

Results of the 1st Regional Solid Waste Management Monitoring

1. Purpose

Based on the Regional Output 1 activity of J-PRISM II "Monitoring mechanism for solid waste management in line with Cleaner Pacific 2025 is strengthened", in February 2020, the J-PRISM II Project Office sent out the regional monitoring form to the 9 member countries (Palau, Micronesia, Marshall Islands, Papua New Guinea, Solomon Islands, Fiji, Vanuatu, Tonga, and Samoa) to collect the municipal solid waste management data and information at the national level. The objectives were as follows.

1. To enhance the sustainable data management system of municipal solid waste in each country by measuring the performance indicators and targets for "Cleaner Pacific 2025".
2. To set the 14 performance indicators of JPRISM II based on the activities of J-PRISM II in the 9 Pacific island countries to support and assess the achievement level of CP2025 targets in each country.
3. To conduct higher needs Trainings and Workshops organized by JPRISM II Regional Project Office through identifying good practices and current challenges based on the municipal solid waste management data entered in this monitoring sheet submitted by each country.

2. Number of Responses

- Monitoring method: Monitoring Form sent by email
- Monitoring Term: February to June 2020

There were three countries that responded by sending in their monitoring forms; Samoa, FSM, and Palau. During the implementation of this monitoring activity which started in February, the COVID-19 was widespread worldwide, and travel and behavioral restrictions began in the PICs, so we reminded the remaining member countries that did not respond to this monitoring form by email and waited until the end of June 2020. Instead of waiting for the remaining countries to respond, we analyzed the current situation based on the valuable responses obtained from the above 3 countries.

We appreciate the great support and commitment from Samoa, FSM, and Palau.

3 Key Monitoring Results

The respondents provided the data and information for the 14 Performance Indicators established by JPRISM II in (Table 1). Some of the indicators were designed to respond to the Performance Indicators determined in the Cleaner Pacific 2025. This document first summarizes the results of the three countries for the Indicator No.1 'Municipal Solid Waste Management Data Collection, Analysis, and Dissemination', which indicate each country's current national reporting system of. Then the results for the Indicators No. 10 to 14 are also put in the table; Per Capita Generation of Municipal Solid Waste (MSW), MSW Capture

Rate, MSW Collection Coverage, MSW Recycling Rate, and MSW Final Disposal Rate, which quantitatively explain the current waste management flow.

This document also noted the areas that are in high demand for trainings in the future. The answers were provided by the countries alongside the response to the 1st Regional Monitoring Form.

Table 1: 14 Performance Indicators of JPRISM2^{1,2}

No. ^{1,2}	Performance Indicators of JPRISM2 ³	Performance Indicators of CP2025 ^{4,5}
1 ^{4,5}	Municipal Solid Waste Management Data Collection, Analysis, and Dissemination ^{4,5}	4 ⁵
2 ^{4,5}	National Strategy and/or Action Plan ^{4,5}	4 ⁵
3 ^{4,5}	Container Deposit Legislation ^{4,5}	✓ 4 ⁵
4 ^{4,5}	Single Use Plastic Banning ^{4,5}	4 ⁵
5 ^{4,5}	Extended Producer Responsibility Legislation (Used oil and E-waste) ^{4,5}	✓ 4 ⁵
6 ^{4,5}	User-pays System for Waste Collection ^{4,5}	✓ 4 ⁵
7 ^{4,5}	Waste Amount and Composition Survey (Waste Audit) ^{4,5}	4 ⁵
8 ^{4,5}	Private Waste Management Operator's Licensing Program ^{4,5}	4 ⁵
9 ^{4,5}	Landfill Managed in Environmentally Friendly Manner ^{4,5}	✓ 4 ⁵
10 ^{4,5}	Per Capita Generation of Municipal Solid Waste (kg/person/day) ^{4,5}	✓ 4 ⁵
11 ^{4,5}	Municipal Solid Waste Capture Rate (%) ^{4,5}	✓ 4 ⁵
12 ^{4,5}	Municipal Solid Waste Collection Coverage Rate (% of population) ^{4,5}	✓ 4 ⁵
13 ^{4,5}	Municipal Solid Waste Recycling Rate (%) ^{4,5}	✓ 4 ⁵
14 ^{4,5}	Municipal Solid Waste Final Disposal Rate (%) ^{4,5}	4 ⁵

Common indicators with CP 2025: No.3, 5, 6, 9, 10, 11, 12, 13

3.1 Results for the Performance Indicator No. 1

1) Implementation Agency for Waste Management Data Collection, Analysis and Dissemination

Implementation Agency		
Samoa	FSM	Palau
Ministry of Natural Resources and Environment	State EPAs and KIRMA	Koror State, Solid Waste Management Office

2) Data Collection Frequency

Data Type	Data Collection Frequency		
	Samoa	FSM	Palau
Per Capita Generation of Municipal Solid Waste	Once/ 4 years	Annual	Once/ 3 years
Municipal Solid Waste Capture Rate	Once/ 4 years	Annual	Once/ 3 years
Municipal Solid Waste Collection Coverage Rate	Once/ 4 years	Annual	Once/ 3 years
Municipal Solid Waste Recycling Rate	Once/ 4 years	Annual	Once/ 3 years
Municipal Solid Waste Final Disposal Rate	Once/ 4 years	Annual	Once/ 3 years
CDL Data	-	-	Annual
Waste Tires	-	-	Annual
Scrap Metal	-	-	Annual
Used Lead-Acid Batteries	-	-	Annual

