADISE CO., WISHES TO INFORM THE GENERAL PUBLIC OF THE RECYCLING PROGRAM SCHEDULE FOR 2019 CHRISTMAS AND NEW YEARS' HOLIDAY SEASON.

ISLAND PARADISE CO. WILL CONTINUE TO TAKE IN RECYCLABLES FOLLOWING THE NORMAL SCHEDULE OF WEDNESDAY THRU FRIDAY UNTIL DECEMBER 20, 2019. ISLAND PARADISE CO. WILL OPEN ADDITIONAL, FOLLOWING DAYS OF MONDAY AND TUES, DEC 23 & 24, 2019. THE RECYCLING PROGRAM WILL THEN CLOSE OPERATIONS BEGINNING CHRISTMAS DAY DEC 25, 2019 & RESUME OPERATIONS ON WED JAN 8, 2020 FOLLOWING NORMAL BUSINESS DAYS AND HOURS OF OPERATION, WED THRU FRI FROM 8:30AM TO 4:00PM.

THE PUBLIC IS ENCOURAGED TO BRING IN RECYCLABLES SOONER RATHER THAN LATER AS WE HEAD INTO THE BUSY HOLIDAY SEASON, AS WELL AS IN SUPPORT OF ISLAND-WIDE CLEANLINESS DUE TO CURRENT HEALTH OUTBREAKS. PLEASE BE REMINDED TO ENSURE THAT RECYCLABLES BROUGHT IN ARE CLEAN AND SEGREGATED TO ALLOW FOR QUICK PROCESSING. SHOULD YOU HAVE ANY QUESTIONS, PLEASE CALL YAP EPA AT 350-2113/2317 OR ISLAND PARADISE COMPANY AT 350-8272 OR 350-3483. WE THANK YOU FOR YOUR CONTINUED SUPPORT OF OUR STATE RECYCLING PROGRAM AND WISH EVERYONE A SAFE AND HAPPY HOLIDAY SEASON.

Reminder: Yap Recycling Program Categories and Other Categories



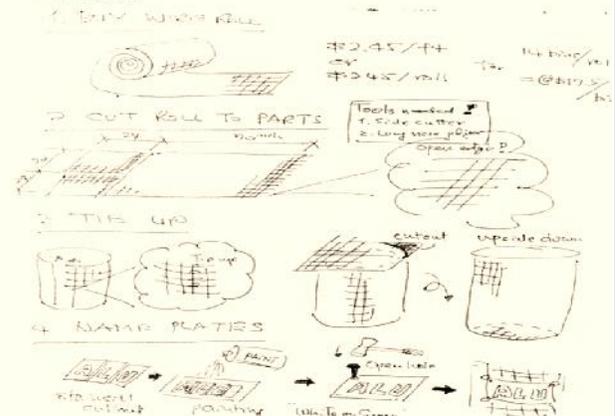
Source: Yap State EPA

Although the outer islands are not part of the scope of the J-PRISM activities, they are indirectly supported by JICA's efforts. A continuing good practice that stemmed from JICA's Volunteer Program efforts was the development and usage of recycling bins which were locally made by EPAs and the communities through JICA Volunteer assistance. The purpose of the recycling bins was to promote segregation in small village settings. Through the AF Project, village bins developed through the JICA Volunteer program were recognized as part of clean and beautification efforts. The bins are made of tie wire, and were connected using simple tools. This bin idea was first introduced in the 2015 Good Practices Booklet. The picture below was taken on Nukuoro island through an Adaptation Project activity showing cleanliness after installing bins in several areas of the island villages.



The wire bin: How do you make one?

1. Buy a roll of wire
2. Cut the wire roll into several parts by 24 inches by height and 70 inches by width
3. Tie ends together



Way Forward

The Federated States of Micronesia National Government in collaboration with its regional partner, JICA, continue to assist the states in their efforts to address waste management. It has been relevant to work alongside JICA as one of its objectives is to provide technical assistance to FSM in the area of Waste Management.

The four states have endorsed their Solid Waste Management Plans, and have begun their implementations. They continue to work in collaboration with the J-PRISM experts to improve their waste management systems, and move towards sustainability.

It is hoped that efforts to address waste management issues in the area of Policy, Awareness, Landfill Management, Collection & Disposal systems, and Recycling continue with more good practices efforts, so that future generations will benefit and continue "to make these islands, another promise land."

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