

# PROCEEDINGS

## THE 1st NATIONAL SOLID WASTE MANAGEMENT PLANNING WORKSHOP



28 February, 2020

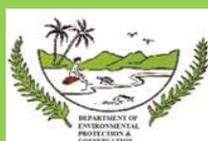
VMGD/MCC Conference Room  
Port Vila, Vanuatu

Attended by

- Port Vila City Council
- Luganville Municipal Council
- Samma Provincial Council
- Shefa Provincial Council
- Tafea Provincial Council
- Malampa Provincial Council
- Apologies
- Lenakel Municipal Council
- Penama Provincial Council
- Torba Provincial Council

Organized by

- Department of Environment, Ministry of Climate Change
- Department of Local Authorities, Ministry of Internal Affairs
- J-PRISM II, JICA



Proceedings of the 1<sup>st</sup> National Solid Waste Management Planning  
Workshop in Port Vila

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

## Table of Contents

Summary of the Proceedings .....	1
Discussion and Feedback .....	2
1. General .....	2
2. Port Vila City Council .....	2
3. Luganville Municipal Council and Sanma Provincial Council .....	2
4. Lenakel Municipal Council and Tafea Provincial Council .....	3
5. Shefa Provincial Council .....	3
6. Malampa Provincial Council.....	3
7. Others .....	3
Presentation .....	4
1. Overview of Appropriate Technology for Waste Management in Vanuatu .	4
2. National Strategy for Waste Management Planning and Annual Monitoring .....	6
3. Port Vila City Council .....	7
4. Luganville Municipal Council and Sanma Provincial Council .....	9
5. Lenakel Municipal Council and Tafea Provincial Council .....	10
6. Shefa Provincial Council .....	13
7. Malampa Provincial Council.....	15
 <i>Appendix 1: List of Attendants</i>	
<i>Appendix 2: Program of the National Solid Waste Management Planning Workshop</i>	

## Summary of the Proceedings

1. Meeting started at 10:00 am
2. Attendants list of the meeting are given in **Appendix 1**
3. Opening of the meeting

An opening remarks was given by Ms. Ionie Bolenga, Principal Waste Management and Pollution Control Officer of the Department of Environmental Protection and Conservation (DEPC). Subsequently, Mr. Moses John Amos, Acting Director General of the Ministry of Climate Change, Environment, Energy, Meteo and Disaster Management (MCC), gave a keynote remarks. Ms. Rikae Kodani acted as chair on behalf of Mrs. Donna Kalfatak, Director of DEPC, and declared the meeting open.

The chairperson proceeded the meeting in accordance with the program in **Appendix 2**.

4. Summary of Program

The workshop was held with aim to build a foundation between the national government and provincial/municipal governments to improve the solid waste management (SWM) in each area. The new monitoring format was developed by the Department of Environmental Protection and Conservation (DEPC). Based on that contents, provincial governments gave a presentation and the DEPC gave feedback to provide a guidance to move forward.

5. Closing of the meeting

The chairperson closed the meeting at 14:00 p.m.



*Keynote Remarks by the Mr. Moses John Amos, Acting Director General of the Ministry of Climate Change*



*Faafetai and Anai, J-PRISM II project team, handed over the project T-shirts to the Acting Director General*



*Discussion During the meeting*

## Discussion and Feedback

### 1. General

- J-PRISM II gave a presentation on the qualifications of different types of landfill site, and recommended that landfill site should be designed by analyzing to balance both the environmental conditions and financial capacity. DEPC informed that the sanitary landfill guideline would be endorsed soon. DEPC requested that every province would consult to DEPC in constructing a new landfill site.
- In general, material volume is too small for promotion of recycling, especially in provinces. Through the discussion among participants, the following solutions were proposed:
  - i. The Container Deposit Scheme (CDS), which is in progress to be introduced in Vanuatu by the national government, can be a trigger to promote material recovery throughout the nation.
  - ii. Each province and municipal council can set up the own By-law, for example, to enforce a new plastic ban against additional items or to establish a local rule of segregation.
  - iii. The five year strategy of the Vanuatu Recycling and Waste Management Association (VRWMA) will be developed with support of SPREP and J-PRISM II, which should include a strategy for promotion of material recovery in remote islands in consideration of geographic and demographic condition in each province.

### 2. Port Vila City Council

- DEPC instructed that PVCC had to submit the application form by the due date.
- **PVCC offered to provide a technical support to other provinces and municipalities, as a capital city of Vanuatu, based on the experience of waste management in Port Vila.**

### 3. Luganville Municipal Council and Sanma Provincial Council

- DEPC advised that the draft waste management plan 2020-2024 should be consulted by the Director of DEPC before finalization.
- LMC requested to consider the different context of community, especially the mindset of community on waste management, in reviewing the draft waste management plan.

4. Lenakel Municipal Council and Tafea Provincial Council

- DEPC recognized that the necessity of strategy for ship-out of separated materials such as aluminum cans.
- DEPC also recognized that the estimation of waste generation volume should be updated for verifying the necessary space of new landfill site.