3) Latest 3 Waste Audit Survey Records (As of February 2020)

Data Type	Details		
	Samoa	FSM	Palau
Latest	2017, J-PRISM	2017, J-PRISM	2019, UN Mission-APWC Consultant
Second Latest	2011, J-PRISM	2015, J-PRISM	2017, J-PRISM
Third Latest	2007, J-PRISM	2011, J-PRISM	2015, Amita Consultant-Japan

3.2 Results for the Performance Indicator No. 10-14¹

Performance Indicators	Figure 1: Municipal Solid Waste Flow
<p>No. 10: Per Capita Generation</p> <p>No. 11: Capture Rate</p> <p>No. 12: Collection Coverage Rate</p> <p>No. 13: Recycling Rate</p> <p>No. 14: Final Disposal Rate</p> <p>(The formulas are detailed in the ANNEX1.)</p>	<p>The flowchart illustrates the municipal solid waste management process. It starts with 'Generation' (10 Per Capita Generation) which splits into (1) Waste Generation from Household and (2) Waste Generation from Other than Household (Industry and Business). (1) leads to (3) Waste Discharge to public service, (4) Waste Discharge to private service and self transportation, or (6) Unmanaged Waste (no collection, illegal dump). (2) leads to (5) On-site Recycling (composting, reuse etc.) or (6). (3) leads to (7) Waste Collection by public service, which then leads to (11) Final Disposal. (4) leads to (8) Waste Collection by private service and self transportation, which leads to (10) Recycling by private sector, then (13) Recycling for the domestic market, and finally (14) Unmanaged Waste (no collection, illegal dump). (7) also leads to (9) Recycling by public service, which leads to (12) Export for recycling to overseas markets. (10) also leads to (12). (11) also leads to (12). (12) leads to (13) Recycling for the domestic market, which leads to (14). (13) also leads to (14). (14) leads to (14) Unmanaged Waste (no collection, illegal dump). The flowchart also shows 'Intermediate Treatment' and 'Recycling and Final Disposal' stages.</p>

Performance Indicator		Samoa (U=Upolu Island, S=Savaii Island)	FSM (P=Pohnpei, Y=Yap, C=Chuuk, K=Kosrae)	Palau	
				National	Local (Koror State)
10	Per Capita Generation of MSW (kg/person/day)	1.06 (U)	1.15 (P) 1.29 (Y) 0.92 (C) 1.13 (K)	2	2.6
11	MSW Capture Rate (%)	42(U)	N/A	99.6	100
12	MSW Collection Coverage Rate (%)	61(U) 68(S)	70 (P) 70 (Y) 70 (C) 100 (K)	84	100
13	MSW Recycling Rate (%)	44(U) *Aluminum can recycling rate for Household	20 (P) 20 (Y) N/A (C)	12	11.2

¹ See Annex "The 1st J-PRISM Regional Monitoring From" for the definition and calculation method of each performance indicator.

			30 (K)		
14	MSW Final Disposal Rate (%)	42(U)	40 (P) 50 (Y) 40 (C) 50 (K)	83	85.1

3.3 Capacity Development Needs Survey Results

Respondents were allowed to choose multiple topics in demand for trainings from the following options. Although all options were ticked by the two countries (Palau and FSM), Samoa highlighted some specific topics that seemed most relevant to their current/ upcoming initiatives.

Topics		Target Participants		
		Samoa	FSM	Palau
1. Basic Data Collection/Analysis				
1-1	Waste Audit for Household Waste		State EPAs/KIRMA, T&I/PW, National SWM Officer, NGOs, Relevant Municipal Government Officer (*1)	Swm national/states
1-2	Waste Audit for Industrial Waste (other than household waste)	MNRE	(same as *1)	Swm national/states
1-3	Identifying Waste Flow from the survey result	MNRE	(same as *1)	Swm national/states
1-4	National Monitoring on SWM (data collection/reporting)	MNRE	(same as *1)	Swm national
2. Policy & Regulation Development				
2-1	National SWM Strategy/ Master Plan Development		National and State Environment Officers, T&I, R&D, Health, Education, Justice, Finance (*2)	Swm national/ EQPB
2-2	State/ Local Government SWM Strategy/Master Plan Development		(same as *1)	Swm -states
2-3	Comprehensive 3R Policy Intervention	MNRE	(same as *1)	Swm national/ EQPB
2-4	Extended Producer Responsibility	MNRE	(same as *2)	Swm national/ EQPB
2-5	Plastic Ban/ Importation Regulation		(same as *1)	Swm national/ EQPB
3. Economic Instruments Design/Development				
3-1	Container Deposit System	MNRE	(same as *1)	Swm national/ EQPB
3-2	Environmental Levy	MNRE	(same as *2)	Swm national/ EQPB
3-3	User-pay for Waste Collection and Disposal		(same as *1)	Swm national/ EQPB/states
4. Waste Collection & Transportation				
4-1	Time & Motion study with/without GPS logger and analysis	MNRE	(same as *1)	Swm national/ states
4-2	Expansion/Improvement of Collection Service	MNRE	(same as *1)	Swm national/ states
4-3	Contractor Management	MNRE	(same as *1)	Swm national/ states
5. Landfill Management				
5-1	New Landfill Design/ Construction	MNRE	(same as *1)	Swm national/ states

