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Forward

Waste Management and Pollution Control is a priority for the Vanuatu government to help protect and conserve the natural environment for its today and tomorrow's generation's safety and success. This strategy is a huge milestone of establishment for the Department of Environmental Protection and Conservation (DEPC) developed and aligned with the National Sustainable Development Plan (NSDP), the National Environment Policy and Implementation Plan (NEPIP) 2016-2030 and the regional Cleaner Pacific 2025 strategy.

Firstly, Vanuatu is a developing country. With annual economic growth in infrastructure, it is our role to ensure proper waste management techniques and pollution control systems are enforced to keep our nature's environment clean and healthy. Previous experiences have shown that due to lack of a proper waste management and pollution control strategy, our environment has become constantly strewn with litter and uncollected garbage. Rubbish has been dumped in rivers, lakes, water ways, bushes, roads and public areas. This has become a public health problem and further damage to our environment due to the increase amounts of pollutants discharged.

This revised strategy is based on best practice approaches that ensures major negative aspects of waste disposal be addressed in both urban and rural communities of Vanuatu. Implementation of this strategy and enforcement of regulations under the Waste Management and Pollution Control Acts, will result in greater volumes of final residual wastes disposed at the landfills be significantly reduced. As a result, the present landfills and any future established landfills in Vanuatu will have an extended life expectancy in regards to filling up.

In closing, I refer to the acronym 'PAPA – Positive Attitude Positive Action – is the main guide of this strategy. Typically, PAPA describes the public's attitude towards waste disposal and pollutants discharged. As waste practitioners let us no longer allow poor waste disposal and poor waste management to take place in our streets, towns, villages and communities. I entreat you to have positive attitude in implementing our action plans outlined in this strategy to ensure a sustainable clean productive environment for all.



Mr. Reedly TARI

Acting Director – Department of Environmental Protection and Conservation

Acknowledgement

This first revised Strategy was prepared during the period of October 2014 to April 2016 to respond to the following objectives:

- (1) Develop a more detailed policy for solid waste minimization in Vanuatu within an Integrated Waste Management System
- (2) Input to National Waste Management Strategy (NWMS) the achievements in Solid Waste Management (SWM) attained both in PVMC and LMC since 2011.
- (3) Mid-term review and revision of the NWMS

This final revised strategy on “National Waste Management and Pollution Control strategy and Implementation Plan 2016-2020” has been developed to also cater for Pollution Control issues such as discharges of pollutants from different anthropogenic sources into the natural environment.

The government of Vanuatu greatly appreciates the generous support of the Government of Japan and other development partners for providing technical and financial support to the development and review of this sector into the National Waste Management and Pollution Control Strategy and Implementation Plan. The technical support provided by the Secretariat of the Pacific Regional Environment Programme (SPREP) has been instrumental in efforts to protect the environment throughout the management of waste and this support is expected to continue into the feasible future.

Lastly, to all our Vanuatu partners mainly government departments, provincial councils, municipal councils, private sectors, civil society organisations and Non-Government Organizations (NGOs), your support in this review and implementation is truly appreciated in advance.

With this National Waste Management and Pollution Control Strategy and Implementation Plan on hand, the Department of Environmental Protection and Conservation (DEPC) appreciates the support of all its development partners in providing assistance to this huge milestone. It is our expectation that this strategy and implementation plan will allow Vanuatu citizens to maintain a sound, practical and sustainable leading role in waste management and pollution control to protecting our beautiful environment.

Executive summary

Vanuatu, like many of its Pacific island neighbours, is undergoing a period of rapid social and economic development. This development leads to an increasingly affluent society, which also leads to increase in waste generation. If left unchecked, Vanuatu will not be able to keep up with waste generation and disposal, and any positive changes that have been made so far, will be overshadowed by the ill-effects of poor waste management. It is in this context, that a coherent waste management and pollution control strategy must be formulated to ensure that Vanuatu’s environment and public health are not adversely affected by the ongoing economic development.

This National Waste Management and Pollution Control Strategy (NWMPCS) represents the implementation of the 2001 National Waste Policy, and is being developed in the face of several improvements that have already taken place such as the upgrade of the Bouffa dumpsite into a semi- aerobic landfill, the provision of partial waste collection services in the urban centres, introduction of market waste composting and separate collection of aluminium cans in both Port Vila Municipal Council (PVMC) and Luganville Municipal Council (LMC) and more recently, the development of the Waste Management Act and the Pollution Control Act.

In fulfilling this purpose, the revised National Waste Management and Pollution Control Strategy and Implementation Plan 2016-2020 is aligned along with the National Environment Policy and Implementation Plan 2016-2030, the National Sustainable Development Plan (NSDP) 2016-2030, the regional Waste Management and Pollution Control Strategy 2016-2025 “Cleaner Pacific” 2025 and it also address commitments in the SAMOA Pathway, Sustainable Development Agenda 2030 and the sustainable Development Goals.

This revised NWMPCS has nine (9) objectives under seven (7) thematic areas. Within each thematic area, the current situation is reviewed to arrive at a number of recommendations which are collected during the final seminar on 19th of April 2016. These recommendations form the basis for further action as developed in the Implementation Plan.

Table 1: Thematic areas and objectives of the strategy

THEMATIC AREA	OBJECTIVES
Policy, Legislation and Enforcement	To support Waste Management (WM) and Pollution Control activities with practical, effective and enforceable legislation. To ensure environmentally sound long-term land use planning is the basis of all development decision-making and empower provincial and municipal planning authorities.
Sustainable Financing	To make waste management systems and programmes financially self-sustaining. (Establish incentive schemes that implement the polluter pays principle by encouraging cleaner production and waste recovery).
Capacity Development	Develop skilled and trained people in Vanuatu to effectively manage waste management and pollution control systems.
Waste minimization	To reduce the amount of waste generated and landfilled.
Integrated Waste management	To implement effective waste collection and disposal throughout Vanuatu and limit the impact of waste and pollution on urban areas and ecosystems. To improve Waste and Pollution Control management infrastructure and support sustainable operation and maintenance.