5. Shefa Provincial Council

- **DEPC emphasized the necessity to strengthen the compliance of the licensing system of Private Waste Operators (PWOs) in provinces.**
- DEPC requested that Shefa province had to submit attachments of the application.

6. Malampa Provincial Council

- DEPC recognized that several actions on waste management were taken by the Malampa province, especially the appointment of the waste management officer was the big progress.
- DEPC instructed that Malampa provincial council had to submit the application form by the due date.

7. Others

- **DEPC requested that the Department of Local Authorities would communicate with the Public Service Commission (PSC) to include a solid waste management to the job description of secretary general of provincial government.**
- DEPC will communicate with Penama provincial council and Torba provincial council to support and monitor the solid waste management planning and implementation accordingly.



**National Solid Waste Management Planning Workshop**  
**Port Vila, Vanuatu**

**DATE**  
**28 FEBRUARY 2020**

**VENUE**  
**VMGD/MCC conference**

Logos include: Vanuatu, Australia, Timor-Leste, Solomon Islands, Port Vila City Council, Department of Local Authorities, JICA, PRISM, SPREP PROE, and the Department of Local Authorities of Vanuatu.

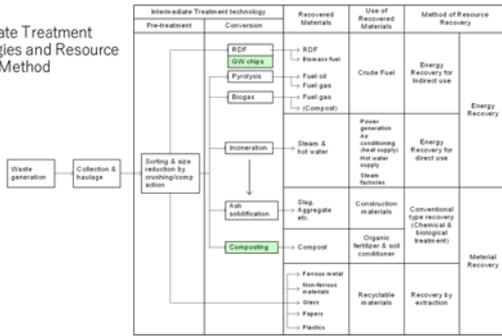
# Presentation

## 1. Overview of Appropriate Technology for Waste Management in Vanuatu

Presented by Mr. Junji Anai, G2 Expert (Sub-leader, Solid Waste Management), J-PRISM II

<p>Japanese Technical Cooperation Project for Promotion of Regional Initiative on SWM in Pacific Island Countries Phase II (J-PRISM II)</p> <p>National Solid Waste Management Planning Workshop Program 1:</p> <p>Overview of Appropriate Technology for Waste Management in Vanuatu</p> <p>28<sup>th</sup> February 2020</p> <p>JICA Expert Junji ANAI</p> <p style="text-align: right;">1</p>	<ol style="list-style-type: none"> <li>Objective of Planning</li> <li>Vision of Municipal Solid Waste Management (MSWM)</li> <li>Estimated MSWM Costs</li> <li>Recommendations</li> </ol> <p style="text-align: right;">2</p>
<p>1. Objective of SWM Plan</p> <ol style="list-style-type: none"> <li>Identify the actions required to manage municipal waste appropriately.</li> <li>Communicate the plan to the stakeholders, convince them, and get the necessary support.</li> <li>Correct the trajectory after starting municipal waste management.</li> </ol> <p style="text-align: right;">3</p>	<p>2. Vision of MSWM</p> <ol style="list-style-type: none"> <li>Waste reduction is encouraged at the generation source, such as households and business establishments.</li> <li>Waste generated after reduction measures have been applied is reused or recycled as much as possible.</li> <li>Only after efforts have been made to reduce, reuse or recycle waste, it is then properly collected, treated, and finally disposed of in an appropriate manner without negative environmental impacts.</li> <li>Such a SWM system will be established by requiring the governmental sector, private sector and general public to bear adequate responsibilities under a transparent and fair rule.</li> </ol> <p style="text-align: right;">4</p>
<p>2.1 MSWM System</p> <ol style="list-style-type: none"> <li>In general, the first priority is given to the collection system which aims at "taking out waste from living area"</li> <li>An intermediate treatment system is introduced for waste reduction, stabilization, harmless and recovery of recyclables.</li> <li>Final disposal system disposes of collected waste avoiding adverse impact as much as possible.</li> <li>Economic viability highly depends on the location of landfill site (transportation cost) and O&amp;M cost of it (The cost will increase according to the stricter application of sanitary landfill operation).</li> <li>Since the public sector should not neglect environmental protection (it costs a lot), no intermediate treatment facility in the world owned by the public, is being operated without receiving a tipping fee that user pays for reduction of transportation and landfill costs.</li> <li>Profit from sales of by-product (compost, electricity, recyclables, etc.) by the operation of waste recycling facility can not cover real cost (depreciation + O&amp;M costs)</li> </ol> <p style="text-align: right;">5</p>	<p>MSWM system</p> <p style="text-align: right;">6</p>

(1) Intermediate Treatment Technologies and Resource Recovery Method



Intermediate Treatment Technologies  
b. GW (Green Waste) Chipping as Biomass Fuel

- This is a recycling system which converts green waste generated largely into chips which are used as a biomass fuel.
- The combustion of chips does not require a special facility, so the existing combustion system can be employed.
- The wood chips can be used as mulching material.
- GW chipping is an adoptable intermediate treatment technology.