5-1	Landfill Rehabilitation and Pollution Control	MNRE	(same as *1)	Swm national/ states
5-1	Daily Landfill Operation Improvement		(same as *1)	Swm national/ states
5-1	Data Management at Landfill	MNRE	(same as *1)	Swm national/ states
5-1	Contractor Management	MNRE	(same as *1)	Swm national/ states
6. 3R (Waste reduction, recycling, reusing)				
6-1	Organic Waste Processing (Composting)	MNRE	(same as *1) +Agriculture dep.	Swm national/ states
6-1	School/Youth Awareness Program on waste and 3R		(same as *1) +Education and Health dep.	Swm national/ states
6-1	Community Awareness Program on waste and 3R		(same as *1)	Swm national/ states
7. Disaster Waste Management				
7-1	Disaster Waste Management Planning	MNRE	(same as *1)	Swm national/ states
8. Occupational Safety & Health in SWM				
8-1	Occupational Safety & Health in SWM	MNRE, refreshers	(same as *1)	Swm national/ states
9. Facility Management				
9-1	Daily Maintenance and Inspection of Vehicles and Heavy Machineries	MNRE	(same as *1)	Swm national/ states
10. All-packaged comprehensive training				
10-1	All-Packaged Comprehensive Training on SWM (novice level for waste management officer)		(same as *1)	Swm national/ states/EQPB
10-2	All-Packaged Comprehensive Training on SWM (intermediate/ advanced)	MNRE	(same as *1)	Swm national/ states/EQPB

4. ANNEX

The 1st J-PRISM Regional Monitoring From



Version1. 2020/2/1

J-PRISM2 Regional Monitoring Form**The 1st Monitoring in 2020****J-PRISM2 Regional Project****Purpose**

J-PRISM2 starts collecting and monitoring the municipal solid waste management data ***once a year*** (**Note: Submission Deadline of this monitoring sheet is March 31, 2020**) in 9 Pacific island countries from 2020 to achieve the following objectives.

1. **To enhance national management system** of basic data on municipal solid waste in each country through measurement of **the 14 Performance Indicators of JPRISM2¹**
2. **To support and assess the achievement level of Cleaner Pacific 2025² targets** in each country
3. **To conduct higher needs trainings and workshops³** organized by JPRISM2 through identifying good practices and current challenges in each country based on the collected data.

Table 1: 14 Performance Indicators of JPRISM2

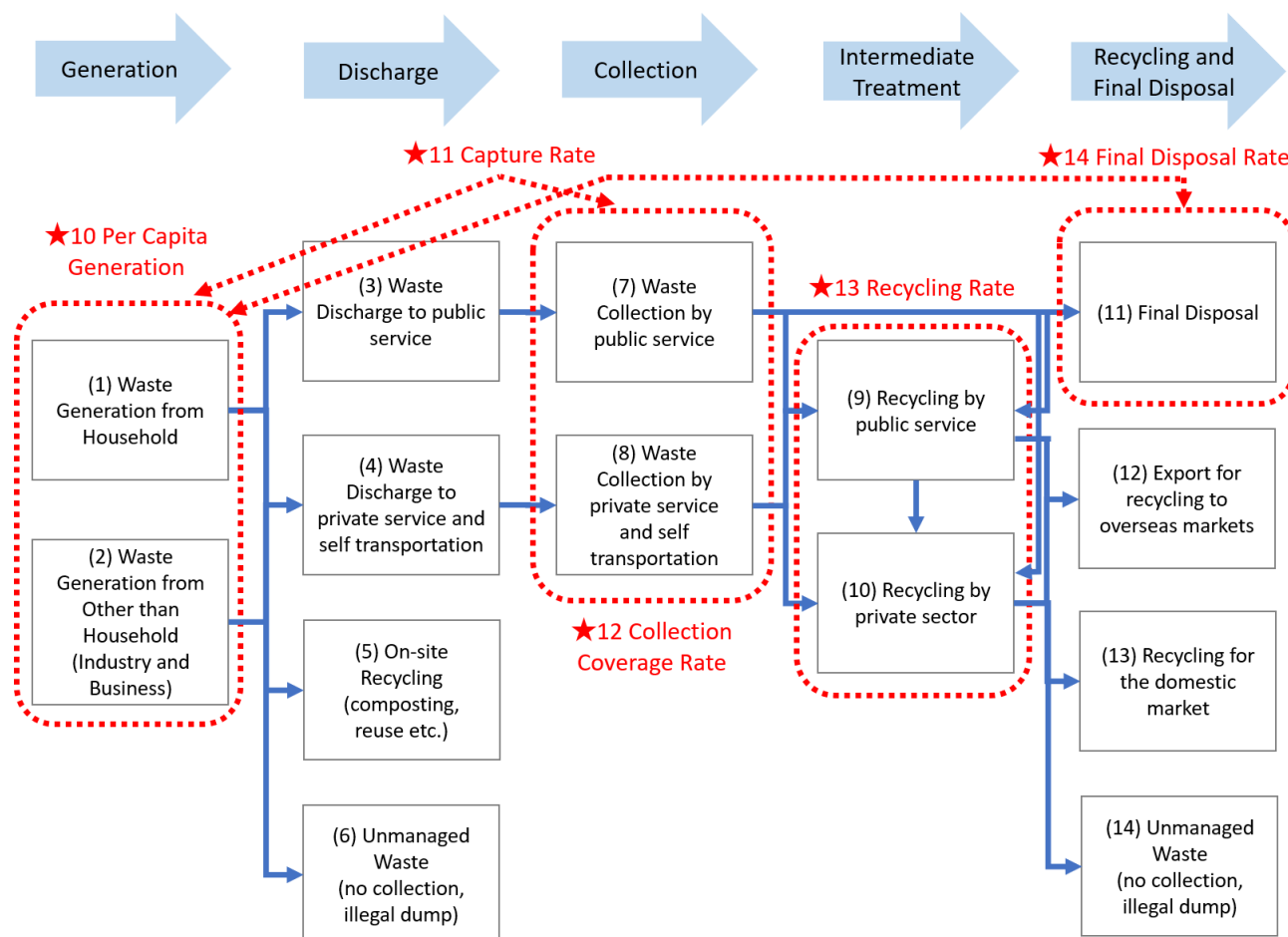
No.	Performance Indicators of JPRISM2	Performance Indicators of CP2025
1	Municipal Solid Waste Management Data Collection, Analysis, and Dissemination	
2	National Strategy and/or Action Plan	
3	Container Deposit Legislation	✓
4	Single Use Plastic Banning	
5	Extended Producer Responsibility Legislation (Used oil and E-waste)	✓
6	User-pays System for Waste Collection	✓
7	Waste Amount and Composition Survey (Waste Audit)	
8	Private Waste Management Operator's Licensing Program	
9	Landfill Managed in Environmentally Friendly Manner	✓
10	Per Capita Generation of Municipal Solid Waste (kg/person/day)	✓
11	Municipal Solid Waste Capture Rate (%)	✓
12	Municipal Solid Waste Collection Coverage Rate (% of population)	✓
13	Municipal Solid Waste Recycling Rate (%)	✓
14	Municipal Solid Waste Final Disposal Rate (%)	