THEMATIC AREA	OBJECTIVES
National Coordination	To better coordinate national waste management activities and ensure that the NWMPCS is implemented and periodically reviewed and updated to achieve the stated goal and purpose.
Public Awareness	<p>To increase public awareness on their (provinces and municipal councils) WM responsibilities.</p> <p>To introduce and enhance community participation on waste management.</p>

The implementation of this Strategy will be coordinated by the DEPC. It should be noted, however, that the Strategy calls for the establishment of a National Waste and Pollution Control Coordinating Committee, which once established may be tasked with monitoring the implementation of the NWMPCS. In February 2016, a coordinating committee was established to work collaboratively with DEPC in strengthening coordination down to local government authorities (Provinces and Municipalities) as well as communities and private sectors. The coordination committee is formulated with in-line relevant agencies and stakeholders as listed in Appendix 1.

BACKGROUND

Country information and environment status:

Vanuatu is comprised of more than 80 islands with a total land area of 12,200km.¹ The current population is estimated at 271,000, approximately 75% of which live in rural villages.² Vanuatu is listed by the United Nations (UN) as a Least Developed Country (LDC) and is ranked first on the World Risk Index.³

Vanuatu's islands have a high degree of biological diversity and endemism and are recognised as a biodiversity hotspot.⁴ However, the high level of reliance on natural resources for livelihoods and food security is now being combined with a rapidly growing population in both urban and rural areas. This places additional pressures on the environment, particularly in relation to waste disposal and is resulting in a decline in the biodiversity within Vanuatu.⁵

The key challenges facing Vanuatu in the context of environmental management and development planning include rapid population growth and local population pressures; land tenure; water pollution, waste disposal and urbanisation; a lack of awareness and understanding about environmental problems; depletion of key species such as coconut crabs and mangroves; inappropriate land use practices that may result in erosion and degraded soils, contributing to impacts on coral reefs and other ocean resources; invasive species; loss of forests and biodiversity; the over-exploitation of natural resources and climate change.⁶

Language and Culture:

Though small, the islands hold exceptional cultural and linguistic diversity. For example, Vanuatu has 108 living languages: more per unit area than any other country;⁷ and over 80% of the population speak three or four languages.⁸ Traditional knowledge also remains highly valued and Vanuatu's diverse local governance systems include traditional chiefs as leaders at the village level, along with village, area and island councils.

Economic conditions:

In terms of the economy, the 2014 domestic economy reflected a real growth of 2.3%, indicative of the positive trends recorded since 2012.⁹ The service sector continues to be the dominant sector of the economy, contributing to 65% of the total Gross Domestic Product in 2014.¹⁰ The relatively small industrial sector continues to expand, as does the agriculture sector. Agriculture continues to expand mainly through the consistent improvement in value-added products. However, over 50 per cent of agriculture productions are informal activities which are driven by 75 per cent of the rural population.¹¹ These informal agricultural

¹ Vanuatu National Statistics Office, 2014 Statistical Pocket Book.

² Vanuatu National Statistics Office, 2014 Statistical Pocket Book.

³ Bündnis Entwicklung Hilft and the United Nations University; Institute for the Environment and Human Security, World Risk Report 2015.

⁴ Critical Ecosystem Partnership Fund, Ecosystem Profile: East Melanesian Islands Biodiversity Hotspot, 2012.

⁵ Vanuatu National Assessment Report 2010: 5 Year Review of the Mauritius Strategy for Further Implementation of the Barbados Programme of Action for Sustainable Development.

⁶ Vanuatu National Assessment Report 2010: 5 Year Review of the Mauritius Strategy for Further Implementation of the Barbados Programme of Action for Sustainable Development; and Robert Thistlethwait and Gregory Votaw, 1992, Environment and Development: A Pacific Island Perspective.

⁷ Critical Ecosystem Partnership Fund, Ecosystem Profile: East Melanesian Islands Biodiversity Hotspot, 2012.

⁸ Vanuatu National Statistics Office, Pacific Living Standards Survey 2013.

⁹ Vanuatu National Statistics Office, National Accounts of Vanuatu 2014 Annual Report.

¹⁰ Vanuatu National Statistics Office, National Accounts of Vanuatu 2014 Annual Report.

¹¹ Vanuatu National Statistics Office, National Accounts of Vanuatu 2014 Annual Report.

activities such as food production on small family plots and artisanal fishing form a vital part of Vanuatu's food security and can be linked to the high degree of biological diversity found across the islands.

Weather conditions:

The climate in Vanuatu is sub-tropical with fairly uniform temperatures year round and two defined seasons: the hot and wet season (November to April), and the cool or dry season (May to October). The warmest month is February, and the coolest is August. Temperatures can vary from 24°C to 30°C with a daily average of 26°C in the hot season¹².

Rainfall is heaviest in the hot season, generally in March, while the driest month is in August. On the island of Efate, annual rainfall on the windward side is between 2400mm – 3000mm per year, with half that amount recorded on the leeward side.

Volcanic eruptions

There is an ever-present danger of a major volcanic eruption from one or more of Vanuatu's active volcanoes. There are active volcanoes on several islands including Ambae, Ambrym, Lopevi, Tanna, Gaua, and Vanua Lava, in addition to underwater volcanoes.

Earthquakes and tsunamis

Vanuatu also lies on the Pacific Plate with a subduction zone to its west, and often experiences a number of earthquakes of varying magnitudes. For example, in 2009, Vanuatu experienced six earthquakes of magnitude 6.5 or greater. Vanuatu may also experience tsunamis as a result of earthquakes in other parts of the Pacific region and the world.

Cyclones:

The hot or wet season in Vanuatu is also the cyclone season. Vanuatu is located on a route occasionally traversed by cyclones, which by definition are associated with winds of at least 34 knots (62km/hr). The land and sea area of Vanuatu receives about 2-3 cyclones in a cyclone season, and the greatest frequency is in January and February. On average, Vanuatu and its marginal seas is a common route to some 20 to 30 cyclones per decade, with 3 to 5 causing severe damage.

On March 13 2015, Tropical Cyclone Pam struck 22 islands of Vanuatu as an extremely destructive category 5 cyclone. The cyclone swept through the southern portion of Vanuatu's islands with estimated wind speeds of 250km/h and wind gusts that peaked at around 320km/h. Following the cyclone's passage from Vanuatu, there were reports of significant damage. The storm brought down communication systems linking the islands, which hampered initial efforts to obtain a comprehensive understanding of the full scale of the disaster impacts. Severe and widespread damage was worse on the larger islands of Tanna, Erromango and Efate than on the smaller islands of Aneityum, Aniwa and Futuna in the southern region.