(2) Final Disposal Technologies

Type of landfill	Characteristics
Open Dumps	Waste is piled up on low-use land such as wetlands. Although the waste is gradually decomposed, the waste pile expands rapidly due to excessive carry-in and mixing of large amounts of non-degradable garbage such as plastic. The surrounding sanitary environment is extremely deteriorated, and spontaneous ignition due to fermentation/compound heat is normal.
Controlled Dumps	This is a method of excavating land where the risk of groundwater contamination is relatively low, such as an impermeable layer, and dumping waste. Landfill waste is compacted, moved and shaped with heavy equipment. There is a widespread method of disposing of small-scale, toxic-free waste.
Engineered Dumps	As a countermeasure to prevent a swarm of hygiene pests such as flies, cover the landfilled waste with thin soil every day. Ventilation pipes are installed to release generated gas from under the cover soil. Leachate becomes often a problem.
Sanitary Landfills	Impermeable liner and leachate collection pipes will be installed at the bottom of the landfill area, and leachate will be received in the collection pit and treated or drained to the sewer. Leachate is generated under anaerobic condition and is also called anaerobic landfill. Although this is the mainstream method worldwide, the <b>treatment cost is large</b> , because leachate containing a large amount of BOD/COD components and ammonia nitrogen continues to be generated for a long time.
Semi-aerobic Landfill (Fukuoka Method)	This is a Japanese standard method which had been put into practical use in Fukuoka in 1975. The leachate is collected by drainage pipes and air flows into the same pipe by natural convection due to the heat of waste fermentation. Aerobic biodegradation is caused by this aeration effect, and the BOD of the leachate drops rapidly. However, the operation and <b>maintenance cost is high</b> , because the semi-aerobic condition cannot be maintained unless air is constantly passed through the leachate collection pipe.

3. Estimated MSWM Costs

GNI of Vanuatu in 2018: US\$ 3,130

	Low Income Countries	Lower Mid Inc Countries	Upper Mid Inc Countries	High Inc Countries
Income (GNI/Capita)	< \$876	\$876 – 3,465	\$4,466 – 19,725	> \$10,725
Waste Generation (t/capita/yr)	0.22	0.29	0.42	0.78
Collection efficiency	43%	68%	85%	98%
<b>Cost of collection and Disposal (US\$/ton)</b>				
Collection	20 - 50	30 - 75 (70)	40 - 90	85 - 250
Sanitary Landfill	10 - 30	15 - 40 (10)	25 - 65	40 - 100
Open Dumping	2 - 8	3 - 10	NA	NA
Composting	5 - 30	10 - 40	20 - 75	35 - 90
Waste-to-Energy	NA	10 - 100	60 - 150	70 - 200
Anaerobic Digestion	NA	20 - 80	50 - 100	65 - 150

Source: Urban Development Series- Knowledge Papers by World Bank  
( ) indicates the actual value of PVCC in 2017

4. Recommendations (1)

It is said that promotion of the 3Rs at the On-site MSWM stage, at generation sources, is preferable to the Off-site stage in order to not only improve MSW management, but also to promote the 3Rs in general.

- Low cost:** The additional cost burden to the government to promote On-site is less than that of Off-site.
- Pure material for recycling:** The most difficult problem is the risk of certain substances contaminating recyclables or becoming mixed in. On-site recycling can minimize this problem. Thus, the saying, "It is *garbage* when mixed, but *resources* when separated."
- Raising the awareness of dischargers:** Proper MSWM is not established without the proper understanding and cooperation of waste dischargers. On-site recycling can not be promoted without raising awareness of waste dischargers. In other words, to promote "On-site Recycling" means to raising the awareness those who are discharging the waste.

end

## 2. National Strategy for Waste Management Planning and Annual Monitoring

Presented by Ms. Ionie Bolenga, Principle Waste Management Officer, DEPC

### National Solid Waste Management Planning Workshop

**NATIONAL STRATEGY FOR WASTE MANAGEMENT PLANNING AND ANNUAL MONITORING**

28/02/2020  
Ms. Ionie Bolenga  
Principal Waste Management & Pollution Control Officer, DEPC

### PURPOSE OF THE WORKSHOP

1. National Data Management on Solid Waste Management (SWM)
2. Build a good relationship between the National government and local governments for improvement of SWM

The Waste Management Act stipulates that each Municipal Council or a Provincial Government Council must formulate, adopt and implement an annual Waste Management Plan, and must consult with the Director of Department of Environmental Protection and Conservation (DEPC) during the formulation of the Waste Management Plan.

The DEPC announced the official application form for consultation of WMP newly developed this year to enforce compliance with the Waste Management Act.