¹ **Performance Indicators of JPRISM2:** J-PRISM2 Regional Project sets the 14 performance indicators based on the activities of JPRISM2 in the 9 countries to support and assess the achievement level of CP2025 targets in each country as shown in Table 1 above. <https://www.sprep.org/publications/cleaner-pacific-2025-pacific-regional-waste-and-pollution-management-strategy>

² **Performance Indicators and Targets for Cleaner Pacific 2025:** Pacific Regional Waste and Pollution Management Strategy 2016-2025 is a comprehensive long-term strategy for integrated sustainable waste management and pollution prevention and control in the Pacific Islands region until 2025. Cleaner Pacific 2025 will undergo a participative mid-term review in 2020 coordinated by SPREP, with the active involvement of Pacific island countries and territories and other stakeholders.

³ **Trainings and workshops organized by JPRISM2 Regional Project Office:** Trainings and workshops conducted using the budget of the JPRISM2 regional project office based on the needs of each country

Figure 1: Municipal Solid Waste Flow



Indicator 10: “Per Capita Generation of Municipal Solid Waste” (kg/person/day)

- How to calculate
 1. Conduct solid waste amount and composition Surveys (= waste audits) for Household and other than household (Industry and Business) in the Performance Indicator 7.
 2. Based on the above surveys, measure the total number of kilograms collected for certain number of days X. Divide this amount by number of days (X) to get rate per day and divide by the number of residents in the households to get rate per day per person
 3. Indicator 10: Per Capita Generation of Municipal Solid Waste(kg/person/day) = (waste generated from **household** per person per day) + (waste generated from **other than household** per person per day)
- Waste amount and composition surveys method
See the Practical Guidebook page 9 developed by J-PRISM member countries:
https://www.sprep.org/attachments/j-prism-2/SWM_GUIDEBOOK_.pdf
- Related SDGs Indicator
[Indicator 11.6.1: Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities.]
Recommendation: For countries and cities that doesn't have a data of Municipal Solid Waste Generation

Per Capita, it is suggested that a household survey to identify daily waste generation should be done, at least two times a year in different seasons. For more details, see the following link;

<https://unstats.un.org/sdgs/metadata/files/Metadata-11-06-01.pdf>

Indicator 11: “Municipal Solid Waste Capture Rate” (%)

- Capture Rate (%) = [(7) Waste Collection by public service + (8) Waste Collection by private service and self-transportation] ÷ [(1) Waste Generation from Household + (2) Waste Generation from other than household (Industry and Business)] × 100
- Capture Rate (%) = Collected Amount / Generated Amount × 100

Indicator 12: “Municipal Solid Waste Collection Coverage Rate” (% of population)

- Collection Coverage Rate (%) = [Number of people in the area where (7) waste is collected **by public service**] ÷ [Total Number of people in the area] × 100

Indicator 13: “Municipal Solid Waste Recycling Rate” (%)

- Recycling Rate (%) = [(9) Recycling by public service + (10) Recycling by private sector] ÷ [(3) Waste Discharge to public service+ (4) Waste Discharge by private service and self-transportation] × 100
- Cleaner Pacific 2025 calculation concept
Recycling Rate (%) = [Amount of Recycled, Reused, Returned] ÷ Amount Recyclable* × 100
* “Amount Recyclable” indicates materials that can be recycled in your country or export destination, such as Used Aluminum can, PET bottle, Glass, Paper, Plastic, Metal etc..
- Related SDGs Indicator