¹² Vanuatu Meteorological Services, Weather Update 2016, Bulletin.

A. INTRODUCTION

Pollution and the growing volumes of solid and hazardous wastes are major threats to the environments and sustainable development of Vanuatu. Globalisation is accelerating the transition of our urban communities towards consumer economies, with increasing urbanisation, migration, and participation in international trade. This is resulting in an escalation in the generation of solid and liquid wastes, and these increase the risk of coastal and marine pollution. The lack of controls on imported chemicals and the lack of capacity for managing pollutants threaten to undermine the quality and health of vulnerable ecosystems on which our people depend.

DEPC is mandated to take action on waste management and the control of pollution. The Department's focus is to improve national technical capacity to manage pollution, solid wastes and hazardous chemicals through provision of training, technical advice and support. DEPC also encourages the development of Provincial and Municipal Waste Management plans to support infrastructure and innovative funding measures, and the sharing of best practices across the islands of Vanuatu in order to support environmentally sound and sustainable waste management and pollution control. DEPC also supports renewed efforts in educating communities through national and other targeted awareness campaigns. With the support of bilateral and multilateral partnerships, the goal is for all local government authorities (Provinces and Municipal councils) to have waste management plans and practices in place to minimize terrestrial, atmospheric and marine pollution, hazardous waste, solid waste and other land-based sources of pollution.

Vision:

A clean healthy environment leads to productive sustainable development. Therefore our vision is ***“towards clean sustainable environment”***.

Overall Goal:

An environmentally sustainable Vanuatu, in which all types of wastes generated are reduced, collected, reused, recycled and treated by environmentally sound technologies suited to local conditions and waste going to landfill is minimized to the lowest possible amount.

Scope:

The strategy covers all sources of solid wastes (residential, commercial, institutional, industrial, disaster waste, medical waste, e-waste and scrap metal, and quarantine wastes), hazardous wastes (such as used-oil) and liquid wastes (mainly pollutants discharge to water sources – treated waste water discharges) and gaseous wastes (mainly emissions from vehicles and other air pollution sources of emission).

The following wastes are not covered in this strategy:

- Liquid wastes (such as raw sewage and septic sludge). This will be covered under the revised Public Health Act. Public Health Department is the lead coordinating agency.

- Gaseous wastes
- Hazardous wastes (such as Persistent Organic Pollutants, POPs). This will be addressed by the Stockholm Convention National Implementation Plan (NIP)

Purpose:

The purpose of this five year National Waste Management, Pollution Control Strategy and Implementation Plan 2016-2020 is to minimize the generation of waste and waste going to landfill, while maximizing the recovery of resources and improving the management of residual waste using environmentally sound techniques.

Objectives:

This National Waste Management and Pollution Control Strategy has nine specific objectives:

1. To support waste management and pollution control activities with practical, effective, enforceable legislation
2. To make waste management systems and programmes financially self-sustaining (establish incentive schemes that implement the polluter pays principle by encouraging cleaner production and waste recovery).
3. To develop skilled and trained people in Vanuatu to effectively manage waste management and pollution control systems
4. To reduce the amount of waste generated at source and land filled.
5. To implement effective waste collection and disposal throughout Vanuatu and limit the impact of waste and pollution on urban areas and ecosystems.
6. To improve waste and pollution control management, infrastructure and support sustainable operation and maintenance.
7. To better coordinate national waste management activities and ensure that the National Waste Management and Pollution Control Strategy is implemented and periodically reviewed and updated to achieve the stated goal and purpose.
8. To increase public awareness on their (local government authorities) waste management responsibilities.
9. To introduce and enhance community participation on waste management.

Strategy Development Process:

The following steps were taken to prepare the NWMS with the assistance of the Secretariat of the Pacific Regional Environment Programme (SPREP) and the Japan International Cooperation Agency (JICA):

(1) Original NWMS

- Holding a 5-day consultation workshop in Port Vila from 16-20 March 2009. This was attended by approximately 25 stakeholders from government ministries and departments, private sector, NGOs and community groups;
- Preparation of a draft of the strategy by SPREP based on information from the consultation workshop;

- One-day consultation workshop on 10 March 2010 to refine and finalize the strategy.

(2) Revised NWMS

- Holding a one day workshop in February 2014 to discuss on the achievements of the NWMS;
- Drafting the revised National Waste Management and Pollution Control Strategy and requesting comments from Stakeholders;
- Discussion of the revised National Waste Management and Pollution Control Strategy at a workshop in November 2015 to refine and finalize the revised strategy.
- Holding a one day final seminar presentation in April 2016 in Port Vila to discuss and finalize the implementation plans of the strategy

Time frame:

The original strategy covered the period 2011-2016 and its implementation was to be coordinated by the DEPC of the government of Vanuatu. However due to lack of specific human resources for waste management and pollution control within DEPC, provinces and municipal councils, the implementation of the strategy could not be sufficiently implemented.

The strategy called for a mid-term review, which has been included in the on-going J-PRISM project. As a result of the review, this revised five year strategy has been prepared "**National Waste Management, Pollution Control Strategy and Implementation Plan 2016-2020**". Monitoring and evaluation of the implementation of the strategy will be undertaken by the DEPC using the format proposed in Appendix 2, and updated as necessary.