### MUNICIPAL SOLID WASTE FLOW

### NATIONAL WASTE MANAGEMENT FLOW IN VANUATU (2019)

### NATIONAL WASTE MANAGEMENT FLOW IN VANUATU (2019)

Waste Flow (Actual)	2019	Vanuatu	Port Vila	Luganville	Lakelani	Torba	Samoa	Penama	Makampa	Shefa	Tafea
Population (person)	281,152	53,882	17,188	6,438	10,797	39,907	34,283	43,128	49,188	49,188	32,803
Waste generation (kg/capita)	-	22.6	9.7	0.205	0.205	0.205	0.205	0.205	0.205	0.205	0.205
Business/Market Waste	114	58	12	1.3	2	8	7	6	10	7	7
1. Waste Generation	114	58	12	1.3	2	8	7	6	10	7	7
2. Self Disposal***	14.3	10.5	1.0	0.0	0.0	0.7	0.3	0.5	0.6	0.2	0.2
3. Home compost***	3.0	0.0	0.0	0.0	0.1	0.1	2.1	0.4	0.0	0.0	0.0
4. Waste Collection	49.2	41.5	6.4	0.6	0.0	0.0	0.0	0.2	0.4	0.0	0.0
5. Unmanaged waste	47.6	5.7	4.6	0.6	1.6	7.4	4.6	7.7	9.0	6.3	6.3
6. Market compost & Animal feed	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7. Material recovery	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recycle	3.2	0.1	0.1	0.0	0.1	0.1	2.1	0.4	0.0	0.0	0.0
8. Disposal amount	49.0	41.4	6.3	0.8	0.0	0.0	0.0	0.2	0.4	0.0	0.0
9. Unknown	-	-	-	-	-	-	-	-	-	-	-
10. Total Landfilled waste	49.0	41.4	6.3	0.8	0.0	0.0	0.0	0.2	0.4	0.0	0.0

Source: VNGC 2018 Post-Plan Mini-Census Report, Vol. 1: Population of Shefa province excludes Port Vila and population of Samoa province excludes Luganville. Lakelani: 2016 part of Tafea province and Lakelani municipal council (2017-2020). Population of Tafea province excludes Lakelani. \*\*\*Source: Port Vila, PNBC "Annual Solid Waste Management Plan (ASWMP) 2019". Luganville: LMC, Samoa Province, Red Cross and World Vision "Luganville Waste Characterisation Report 2018". Lakelani and Province: Governance/Literacy Programme (GLP) "Waste data from Vanuatu" 2018. \*\*\*Source: VNGC 2008 census report volume 2.

### SOLID WASTE MANAGEMENT PLAN OF PROVINCE / MUNICIPALITY

<https://depc.gov.vu/index.php/environmental-protection/waste-management/waste-management-planning>

### REQUEST FORM OF CONSULTATION FOR AN ANNUAL WASTE MANAGEMENT PLAN IN PROVINCES AND MUNICIPALITIES

<https://depc.gov.vu/index.php/forms-and-fees/waste-and-pollution>

### CONTENTS OF THE APPLICATION FORM

1. Background
2. Current Situation of Waste Management
3. Upcoming Plan
4. Request for Support from DEPC

### 3. Port Vila City Council

Presented by Mr. Sandy Mwetu, Acting Supervisor Waste Management, Port Vila City Council

<p><b>Main activities to realize SWM Plan</b></p> <ol style="list-style-type: none"> <li>1. Strengthening of waste collection capacity</li> <li>2. Improvement of Bouffa Landfill</li> <li>3. Waste minimization through promotion of 3R (Reduce, Reuse, Recycle)</li> <li>4. Public awareness raising</li> <li>5. Reorganization of waste management section that can implement SWM plan</li> <li>6. Enhancement of maintenance system for SWM equipment</li> <li>7. Secure funding to implement appropriate waste management</li> <li>8. Improvement of regulations necessary for implementing appropriate SWM</li> </ol>	<p><b>Strengthening of waste collection capacity</b></p> <ul style="list-style-type: none"> <li>▶ GPS tracking survey for collection coverage</li> <li>▶ New collection route created</li> <li>▶ New designated map displaying area of collection within timeframe</li> <li>▶ Waste stands for Collection point build and ready to installed in areas designated by Communities</li> <li>▶ Working with Shefa Province to set the demarcation boundary for waste collections.</li> <li>▶ Outcomes</li> <li>▶ More yellow garbage bags collected in less time</li> <li>▶ Waste collection covers all area of Port Vila</li> <li>▶ Cost effective</li> </ul>
<p><b>Improvement of Bouffa Landfill</b></p> <ul style="list-style-type: none"> <li>▶ Maintenance and Improvement of Access</li> <li>▶ Waste water drainage improvement</li> <li>▶ Relocation of construction waste to ensure dumping control</li> <li>▶ Disaster waste area cleared and reserved for emergency situation</li> </ul> 	<p><b>Waste minimization through promotion of 3R (Reduce, Reuse, Recycle)</b></p> <ul style="list-style-type: none"> <li>▶ Composting trial with Market green waste and waste leaves and mowed grass by Waste Management team PVCC</li> </ul> 
<p><b>Pilot Project on WACS for Market Waste</b></p> 	<p><b>Pilot Project on Composting in schools started.</b></p> 
<p><b>Public awareness raising</b></p> <ul style="list-style-type: none"> <li>▶ Through social media</li> <li>▶ FB PVCC account</li> <li>▶ Through schools</li> </ul> <p><b>Teachers College</b></p>  <p><b>Through Community cleanup &amp; Meetings</b></p>  <p><b>Installation of rubbish bins around Port Vila</b></p> 	<p><b>Reorganization of waste management section that can implement SWM plan</b></p> <ul style="list-style-type: none"> <li>▶ Staff were involved in pilot projects and regional trainings as part of Capacity Building for waste management staffs</li> <li>▶ Waste Management office with conference room for waste management planning and meeting</li> </ul> 