[Indicator 12.5.1: National recycling rate, tons of material recycled]

Note that No data for this indicator is currently available and its methodology is still under development as of August 2018. For more details and update, see the following link;

<https://unstats.un.org/sdgs/tierIII-indicators/files/Tier3-12-05-01.pdf>

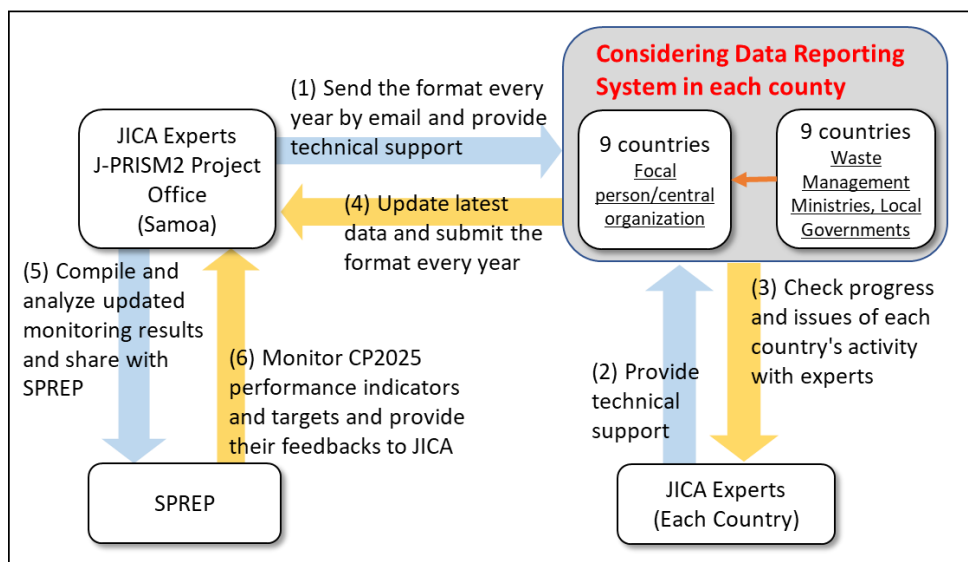
Indicator 14: “Municipal Solid Waste Final Disposal Rate” (%)

- Final Disposal Rate (%) = [(11) Final Disposal] ÷ [(1) Waste Generation from Household + (2) Waste Generation from other than household (Industry and Business)] × 100

J-PRISM2 Monitoring Flow

J-PRISM2 collects and monitors the municipal solid waste management data once a year based on the following roles of each organization.

Figure 2: JPRISM2 Data Monitoring Flow



Role of each organization:

- **Focal person/central organization in each country:**
 - ✓ Data Report and Management: Ensure timely completion and proper data collection, analyze at the national level by the deadline for submitting the monitoring sheet
- **JICA JPRISM2 Experts (Each Country):**
 - ✓ Check progress and issues of each country's data collection, analyze and activities with the C/Ps
 - ✓ Collect and analyze updated monitoring data received from the C/Ps once a year
- **JICA JPRISM2 Experts (Project Office in Samoa):**
 - ✓ Send the monitoring sheet once a year to the focal person/central organization of 9 countries.
 - ✓ Collect and analyze updated monitoring data received from 9 countries once a year
 - ✓ Provide trainings on the monitoring system to the counterparts of the target countries
 - ✓ Provide feedback at regional and national level every 1 year
 - ✓ Compile and analyze updated monitoring results and share with SPREP
- **SPREP:**
 - ✓ Check and Analyze collected data by JPRISM2 and provide the feedbacks to JPRISM2
 - ✓ Review the CP2025 indicators and targets based on the collected data by JPRISM2 if necessary

Submission

Please fill out this form and submit it to the following email address by no later than 31 March 2020:

Dr. Yoko Onuma, JICA Expert (Monitoring/3R+Return), J-PRISM2 Project Office
onumayoko@outlook.com

and

Ms. Nomura Mayu, JICA Expert (SWM Training/Monitoring), J-PRISM2 Project Office
nmr.mayu@gmail.com

J-PRISM2 Regional Monitoring Form
The 1st Monitoring in 2020
[Version1. 2020/2/1]

I. Contact

Please fill out the name and detail information of a person who submit this form to JPRISM.

Name		<input type="checkbox"/> Mr./ <input type="checkbox"/> Ms.
Email Address		
Title		
Agency		
Address of Agency		
Phone Number		

II. Solid Waste Management Data

Part 1. Qualitative Indicators

Indicator1. Municipal Solid Waste Management (MSWM) Data Collection, Analysis, and Dissemination

1-1. Agency/ institution plays a role as an implementing agency for MSWM data collection/analysis/dissemination

- ☐ Same as Above Contact
☐ Another agency as follows;

Name of Agency	
Person in charge for MSWM data collection/analysis/dissemination	
Email Address	

1-2. How frequent are you supposed to collect/analyze/disseminate data?

- ☐ Yearly ☐ Once in two years ☐ Once in three years ☐ Once in five years
☐ Not regularly, but occasionally only when needed ☐ Differ depending on data

1-3. Choose all items from the following table and add any items which are supposed to be collected/analyzed/disseminated periodically. (Multiple answer allowed)

Then fill out the column "Data Source". If you answer "Differ depending on data" in question 1-2, please also fill in the column "Data Collection Frequency".