B. WHERE ARE WE NOW?

1. Policies and legislation

I. Policies

The following national policies also address the issues of Waste Management and Pollution Control (WMPC):

- National Sustainable Development Plan 2030 (NSDP)
- National Environment Policy and Action Plans 2030 (NEPIP)
- National Biodiversity Strategy and Action Plans (NBSAP)
- Vanuatu Climate Change and Disaster Risk Reduction Policy (2016-2030)
- Vanuatu National Oceans Policy

II. Legislations

The following national legislations addresses the issue of Waste Management and Pollution Control (WMPC)

- Waste Management Act. No. 24 of 2014
- Pollution Control Act. No. 10 of 2013
- Environmental Protection and Conservation and Conservation Act [Cap 283]

III. Relevant Regional Policies

- Regional Waste Management and Pollution Control Strategy 2016-2025 “Cleaner Pacific 2025”
- SAMOA Pathway for sustainable development goals

IV. Relevant International Conventions or Multilateral Environmental Agreements (MEAs)

Table 2: List of MEAs implemented in Vanuatu

MEA	Date ratified, acceded, approved or accepted	Focal Point	Ratification, accession, approval or acceptance legislation
Stockholm Convention on Persistent Organic Pollutants	2005	DEPC	Stockholm Convention on Persistent Organic Pollutants (Ratification) Act No. 12 of 2005 Stockholm Convention on Persistent Organic Pollutants Stockholm, 22 May 2001 Adoption of Amendment to Annex A (Ratification) Act No. 5 of 2014 Stockholm Convention on Persistent Organic Pollutants Stockholm, 22 May 2001 Adoption of

MEA	Date ratified, acceded, approved or accepted	Focal Point	Ratification, accession, approval or acceptance legislation
			Amendments to Annexes A, B and C (Ratification) Act No. 6 of 2014
Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (Waigani Convention)	2007	DEPC	Waigani Convention (Ratification) Act No. 16 of 2007
International Convention for the Prevention of Pollution from Ships (MARPOL)	1989	DoPM	Maritime (Conventions) Act [Cap. 155]
Vienna Convention for the Protection of the Ozone Layer	1994	DEPC	Vienna Convention for the Protection of the Ozone Layer (Ratification) Act No.3 of 1994
Montreal Protocol on Substances that Deplete the Ozone Layer	1994	DEPC	Montreal Protocol on Substances that Deplete the Ozone Layer (Ratification) Act No.4 of 1994 The 1997 Montreal Amendment to the Montreal Protocol on substances that deplete the Ozone Layer (Ratification) Act No. 21 of 2010 The 1999 Beijing Amendment to the Montreal Protocol on substances that deplete the Ozone Layer (Ratification) Act No. 20 of 2010

*Other important relevant conventions yet to be ratified include; Basel Convention, Rotterdam Convention and Minamata Convention

Basel Convention is the control of transboundary movements of hazardous wastes and their disposal. It is also an international treaty that was designed to reduce the movements of hazardous wastes between nations, and specifically to prevent transfer of hazardous waste from developed to least developed countries (LDCs). It is important that Vanuatu government ratify this convention to ensure there is control of imported materials into the country such as second hand tyres and vehicles etc. due to lack of disposal or treatment facilities at the local level. Ratification of this convention will also allow Vanuatu to export its hazardous waste materials which cannot be treated within, such as lead acid batteries, to other regional member countries for further recycling and treatment purposes.

Rotterdam convention (on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade) is a multilateral treaty to promote shared responsibilities in relation to importation of hazardous chemicals. It is important that Vanuatu has a consent procedure for imports for certain hazardous chemicals into the country and to ensure there is an update National Chemical Profile.

The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury. The Convention draws attention to a global and ubiquitous metal that, while naturally occurring, has broad uses in everyday objects and is released to the atmosphere, soil and water from a variety of sources. Controlling the anthropogenic releases of mercury throughout its lifecycle has been a key factor in shaping the obligations under the Convention.

Major highlights of the Minamata Convention include a ban on new mercury mines, the phase-out of existing ones, the phase out and phase down of mercury use in a number of products and processes, control measures on emissions to air and on releases to land and water, and the regulation of the informal sector of artisanal and small-scale gold mining. The Convention also addresses interim storage of mercury and its disposal once it becomes waste, sites contaminated by mercury as well as health issues.

2. Technical capacity

Developing technical capacity for Provinces and Municipalities remains a national priority if they are to achieve nationally-sustainable waste and pollution management. The Agence Francais de Development (AFD) Regional Solid Waste Initiative has been instrumental in developing and delivering a regional waste management training-of-trainers (TOT) programme, with additional delivery supported by the GEF-PAS POPs Release Reduction Project in collaboration with the Fiji Nation National University (FNU) in Suva. Also through J-PRISM project Ni-Vanuatu have been trained in Japan and in the region, developed and mentored as waste management specialist, and are now utilized as resourced persons in other training programmes.

3. Institutional arrangements

The lead agency for waste management and pollution control issues in the national government is the Department of Environmental Protection and Conservation (DEPC) under the Ministry of Climate Change, Environment, Energy, Meteo and Disaster Management. Within the DEPC, the waste management and pollution control functions are carried out by the Division of Environmental Protection. In mid-June 2014, the laws for Waste Management and Pollution Control were gazetted.

The Waste Management Act No. 24 of 2014 defines who the Designated Waste Management Operators (DWMO) are. Under the Act, DWMO are the Provincial councils and the Municipal councils. The functions of the designated waste management operators are defined in sections 19, 20, 21 and 22. See Appendix 3.

Under the Pollution Control Act pollutants discharge from occupants of premises (including treatment plants) are required to take a permit before discharging pollutants into the environment. The Director of DEPC is mandated under the Act to develop and enforce prescribed guidelines and standards for premises, vehicles, vessels or aircrafts to discharge pollutants.

4. Municipal Solid Waste Management (MSWM)

Generation and composition

Municipal Solid Waste Management (MSW) in Vanuatu is managed by PVMC, LMC and LTMC (Lenakel Town Municipal Council). One of the activities under phase I of J-PRISM Project was to carryout waste characterisation studies within the three municipal councils to determine the amount and composition of waste generated. The data obtained during waste characterization surveys is useful for the organizations future planning to improve waste management within their respective service areas.

Table 3: Domestic Waste Composition in the three municipalities (2014)

Waste Category	PVMC (%)	LMC (%)	LTMC (%)	Comment
Vegetable/Putrescible	5	51	79	
Yard		12	5	Yard waste not separated in PVMC survey
Paper	5	2	2	
Cardboard		2		
Textiles	2	Others	Others	Textiles not separated for LMC and LTMC
Plastics	15	13	5	LMC: separated into PET1 & HDPE2, and LDPE6.
PET Bottles	1	6		LTMC: Plastics
Aluminum Cans	1	3	6	LTMC: separated into Metal
Tin & other Metals	5	5		
Glass ceramic	3	3		
Nappies	18			Not separated in LMC and LTMC surveys
Others	0	3	0	
Source: JPRISM Team, 2015				

Table two above shows that majority of the produced domestic waste is food waste followed by plastics, aluminum and tin containers. The data suggests that a strong recycling program focusing on the traditional recyclables (paper, plastics and glass) would go a long way to reducing the amount of waste ending up at the landfill. Encouraging the separation of kitchen and yard waste at the household level to feed animals or for composting, would further reduce waste to landfill.