- ▶ Strengthening waste management Unit by building up respect, trust and confidence between Waste management staffs and units
- ▶ Encouraging good communication and understanding among staffs to ensure good practice in waste management.
- ▶ Encouraging communication through the channel of command to ensure that instructions are carried out accordingly
- ▶ Encouraging mid-week briefing from foremen to report on status of daily task for work monitoring.
- ▶ New structure and Job Descriptions for Waste Management Division developed and await Council's approval.

#### Enhancement of maintenance system for SWM equipment

- ▶ Outsourcing of mechanical repairs for waste collection truck
- ▶ Construction of new shade for Landfill heavy machines

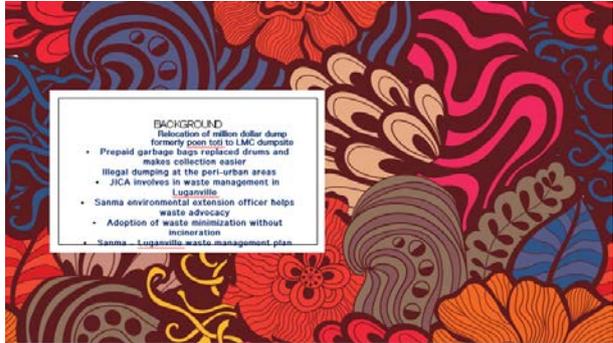


- ▶ **Secure funding to implement appropriate waste management**
  - Fully equipped Weight bridge
- ▶ **Improvement of regulations necessary for implementing appropriate SWM**
  - Solid Waste Management By-law

Thank yu tumas

4. Luganville Municipal Council and Sanma Provincial Council

Presented by Mr. Leonard Lolo, Waste Management Officer, Luganville Municipal Council

<p><b>SOLID WASTE MANEGEMENT WORKSHOP</b></p> <p>Port Vila SANMA &amp; LUGANVILLE WASTE OVERVIEWS</p> <p>by TOMMY &amp; LOLO</p>	 <p><b>BACKGROUND</b></p> <ul style="list-style-type: none"> <li>Relocation of million dollar dump formerly open top to LMC dumpsite</li> <li>Prepaid garbage bags replaced drums and makes collection easier</li> <li>Illegal dumping at the peri-urban areas</li> <li>JICA involves in waste management in Luganville</li> <li>Sanma environmental extension officer helps waste advocacy</li> <li>Adoption of waste minimization without incineration</li> <li>Sanma Luganville waste management plan</li> </ul>
<p><b>SITUATIONS</b></p> <ul style="list-style-type: none"> <li>Business house waste collection data base</li> <li>Compaction of municipal waste at the dumpsite - needed own machinery.</li> <li>Urban drift and transition of waste management awareness</li> <li>Waste problems in the 2 mini townships of Port Olry and Hog harbor.</li> </ul>	<p><b>FUTURE PLANS</b></p> <ul style="list-style-type: none"> <li>Set up mini dump site for port Olry and hog harbor</li> <li>update data on waste generation and composition that will inform effective planning on waste management</li> <li>Proper data base for collection and invoicing</li> <li>Luganville Zero waste city</li> <li>Electronic awareness</li> <li>Remove and segregate illegal dumpsites</li> <li>Waste management education in all Sanma schools</li> </ul>
<p><b>PICTURES</b></p>  <p>CBD Wednesday clean up</p> <p>Waste collection campaign</p>	<p><i>end</i></p>