	Data	Data Source (How do you obtain the data? / Which institution is responsible to report the data?)	Data Collection Frequency
1	<input type="checkbox"/> Per Capita Generation of Municipal Solid Waste		
2	<input type="checkbox"/> Municipal Solid Waste Capture Rate		
3	<input type="checkbox"/> Municipal Solid Waste Collection Coverage Rate		
4	<input type="checkbox"/> Municipal Solid Waste Recycling Rate		
5	<input type="checkbox"/> Municipal Solid Waste Final Disposal Rate		
6	<input type="checkbox"/>		
7	<input type="checkbox"/>		

[illegible]

3-1. Name of the legislation/ regulation						
3-2. Year of enactment or amendment of the legislation/ regulation						
3-3. Year of enforcement of the legislation/ regulation						
3-4. Did J-PRISM or any other donors support in CDL activities?		<input type="checkbox"/> J-PRISM <input type="checkbox"/> Other donors ()				
3-5. Identified Issues or further challenges if any						
3-6. Target Items		Deposit per item (US\$/item)	Refund per item (US\$/item)	Collected Amount in 2019 (ton/year)	Exported Amount in 2019 (ton/year)	Countries to Export
1						
2						
3						
4						
5						

☐ Yes ☐ Under Discussion ☐ No

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4-1. Name of the legislation/ regulation	
4-2. Year of enactment or amendment of the legislation/ regulation	

4-3. Year of enforcement of the legislation/ regulation	
4-4. Designated Banned Items	
4-5. Did J-PRISM or any other donors support in the plastic ban?	<input type="checkbox"/> J-PRISM <input type="checkbox"/> Other donors ()
4-6. Identified Issues or further challenges if any	

Indicator 5. Extended Producer Responsibility (EPR) Legislation (Used oil and E-waste)

5-1. Has an Extended Producer Responsibility Legislation for Used Oil been enacted?

☐ Yes
 ☐ Under Discussion
 ☐ No

If "No", please describe the status, development timeframe and issues which require technical support or consultation.

If "Yes" or "Under Discussion", please describe the (planned) program.

5-1-1. Name of the EPR Program	
5-1-2. Name of the legislation/ regulation	
5-1-3. Year of enactment or amendment the legislation/ regulation	
5-1-4. Year of enforcement of the legislation/ regulation	
5-1-5. Policy Approach (multiple answers allowed)	<input type="checkbox"/> Regulate manufacturers (or importers) to collect end-of-use products for recycling or disposal. (ex. deposit-refund system) <input type="checkbox"/> Regulate manufacturers (or importers) to bear the cost for recycling or disposal of end-of-use products (advance recycling fee on products, fee on disposal) <input type="checkbox"/> Restrict specific disposal methods for end-of-use products <input type="checkbox"/> Impose levy on specific products when they are imported <u>Please describe the system more specifically:</u>

5-1-6. Identified Issues or further challenges if any	
5-1-7. Did J-PRISM or any other donors support in EPR activities?	<input type="checkbox"/> JPRIMS <input type="checkbox"/> Other donors ()

5-2. Has an Extended Producer Responsibility Legislation for **E-waste** been enacted?

☐ Yes
 ☐ Under Discussion
 ☐ No

If “No”, please describe the status, development timeframe and issues which require technical support or consultation.

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If “Yes” or “Under Discussion”, please describe the (planned) program.

5-2-1. Name of the EPR Program	
5-2-2. Name of the legislation/ regulation	
5-2-3. Year of enactment or amendment the legislation/ regulation	
5-2-4. Year of enforcement of the legislation/ regulation	
5-2-5. Policy Approach (multiple answers allowed)	<input type="checkbox"/> Regulate manufacturers (or importers) to collect end-of-use products for recycling or disposal. (ex. deposit-refund system) <input type="checkbox"/> Regulate manufacturers (or importers) to bear the cost for recycling or disposal of end-of-use products (advance recycling fee on products, fee on disposal) <input type="checkbox"/> Restrict specific disposal methods for end-of-use products <input type="checkbox"/> Impose levy on specific products when they are imported <u>Please describe the system more specifically:</u>
5-2-6. Identified Issues or further challenges if any	
5-2-7. Did J-PRISM or any other donors support in EPR activities?	<input type="checkbox"/> JPRIMS <input type="checkbox"/> Other donors ()

Indicator6. User-pays Systems for Waste Collection

User-pay System is one of the economic instrument approaches for disposing of municipal solid waste where users (citizens) are charged for waste discharge collected by municipality (local authority) or contractors as a public service.

User-pay System doesn't include tipping fee (at landfill site gate fee).

Has a user-pay system for waste collection been in place?

☐ Yes ☐ Under Discussion ☐ No

If "No", please describe the status, development timeframe and issues which require technical support or consultation.

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If "Yes" or "Under Discussion", please describe the (planned) system.

6-1. Name of the legislation/ regulation	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Under Development
6-2. Year of enactment or amendment of the legislation/ regulation	
6-3. Year of enforcement of the legislation/ regulation	
6-4. Payment approach	
6-5. Did J-PRISM or any other donors support in User-pay System?	<input type="checkbox"/> JPRIMS <input type="checkbox"/> Other donors ()
6-6. Identified Issues or further challenges if any	

Indicator7. Waste Amount and Composition Survey (Waste Audit)

Please fill in the blank about the 3 latest Waste Amount and Composition Survey (Waste Audit) done in your country.