Reduction, Reuse, Recycling and Return (3R + Return)

Recycling activities is not done in Vanuatu. In Port Vila, a private recycle company known as Recycle Corp Vanuatu collects and pay materials such as Copper (Cu), Brass, Aluminium (Al), Gear box, lead acid batteries, stainless steel, compressors, brass radiators, aluminium radiators and electric motors for storage and then export to overseas for further processing. Other electronic wastes such as old computers, keyboards, CPU and monitors are collected for free.

Table 4: Price of collected recyclable materials, March 2015

Name of Recycling Company	Recycling item	Value (Vatu)
Recycle Corp Vanuatu	Copper (Cu)	200vt/kg
	Brass	120vt/kg
	Aluminum (Al)	40vt/kg
	Gear Box	10vt/kg
	Lead acid batteries	10vt/kg
	Stainless steel	40vt/kg
	Compressors	10vt/kg
	Brass radiators	120vt/kg
	Aluminum radiators	100vt/kg
	Electric motors	10vt/kg

In addition, there are two brewers/bottling companies in Vanuatu, Vanuatu Brewing Limited (VBL) and Vanuatu Beverage (VB), and both companies often reuse glass bottles as part of their normal operations. A deposit is paid on each bottle when purchased from wholesale and retail locations and this is refunded when the bottle is returned for reuse.

Wan Small Bag, a Port Vila-based NGO that promotes awareness in certain areas, is also engaged in a community initiative to collect plastics, cans, scrap steel, packaging waste and diapers from seven communities in Port Vila. The recyclable material collected is transported to the recycler (Recycle Corp) and the remainder goes to the Bouffa Landfill. This is a good initiative, however, throughout the country, the integrated waste management approach at the community level, which involves recycling, reuse and waste reduction seems to be absent.

PVMC and LMC have introduced projects to separate and compost green wastes from the markets and to separate aluminum cans in the generation areas. PVMC transports the separated market green wastes to Vanuatu Direct, a private company which composts the green waste and uses it in its agricultural activities. LMC has set up a composting facility at the market and is composting the green waste by itself and selling to users. Both PVMC and LMC have set up 3 and 28 cages respectively in different areas of the cities for citizens to separate and discharge their aluminum and tin containers. Recycle Corp purchases the separated containers and transports them to their warehouses for processing and export. The money is used by the communities for social activities.

LMC has other programs for separation and collection of toner cartridges and cardboard as well.



Composting and nursery practice at Kamewa School, Santo



Household nursery from composting organic wastes, Port Vila

Waste collection

Solid waste collection services are usually provided in the Provincial Centres where the population density tends to be higher than in rural areas. In Port Vila Municipality, waste collection is scheduled for two to three times per week using a combination of compactor vehicles and tipper trucks. In LMC a plan to collect household waste at least one day per week has been introduced in 2015. However, in the other provincial centres smaller pickup trucks are commonly used. In general, the waste collection service can be unreliable and inefficient. The collection routes are now starting to improve using the techniques of time and motion studies and the use of GPS tracking system implemented by PVMC.

PVMC and LMC have also introduced the use of the prepaid bag system to improve their collection services. PVMC uses two different sized yellow bags to collect wastes from residential and commercial areas and buildings. While the LMC only uses one size of red bag to collect wastes from the residents and commercial premises. Luganville red bag begun its implementation in 2012 after a long period of awareness and the establishment of their red-bag bye-law. Port Vila yellow bag system begun in early 2014 with full implementation from September 2015. The main purpose of using the pre-paid bags by the two councils is to encourage source minimization like home composting and aluminium can separation so that final disposal of waste at the dumpsite or landfill is at least minimum.

Table 5: Size and price of the Pre-Paid bags practiced by PVMC and LMC

Name of Municipal Council	Name of Bag	Size of Bag	Price/Bag (VT)	Price/Roll (VT)
PVMC	Yellow Bag	100kg	100	1,500
		70kg	80	850
LMC	Red Bag	15kg	80	1,200
			70	1,400 (20 bags)
			60	30,000 (500 bags/carton)

In outer Islands apart from PVMC, LMC and LTMC, collection is done by the provincial council. In most times, collection schedules is often once per month mainly in the provincial centers. For rural areas, there is no proper collection system arranged for wastes.

Waste disposal

The usual practice of waste disposal is open burning. In Port Vila, most solid wastes are disposed at Bouffa semi-aerobic landfill. In Luganville wastes are disposed in a controlled disposal site managed by the LMC. In other Provincial centres, wastes are disposed openly at an assigned area. Backyard disposal is still in practice in most homes throughout Vanuatu.

Quarantine wastes

Quarantine wastes in Port Vila and Luganville are managed by the Department of Biosecurity Vanuatu (DBV) using pickup trucks. The DBV in Vila have an incinerator installed in their compounds but due to fuel budget constraints, all quarantine wastes collected from the ports and airports are being treated through open fire burning at the landfill.



Bouffa semi-aerobic landfill, Port Vila

Hazardous waste burning

5. Hazardous Waste Management (HWM)

a) Asbestos

Asbestos refers to a group of naturally-occurring fibrous minerals, which were used globally to manufacture construction, insulation, and fire-resistant products. The most common types of asbestos are chrysotile (white asbestos), crocidolite (blue asbestos) and amosite (brown asbestos).

Asbestos Containing products Materials (ACM) such as cement water pipes, corrugated roof sheets, floor tiles, wall claddings, and insulation (e.g. boiler insulation), were widely used in the construction sector, prior to being phased-out due to health concerns. Exposures to asbestos fibers causes human cancer of the lung, larynx, and ovaries, and other diseases such as mesothelioma, asbestosis, and plaques. Ni-Vanuatu may unknowingly become exposed to asbestos fibers when working with ACM (e.g. during roof repairs, or boiler repairs), or during the aftermath of a natural disaster involving disturbance and dispersal of ACM.