5. Lenakel Municipal Council and Tafea Provincial Council

Presented by Mr. Jamesly Tavuti, Provincial Planner, Tafea Provincial Council

 <p><b>National Solid Waste Management Planning Workshop</b></p> <p>Date: 28 February, 2020</p> <p>Presenter: Jamesly Tavuti Tafea Provincial Planner</p>    <p><b>LENAKEL MUNICIPALITY TAFEA PROVINCE</b></p> 	 <p><b>PROFILE TAFEA PROVINCE</b></p>  <p><b>TAFEA PROVINCE</b></p> <ul style="list-style-type: none"> <li>○ Tanna - 7 ACs</li> <li>○ Erromango - 2 ACs</li> <li>○ Futuna - 1 ACs</li> <li>○ Aneityum - 1 ACs</li> <li>○ Aniwa - 1 ACs</li> </ul> <p>Municipality - LMC</p> <p><b>POPULATION - 36,801</b> (2016 Post Pam mini census Report, Vol 1)</p>
 <p><b>LENAKEL MUNICIPALITY</b></p>  <ul style="list-style-type: none"> <li>○ Population 1,000</li> <li>○ 165 households</li> <li>○ 161 registered businesses</li> </ul> <p><b>MAP - LMC</b></p>	 <p><b>SOLID WASTE MANAGEMENT BACKGROUND</b> (According to SWM Plan)</p> <ul style="list-style-type: none"> <li># 3 Level of Solid Waste Management (Tanna, Erromango &amp; Outer Islands)</li> <li># Waste Minimization - Composting &amp; Waste separation</li> <li># Disposal - Self Disposal (rural) &amp; Storage Site</li> <li># Waste collection: Tafea peri-urban areas is conducted by LTMC - including Lenakel Hospital, Lenakel school . . .</li> </ul> 
 <p><b>LENAKEL BLACKMAN TOWN WASTE COMPOSITION</b></p> <p><b>BACKGROUND</b></p> <p>Household Waste 16 kg per week - equates to 839 kilos per household per year or <b>134 tonnes per year</b>. About <b>76% of this waste is organic</b> and 11% readily recyclable – this includes; cardboard, plastics PET 1 &amp; HDPE 2, aluminium, tin and glass.</p> <p>Businesses approximately 24 kg per week - equates to 1.2 tonnes per business per year or <b>197 tonnes per year</b> from the entire business community. About <b>84% of this waste is organic</b> and 9% readily recyclable.</p>	 <p><b>LENAKEL BLACKMAN TOWN WASTE COMPOSITION</b></p> <p><b>BACKGROUND</b></p> <p>Market Waste (Central market) - on average of 567 kg per week - equates to <b>29 tonnes of weight per year</b>. <b>95% of waste is organic</b> and 4% readily recyclable.</p> <p>Waste (Public Rubbish Bins) - on average of 169kg per week - equates to <b>8.8 tones per year</b>. <b>72% is organic</b> and 20% readily recyclable waste.</p>

### LENAKEL BLACKMAN TOWN (WASTE COMPOSITION SURVEY 2014)

**BACKGROUND**

54% Solid Waste (Business) – increases of business in LMC area.

38% Solid Waste (Residents) – Increases in Residents in LMC area.

Market - 8%  
Public Area - 2%  
Household - 36%  
Business - 54%

### CURRENT SITUATION LENAKEL BLACKMAN TOWN TAFEA AREA COUNCILS

- # No collection system in Place
- # Lack of Public awareness
- # No technical expertise (LMC or Province)
- # Transportation & Safety
- # No proper waste disposal system in place
- # Data is either inconsistent or outdated
- # Absent capacity building
- # Limited Financial Aid/sustainable funding.
- # Lack Partnership

### CURRENT SITUATION LENAKEL BLACKMAN TOWN TAFEA AREA COUNCILS

- # People mindset towards SWM is still low.
- # Reluctant of taking information
- # Lack knowledge of 3R – Composting & others
- # Enforcement is challenging
- # Landfill/dump site

### UPCOMING PLAN 2020 SWM PLAN – TAFEA/LMC

**7 THEMATIC AREA (NWMS)**

- 1) SWM By-Laws
- 2) Develop sustainable financing
- 3) Capacity building
- 4) Waste Minimisation
- 5) Integrated Solid Waste Management (ISWM).
- 6) Provincial coordination
- 7) Public awareness.

### 2020 ANNUAL PLAN

Plan/Activities	Detailed Tasks	Responsible entity	Schedule			
			Q1	Q2	Q3	Q4
1 Review relevant SWM By-laws	Review current waste by-laws for possibility of inclusion of standing orders	TPGC & LTMC, with assistance from DEPC and State Law Office.				
	Develop draft Household and Institutional fees by-laws	TPGC & LTMC, with assistance from DEPC and State Law Office				
	Develop littering and burning waste by-law	TPGC & LTMC, with assistance from DEPC and State Law Office				
	Nominate waste management representative in lieu of officer	TPGC & LTMC				
2 Develop sustainable financing	Increase collection fees efficiency; source personnel to create database of source of funds	TPGC & LTMC				
	Collect from market service fees with stakeholders	LTMC				
3 Capacity building	Arrange local training and awareness programs- undertake composting training	LTMC, with assistance from DEPC, JICA and NGOs				
	Consult with JICA/VISA/AVID/Peace Corp to enquire about the possibility to acquiring a new volunteer	TPGC & LTMC				
4 Waste minimisation	Introduce composting at the main market.	LTMC				

Activity	Responsible Entity	Funding Source	Output/Target	Timeline
5 ISWM	Identify new landfill site: Commence search for alternative landfill site.	TPGC & LTMC, with assistance from DEPC, Ministry of Lands and donor partners	Identify possible landfill sites	
	Acquire a waste collection Drivers: Include waste collection driver in 2020 budget	LTMC	Waste collection driver budget included in 2018 budget	
6 Provincial Coordination	Complete waste characterisation study	TPGC, LTMC, DEPC, JPRISA, Donor Partner	Submit waste characterisation study report to DEPC	
	Plan for the extension of collection outside LTMC boundary	TPGC & LTMC	Boundary of waste collection extension plan developed	
	Sign (MoU) between TPGC and LTMC	TPGC & LTMC, with assistance from DEPC	MoU signed	
7 Public Awareness	Waste Management program: include a waste management program in the 2020 budget, including budget for LTMC landfill site manager	TPGC & LTMC	Specific waste program included in the overall budget, salary allocated for landfill site manager and waste management officer	
	Increase awareness of use of public bins	LTMC	Reduced rate of vandalised bins	