The latest

1	The Implementation Year	
	The Target Area for the Survey	
	Number of population/ households for the Survey	
	Did J-PRISM or any other donors support the Survey?	<input type="checkbox"/> JPRIMS <input type="checkbox"/> Other donors ()

The second latest (if any)

2	The Implementation Year	
	The Target Area for the Survey	
	Number of population/ households for the Survey	
	Did J-PRISM or any other donors support the Survey?	<input type="checkbox"/> JPRIMS <input type="checkbox"/> Other donors ()

The third latest (if any)

3	The Implementation Year	
	The Target Area for the Survey	
	Number of population/ households for the Survey	
	Did J-PRISM or any other donors support the Survey?	<input type="checkbox"/> JPRIMS <input type="checkbox"/> Other donors ()

Indicator8. Private Waste Management Operator's Licensing Program

Do you have Private Waste Management Operator's Licensing Program in Place? Private management operators include collectors, recyclers, traders, and disposal management companies.

☐ Yes
 ☐ Under Discussion
 ☐ No

If "No", please describe the status, development timeframe and issues which require technical support or consultation.

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If "Yes" or "Under Discussion", please fill in the blank about the Licensing Program.

The number of Private Waste Management Operators			
		No. of Licensed Companies	No. of Non-licensed Companies
A	Collectors		
B	Recyclers/ Traders		
C	Disposal Site Management Companies		
Condition for Issuing license			
Identified Issues or further challenges if any			

Indicator9. Landfill Managed in Environmentally Friendly Manner

8-1. Please write down the names of all of the final disposal sites in your country and tick the maintenance condition for each site.

A. Landfill Sites (sanitary or controlled)

No.	Name of the site	Soil cover stockpile	Administrative office on site	Site access control by fence and gate	Embarkment	Drainage facility	Gas venting	Leachate collection facility	Leachate circulation	Leachate chemical treatment	Environmental monitoring	Liner installation	Weigh Bridge
1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

B. Open Dump Sites

Please declare the number of open dump sites and the area unequipped and unmanaged with any above mentioned facilities. If you unsure the number and site name, please provide the best guess.

	Administrative Division/ District	Total number of the open dump site
	Ex) XXX Province	Ex) 3
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

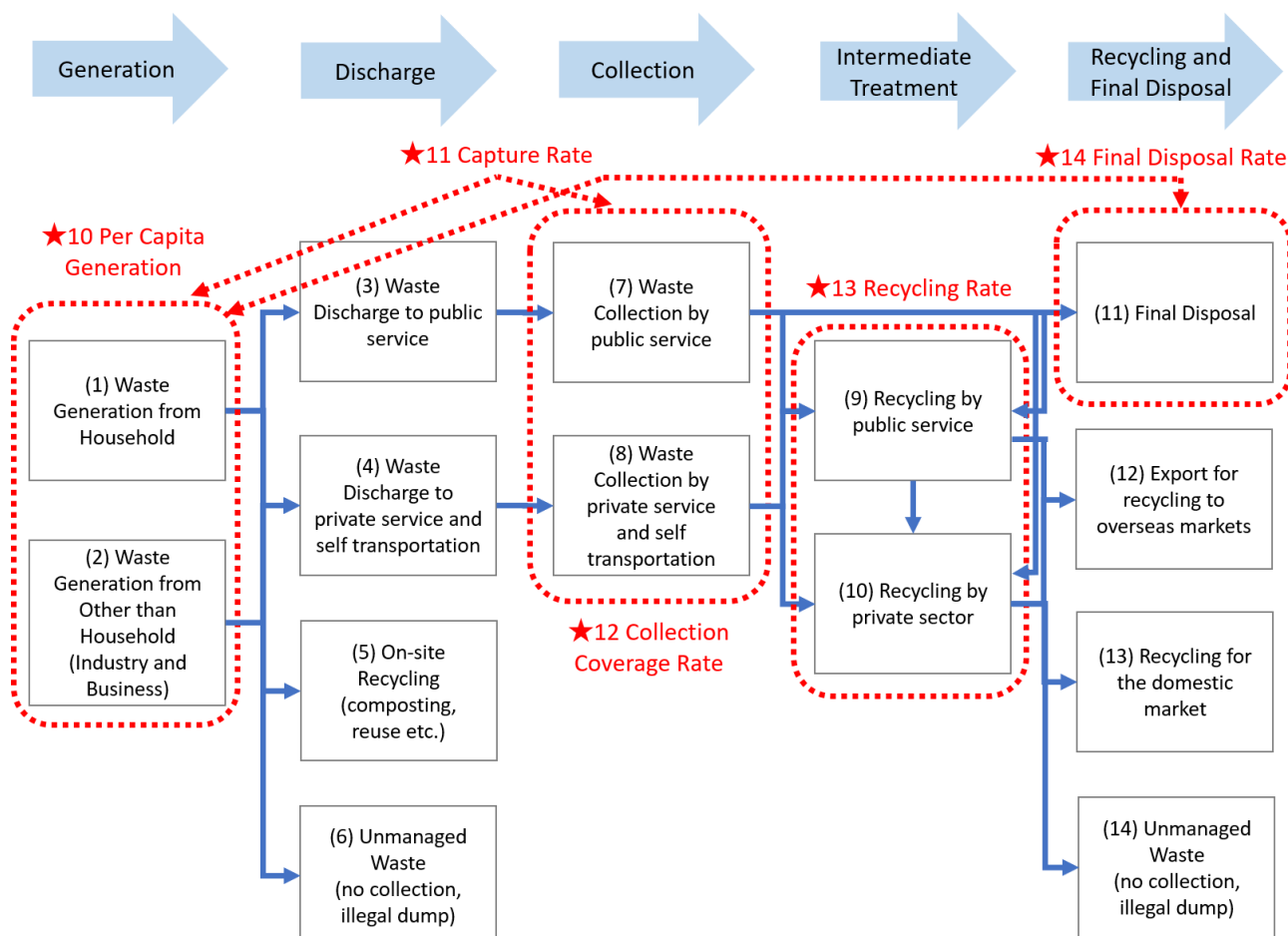
8-1. Do you have **NEW** final disposal sites either planned or under construction?