Table 6: Confirmed asbestos-containing materials in Vanuatu

	High Risk	Moderate Risk	Low Risk	Very Low Risk	Total
Estimated quantities of confirmed ACM (M²)	2,000	17,000	300	30	19,330

Source: (Contract Environmental Ltd, Geoscience, 2015)

Note: High risk = significant potential to release asbestos fibres if distributed and significant health risk to occupants of affected buildings.

The PacWaste project will support removal and disposal of stockpiles, and in-situ remediation of ACM in the affected areas. The affected targeted areas assisted under this project are: Malapoa College, Vila Central Hospital, Onesua Presbyterian College and Paunagisu Health Centre.

b) Electrical and Electronic Waste

E-waste typically refers to end-of-life electrical and electronic products including computers, printers, photocopy machines, television sets, washing machines, radios, mobile phones and toys, which are made of sophisticated blends of plastics, metals, and other materials. Due to the demand for newer technology, the life-span of electrical and electronic products is progressively decreasing. Consequently, older and out-dated items are becoming obsolete and being discarded in large quantities and at increasing rates worldwide.

The extent of the E-waste problem in Vanuatu has not been comprehensively documented, but the limited information available indicates that the use of electrical and electronic equipment is increasing significantly on an annual basis in the country. Electrical and electronic waste contains hazardous but also valuable and scarce materials such as metal and alloys which can be recovered and recycled. Proper management and disposal of E-waste is important to the long-term protection of the environment, as well as to the maintenance of long-term sustainability.

PacWaste project also supports the e-waste removal in Vanuatu targeting mobile phones. An MOU is set to be signed by July between DEPC, SPREP, Recycle Corp and Telecom Vanuatu Limited (TVL) to collect used mobile phones throughout Vanuatu for shipment to overseas for further recycling process.

c) Medical Waste Management

Medical wastes generated from the hospitals and health care centres are either incinerated or openly burned in a dumpsite. These wastes include infectious wastes, body part wastes, chemical or pharmaceutical wastes, expired pharmaceuticals, soiled bandages and dressings, contaminated sharps and radioactive and cytotoxic wastes and broken thermometers. There is currently ineffective separation of medical waste at source (hospitals, clinics and health care centres). Landfill dumping or open fire burning of medical wastes is still a common practice in Vanuatu. These may result in unacceptable community health risks and expired drugs may be acquired by children or scavengers if disposed in a landfill or open dump site. On the other hand, Vila Central Hospital, where medical waste incinerators exist, they are often incorrectly operated, have technical problems or there is a lack of trained operators or a shortage of money for diesel fuel – hence open fire burning of the medical waste is a common practice.

In 2015, the EU has donated five (5) incinerators to five different hospitals in Vanuatu. These hospitals include; Vila Central Hospital (VCH), Northern District Hospital (NDH), Lolowai Hospital, Norsup Hospital and Lenakel Hospital. Trainings were also conducted for medical wastes and incinerator handlers in these five respective hospitals on February 2016 upon their incinerator installation at the respective hospitals.

Table 7: Healthcare Waste generation in Vanuatu

Average Daily HCW (kg/occupied bed)	1.0
Stockpiles (tonnes)	0
Source: Environ Australia Pty Ltd. (2014). <i>Baseline study for the Pacific hazardous waste management project – healthcare waste</i> . Report prepared for the SPREP/EU PacWaste Project.	

A number of issues were observed during the baseline study at the five respective hospitals in Vanuatu:

- Poor record-keeping of wastes volume data by hospitals;
- Poor maintenance of existing incinerators due to insufficient funding provisions and lack of appropriate maintenance expertise
- Insufficient allocation of resource for general management of HCW
- Little understanding of HCW treatment costs; and
- Breakdown in communication between national regulatory bodies (Ministries of Health) and principal HCW generators (hospitals).

The regional PacWaste project funded by the European Union from 2015 – 2020 will mainly address many of these issues for priority hospitals, within the available budget. However, there will continue to be a need for additional interventions (e.g. hospitals not covered by PacWaste, or healthcare waste water) to further reduce the public health risks.

d) Used Oil

Used oil is any semi-solid or liquid used product consisting totally or partially of petroleum-based or synthetic oil, oily residues from tanks, and oil-water mixtures (Technical Working Group of the Basel Convention, 1997). Used oil includes-but is not restricted to-used engine oils, transmission fluids, refrigeration oils, compressors oils, metal working fluids and oils, electrical insulating oil, and hydraulic fluids. Environmental contamination occurs when used oil is dumped in drains, on the ground, in aquatic environments; used as a dust suppressant or to mark sports fields; applied to wood as a preservative; or burnt in ill-equipped facilities causing the release of uPOPs such as dioxins and furans.

There is still no established management system for Used-Oil in Vanuatu. GEFPAS project is currently assisting regional countries to improve management of used oil. In 2013, under the AFD regional project, SPREP has been assisting Vanuatu in developing a management plan for waste oil. Although the project has ended in 2015 and there is still need for further assistance to finish the task between 2016-2017. GEFPAS project will be assisting Vanuatu to complete the project to ensure a Used-Oil stewardship collection system is established in Vanuatu.

Table 8: Used Oil Statistics for Vanuatu

Theoretical Annual Generation (A)	Amount reused or returned overseas on a continual basis (B)		Total Recycling/Return Rate	Stockpiles (estimated as of 2013/2014)
Litres/year	Litres/year	Management Method	%	Litres
247,500	125,000	Exported to India	51%	0

Source: National Used Oil Audits completed by SPREP during implementation of the SPREP/AFD Regional Solid Waste Management Initiative, and the SPREP/EU Pacific Hazardous Waste Management Project

6. Liquid waste management

Liquid waste management especially pollutants discharged by waste water will be covered under this strategy. Vanuatu has uniquely fragile water resources due to its size, lack of natural storage, competing land uses and vulnerability to natural hazards. Pollution of freshwater resources due to settlements and other developments can have a significant impact on public health, quality of life, the environment and on economic development. The main types of liquid wastes and pollutants threatening Vanuatu include increased loads of nutrients, sediments and pesticides in sewage and storm water runoff and in agricultural runoff. Urbanization, rural development, growing populations, climate change and increased demand from industry and agriculture is putting further pressure on the national’s freshwater resources, threatening the long term viability of communities and islands.