<p><b>UPCOMING ACTIVITY</b></p> <p><b>NEEDS SUPPORT - DEPC</b></p> <p>Need support from DEPC &amp; partners in implementation and monitoring of 2020 TAFEA &amp; LMC Annual SWM Plan</p> 	<p><b>STORAGE SITE</b></p> <p><b>STORAGE SITE Manage by LMC</b></p>   <p>Waste separation/storage site Rental - 15,000 VT per month</p>
<p><b>THANK YOU</b></p>  	<p><i>end</i></p>

## 6. Shefa Provincial Council

Presented by Mr. Kentaro Fujitani, JOCV/Waste Management Assistant, Shefa Provincial Council

 <p><b>SHEFA PROVINCE GOVERNMENT</b> Waste management assistant &amp; JICA Volunteer <a href="#">Kentaro Fujitani</a></p>	<p><b>Work Contents</b></p> <ul style="list-style-type: none"> <li>• Community Awareness</li> <li>• Implement Cleanup Campaign</li> <li>• Implement Compost Workshop</li> <li>• Cooperate with other organization</li> </ul>
<p><b>Community Awareness</b></p> <ul style="list-style-type: none"> <li>• Survey Current situation</li> <li>• Survey community waste management</li> <li>• Teach How to make the compost</li> <li>• Distribute the leaflets</li> </ul> 	<p><b>Community Awareness</b></p> 
<p><b>Leaflet Contents</b></p> 	
<p><b>Compost workshop</b></p> 	<p><b>2019 Clean up Campaign</b></p> 

### 2019 Planting Mangrove TAGABE



### SHEFA Province Task

- Make Income
- Discuss with PVCC about Service Boundary
- Discuss about Yellow bag income
- How to collect distant land (East Efate, North Efate)
- How to build own landfill site



*end*

7. Malampa Provincial Council

Presented by Mr. Ben Nehemiah, Provincial Planner, Malampa Provincial Council



### COLLECTEM DOTI



### PAMPHLET BLO AWARENESS



**FROM WANEH YUMS MAS STOPEM SAKEM DOTI OUBAGI ?**

**NO BOMEN DOTI**

**YUMS MAS GAS RESPONSIBILITI BLONG DOTI BLONG YUMS**

**HAO BLONG USUM WHITE BAG**

Produced by Malampa province, SOCA

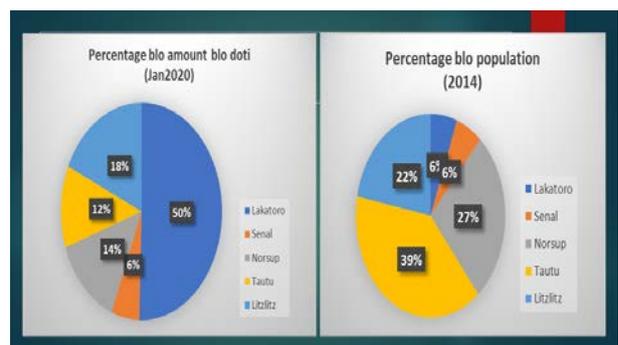
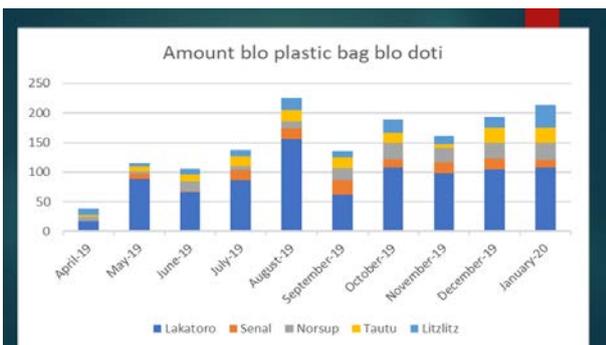
**HAO BLONG USUM WHITE BAG**

**CONSECTIONS**

**Evri Tuessel mo Fride**

**TABU**

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### DUMP SITE (After)



### ENVIRONMENTAL EDUCATION



### CLEAN UP CAMPAIGN



### PUBLIC GARBAGE CAN



### WASTE MANAGEMENT BYLAW



## CHALLENGE BLO MIFALA

- \_ Land dispute
- \_ NO Proper Waste Management plan

## ROAD CONDITION



## KAMION BLO COLLECTEM DOTI



## MANAGEMENT BLO DOTI LO MARKET



## 2<sup>ND</sup> PHASE, PLASTIC BAN



## Future plans

- ▶ Update garbage collection system
- ▶ Make waste management committee
- ▶ Extension of dumpsite
- ▶ Waste management of market
- ▶ Clean-up campaign
- ▶ Environmental education for school
- ▶ Awareness
- ▶ Attract recyclers

END OF PRESENTATION

THANK YOU TUMAS....