- ☐ Under Discussion
 ☐ Under Designing
 ☐ Under Construction
 ☐ Neither plan nor construction

Please describe current status of the new final disposal site development.

1	Name of the area	
	Land Acquisition	
	Size of the Land	
2	Name of the area	
	Land Acquisition	
	Size of the Land	

Part 2. Quantitative Indicators



A. National Data

PI		Results	Please describe your calculation method if you calculate from obtained resource data	Please describe how did you obtain the resource data
10	Per Capita Generation of Municipal Solid Waste (kg/person/day)			
11	Municipal Solid Waste Capture Rate (%)			
12	Municipal Solid Waste Collection Coverage Rate (%)			
13	Municipal Solid Waste Recycling Rate (%)			
14	Municipal Solid Waste Final Disposal Rate (%)			

B. States/ Municipal/ Local Governments Data

Please select at least one state/ municipal/ local government.

The Name of the Target State/ Municipal/ Local Government	
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PI		Results	Please describe your calculation method if you calculate from obtained resource data	Please describe how did you obtain the resource data
10	Per Capita Generation of Municipal Solid Waste (kg/person/day)			
11	Municipal Solid Waste Capture Rate (%)			
12	Municipal Solid Waste Collection Coverage Rate (%)			
13	Municipal Solid Waste Recycling Rate (%)			
14	Municipal Solid Waste Final Disposal Rate (%)			

Capacity Development Needs Survey

Please tick topics that are high in demand for trainings for those who engaged in waste management in your country, whichever at national or local level and whoever from private or public sector. In addition, please specify the target organizations likely to participate to the selected trainings. (Multiple answers allowed)

Topics	Tick (multiple answers allowed)	Organizations preferable to participate to the training (multiple answers allowed) EX. Ministry of XXX, City of YY, Municipal council of ZZ, etc.
1. Basic Data Collection/Analysis		
1-1: Waste Audit for Household Waste	<input type="checkbox"/>	
1-2: Waste Audit for Industrial Waste (other than household waste)	<input type="checkbox"/>	
1-3: Identifying Waste Flow from the survey result	<input type="checkbox"/>	
1-4: National Monitoring on SWM (data collection/reporting)	<input type="checkbox"/>	
2. Policy & Regulation Development		
2-1: National SWM Strategy/ Master Plan Development	<input type="checkbox"/>	
2-2: State/ Local Government SWM Strategy/Master Plan Development	<input type="checkbox"/>	
2-3: Comprehensive 3R Policy Intervention	<input type="checkbox"/>	
2-4: Extended Producer Responsibility	<input type="checkbox"/>	
2-5: Plastic Ban/ Importation Regulation	<input type="checkbox"/>	
3. Economic Instruments Design/Development		
3-1. Container Deposit System	<input type="checkbox"/>	
3-2. Environmental Levy	<input type="checkbox"/>	
3-4. User-pay for Waste Collection and Disposal	<input type="checkbox"/>	
4. Waste Collection & Transportation		
4-1. Time & Motion study with/without GPS logger and analysis	<input type="checkbox"/>	
4-2. Expansion/Improvement of Collection Service	<input type="checkbox"/>	
4-3. Contractor Management	<input type="checkbox"/>	
5. Landfill Management		
5-1. New Landfill Design/ Construction	<input type="checkbox"/>	
5-2. Landfill Rehabilitation and Pollution Control	<input type="checkbox"/>	
5-3. Daily Landfill Operation Improvement	<input type="checkbox"/>	
5-4. Data Management at Landfill	<input type="checkbox"/>	
5-5. Contractor Management	<input type="checkbox"/>	
6. 3R (Waste reduction, recycling, reusing)		

6-1. Organic Waste Processing (Composting)	<input type="checkbox"/>	
6-2. School/Youth Awareness Program on waste and 3R	<input type="checkbox"/>	
6-3. Community Awareness Program on waste and 3R	<input type="checkbox"/>	
7. Disaster Waste Management		
7. Disaster Waste Management Planning	<input type="checkbox"/>	
8. Occupational Safety & Health in SWM		
8. Occupational Safety & Health in SWM	<input type="checkbox"/>	
9. Facility Management		
9. Daily Maintenance and Inspection of Vehicles and Heavy Machineries	<input type="checkbox"/>	
10. All-packaged comprehensive training		
10-1. All-Packaged Comprehensive Training on SWM (novice level for waste management officer)	<input type="checkbox"/>	
10-2. All-Packaged Comprehensive Training on SWM (intermediate/ advanced)	<input type="checkbox"/>	