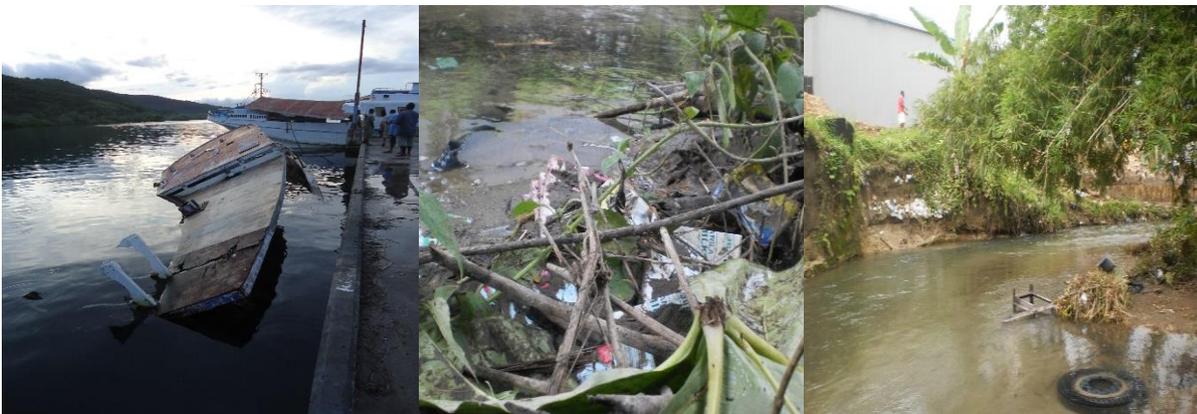
Waste water discharged directly into Tagabe river causing pollution.

7. Marine and terrestrial pollution

Marine Pollution is recognised as one of the main threats to Vanuatu’s waters. Shipping is a significant source of marine pollution which has been to date the main focus of Vanuatu in developing its NATPLAN. In the last devastating damage caused by Cyclone Pam in early 2015 mainly in SHEFA and TAFEA provinces, a number of ships were wrecked along the shoreline near the Port Vila harbour. National arrangements for ship wrecks removals are still unclear. The Shipping activity is coordinated under the Ports and Marine department. The ship wreck with reports of oil spillage along the Port Vila harbour has caused significant pollution for the marine environment.

Other useful regional resources include:

- Pacific Oceans Pollution Prevention Programme (PACPOL) Strategy 2010-2014
- Convention on Anti-fouling Systems 2001;
- Protocol on Hazardous and Noxious Substances;
- Bunkers Convention
- Ballast Water Convention 2004
- Ship Wreck Removal Convention.
- Regional Reception Facilities Plan
- Marine Debris Pollution in the Pacific
- PACPOL Strategy and Work Plan 2015-2020
- Regional Strategy WWII Wrecks
- Regional Strategy to address Shipping Related Invasive Marine Pest in the Pacific Islands (SRIMP-Pac)



Ship-wreck at Litzlitz warf, Malekula

Solid waste disposed at Tagabe river causing pollution.

8. Disaster waste management

Natural disasters such as cyclones, floods, and tsunamis can generate large quantities of solid and liquid wastes which can pose risks to public health through direct or vector-induced exposure to uncollected hazardous wastes. Waterways, agricultural areas, and communities are also at risk of contamination.

Vanuatu does not have a clear coordination mechanism for disaster waste. In the recent hit by category 5 cyclone Pam in 2015, disaster waste is a big issue for the PVMC, SHEFA and TAFEA Provinces. JICA through J-PRISM project and SPREP have assisted the government to ensure disaster wastes is handled and managed efficiently during that devastating period.

Recently, with development of Waste Management Plans by the Provinces and Municipalities it also include disaster waste management activity into their respective plans. National coordination for disaster waste management should be under the National Disaster Management Office also under the Ministry of Climate Change, Environment, Energy, Meteo and Disaster Management.

C. WHERE DO WE WANT TO GET TO?

4.1 Guiding Principles

To achieve our vision and goals, the DEPC and Local government authorities (Province and Municipal councils) will adhere to the following guiding principles (values) in line with the Cleaner Pacific 2025 strategy, in no specific order of priority:

Table 9: Guiding Principles in Waste Management in Vanuatu

Guiding Principle	Description
PRINCIPLE 1: Reduce, Reuse, Return (3R + Return)	In prescribing waste management interventions, the preference shall be to reduce the generation of waste and pollutants; to reuse if appropriate and safe to do so; to recycle domestically when technically and economically feasible; and finally to return waste resources to appropriate recycling facilities in other countries. Residual waste that cannot be reused, recycled, or returned for recycling, shall be disposed of in an environmentally-sound manner.
PRINCIPLE 2: Product Stewardship	Those involved in producing, importing, selling, using and disposing of products have shared responsibility to ensure that those products or materials are managed throughout their lifecycle in a way that reduces their impact on the environment and on human health and safety.
PRINCIPLE 3: Polluter Pays Principle	Waste producers and polluters should pay the cost of managing their wastes, or cleaning up the pollution and remediating associated environmental damage.
PRINCIPLE 4: Proximity Principle	The treatment and disposal of wastes and pollutants should take place at the closest possible location to the source, in order to minimize the risks involved in its transport.
PRINCIPLE 5: Transparency	All waste management activities shall be conducted in an open and transparent manner
PRINCIPLE 6: Public consultation and participation	Public consultation shall be integrated into the planning of national and regional waste management and pollution control activities, and participants shall be given the opportunity to provide informed input, which shall be considered as advice by relevant decision makers. Participants shall be informed of the results of the consultation process.
PRINCIPLE 7: Multi-sectorial approach	Waste management and pollution control approaches shall involve multiple sectors (such as climate change, biodiversity, health, tourism, biosecurity, customs and agriculture) in order to improve the success and effectiveness of interventions
PRINCIPLE 8: Nationalism	National cooperation and collaboration through genuine partnerships shall be undertaken where appropriate, to implement national efforts, overcome common constraints, share resources, and harness shared strengths.
PRINCIPLE 10: Precautionary approach	When an activity may lead to unacceptable but scientifically-uncertain harm to human health or the environment, actions shall be taken to avoid or diminish that harm without having to await the completion of further scientific research.
PRINCIPLE 11: Adherence to regional and international conventions	Vanuatu shall abide by its obligations to regional and international treaties related to waste, chemicals, hazardous waste and marine pollution.
PRINCIPLE 12: Public-private partnership	The comparative and competitive advantages of the private sector shall be harnessed to improve the delivery of waste management and pollution control services through a contractual relationship between private and public entities.
PRINCIPLE 13: Selection of appropriate and affordable technology	Selection (development and/or transfer) of environmentally sound technologies for waste management and pollution control shall fully consider the prevailing socio-economic conditions and capacity of local authorities, and where deemed necessary, shall be part of an overall management strategy that prioritizes public health and environmental protection, sustainability, and compliance with

	international and regional treaties (such as reduction in greenhouse gas and ODS emissions and UPOPs generation)
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4.2 Thematic areas