*end*

## Appendix 1: List of Attendants

 <b>The National Solid Waste Management Planning Workshop in Port Vila (28. Feb)</b> 				
<b>Participants List</b>				
No.	Province/Municipal/Organization	Mr./Ms.	Name of Participants	Position/Organization
1	Ministry of Climate Change, Environment, Energy, Meteo and Disaster Management (MCC)	Mr.	Moses John Amos	Acting Director General
2	Department of Environmental Protection and Conservation (DEPC)	Ms.	Ionie Gabriella Bolenga	Principal Waste Management and Pollution Control Officer/Environmental Planning and Impact Assessment Division
3	Department of Local Authority (DLA)	Mr.	Richly Bule	Physical Planning Unit
4	Port Vila City Council (PVCC)	Mr.	Sandy Mwetu	Acting Supervisor Waste Management
5	Luganville Municipal Council (LMC)	Mr.	Leonard Lolo	Waste Management Officer
6	Malampa Provincial Council	Mr.	Ben Nehemiah	Provincial Planner
7	Malampa Provincial Council	Mr.	Oral Kilman	Waste Management Officer
8	Sanma Provincial Council	Mr.	Tommy Warele	Physical Planner
9	Shefa Provincial Council	Mr.	Kentaro Fujitani	JOCV/Waste Management Assistant
10	Tafea Provincial Council	Mr.	Jamesly Tavuti	Provincial Planner
11	SPREP	Ms.	Ma Bella Guinto	Solid Waste Management Adviser
12	SPREP	Mr.	Michael Taiki	Pac Waste Plus
13	JICA Vanuatu Office	Mr.	Ohara Katsuhiko	Assistant Representative (Project Formulation)
14	JICA Vanuatu Office	Mr.	Hayashi Hiroyuki	Volunteer Coordinator
15	JICA Vanuatu Office	Mr.	Silas Ngui	Program Officer
16	JICA Vanuatu Office	Ms.	Rebecca Boekara	Program Officer
17	JICA Vanuatu Office	Ms.	Taish Obed	Program Officer
18	J-PRISM II	Mr.	Faafetai Sagapolutele	Assistant Chief Advisor
19	J-PRISM II	Ms.	Ayako Yoshida	Regional Cooperation/Project Coordinator
20	J-PRISM II	Ms.	EvangelinePotifara	Project Assistant
21	J-PRISM II	Mr.	Junji Anai	G2, Expert(Sub-leader, Solid Waste Management)
22	J-PRISM II	Ms.	Rikae Kodani	G2, Expert(Solid Waste Management for Vanuatu)

## Appendix 2: Program of the National Solid Waste Management Planning Workshop



### Program of the National Solid Waste Management Planning Workshop

**Date:** Friday 28<sup>th</sup> February, 2020

**Time:** 10:00 am – 14:00pm

**Venue:** VMGD/MCC Conference room

**Chairperson (Facilitator):** Ms. Donna Kalfatak, DEPC

**Participants:** DEPC/MCC, all provincial and municipal councils

**Agenda:**

Time	Agenda Item	Responsible Person
10:00-10:30 am	Arrival & registration of Guests and Participants	Registration by All participants
10:30-10:32 am	Opening Prayer	-
10:32-10:40 am	Welcome Toktok	Ms. Donna Kalfatak, Director, DEPC
10:40-10:50 am	Keynote Remarks of Ministry of Climate Change	Mr. Moses John Amos, Acting Director General, MCC
10:50-11:05 am	1. Overview of Appropriate Technology for Waste Management in Vanuatu	Mr. Junji Anai, J-PRISM II
11:05-11:20 am	2. National Strategy for Waste Management Planning and Annual Monitoring	Ms. Ionie Bolenga, Principle Waste Management Officer, DEPC
11:20-11:40 am	3. Q&A Session	Facilitator
11:40-11:50 am	4. Presentation by Port Vila City Council	Port Vila City Council
11:50-12:00 am	5. Presentation by Luganville Municipal Council and Sanma Province	Luganville Municipal Council and Sanma Province
12:00-12:10 pm	6. Presentation by Lenakel Municipal Council and Tafea Province	Lenakel Municipal Council and Tafea Province
12:10-12:20 pm	7. Presentation by Shefa Province	Shefa Province
12:20-12:30 pm	8. Presentation by Malampa Province	Malampa Province
12:30-12:58 pm	9. Feedback-Q&A Session	Facilitator
12:58-13:00 pm	Closing Prayer	-
13:00-14:00 pm	Group Photo & Lunch	All participants



Department of Environmental Protection and Conservation,  
Ministry of Climate Change Adaptation, Meteorology and Geo-  
Hazards, Environment, Energy and Disaster Management (MOCCA)

2020