Table 10: Strategic Goals for Waste Management in Vanuatu

Strategic Goals	Description
✓ Policy and legislation	The two laws, Pollution Control Act No. 10 of 2013 and Waste Management Act No. 24 of 2014 addresses the roles and responsibilities for different agencies and the general public, as well as identify appropriate fines and penalties to ensure management of waste and pollutants to the receiving environment is controlled.
✓ Sustainable financing	Maximize donor financing and national budget financing and partnership to improve waste management, while working towards a system of 100 percent sustainable financing for waste management and pollution control from internal sources and potential revenue streams such as the Container Deposit Legislation scheme over the long term.
✓ Capacity development	Improve institutional capacity in the lead waste management entities i.e. DEPC, Provincial centers and municipalities for waste management and pollution control
✓ Waste minimization	Better awareness of waste minimization techniques, including source separation among all Ni-Vanuatu. Incentives created to encourage waste minimization, reuse and recycling to strengthen existing activities and mechanisms established and strengthened to control importation and production of problematic items and ease exportation of the recyclable materials through revision of relevant tax laws.
✓ Integrated waste management	Effective and efficient collection service implemented for the main urban and provincial centres. Environmentally sound and technologically-appropriate disposal facilities for solid waste, hazardous wastes and liquid wastes.
✓ National coordination	Stronger cooperation and collaboration among the responsible agencies for the management of the different types of wastes, and between the agencies, NGOs and private companies for education and awareness. Members of the present J-PRISM Counterpart team may be recruited to the proposed National Waste Management and Pollution Control Committee. Waste and Pollutants management in terms of funding resources should be seen as a high priority by all levels of government. Increase the budgetary allocation to DEPC for national Waste management and environmental protection activities.
✓ Public awareness	Develop a Waste and Pollution public awareness plan; the persons in charge, media to be used, budget, messages and implementation plan. Identify specific waste and pollution management responsibilities to be entrusted to the communities and prepare the implementation plan. Establish cooperation and partnerships with the private sector on public awareness.

D. HOW WILL WE GET THERE?

Multi-disciplinary approaches to reducing and managing waste and pollutants must be pursued during implementation of the NWMPCS to maximize the potential environmental benefits, and enhance the sustainability of outcomes. For example, approaches such as integrating climate change considerations into waste infrastructure planning can offer significant benefits for disaster risk reduction, biodiversity conservation, and waste management.

IMPLEMENTATION PLAN 2016-2020

Table 11: Implementation Plan for Thematic Area 1

Key: **Green** text: included in the NSDP

Purple text: included in the NEPIP

THEMATIC 1: POLICY, LEGISLATION AND ENFORMENT						
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget	
To support Waste Management (WM) and Pollution Control Activities with practical, effective and enforceable legislation	By 2017, VAT Act is revised to facilitate recycling of scrap metal	Revised VAT Act to facilitate recycling of scrap metal	VAT Act in place and enforced.	DEPC, Customs Dept, SLO, private sector, development partners.		
	By 2018, authorized officers are appointed to enforce the Pollution Control Act and the Waste Management Act	Appointment of authorized officers	Appointment Letter from DEPC Director	DEPC, PSC, Police Service Commission, PGCs, MCs	20,000	
	By 2018, the National Implementation Plan for POPs is updated and enforced.	National Plan for Implementation of the Stockholm Convention on POPs in 2016	Endorsement and implementation of the NIP for POPs	DEPC, MoH, DoB, private sector, NGO, development partners	200,000	
	By 2018, landfill guidelines are developed and implemented	Develop landfill guidelines for semi-aerobic landfill	Landfill guideline established and implemented.	DEPC, PGs, MCs, and development partners	100,000	
	By 2018, Waste Oil stewardship system is established and enforced	Conduct consultation with stakeholders and inform them about the stewardship system.	Finalize Waste Oil Stewardship collection system for Vanuatu	Waste Oil Stewardship system established and implemented.	DEPC, MCs, PGs, Private sector, Development partners	100,000
	By 2019, Policy and procedures for managing disaster waste is developed and approved	Convene a stakeholder meeting to establish a disaster waste coordinating team under the current NDMO policy.	Meeting convened with minutes	NDMO, DEPC, PGCs, MCs, Private Sector, CSOs, development partners	50,000	
	By 2020 100% of provincial governments have a Waste Management Plan	Finalize solid Waste Management Plans	Number of Waste Management Plans approved by	PGCs, MCs, DEPC, MoH, BV, development partners,	300,000	

THEMATIC 1: POLICY, LEGISLATION AND ENFORMENT						
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget	
	By 2020, provincial governments have implemented 20% of their Waste Management Plans		PGCs and MCs	private sector, communities		
	By 2020, there are six environmental guidelines in place	Develop waste and pollution regulations	Number of environmental guidelines developed under Pollution (Control) Act, Waste Management Act and Ozone Layer Protection Act	DEPC, SLO, PWD, DGMWR, PPU, Tourism, DoPM, MCs, PGCs, VFD, DOF, DoL, private sector, public, MCCA, VIPA, development partners	50,000	
		Develop guidelines				
	By 2020, Waste Regulations are in force and implemented	Develop Waste Regulations	Number of Waste Management Operators Licensed.	DEPC, SLO, PGCs, MCs, MoH, BV, private Sector, Development Partners.		
	By 2020, at least two pollution guidelines/standards are in force.	Develop standards on the design and performance of sanitation systems and the types of sanitary devices and standards for sanitary devices for use in Vanuatu	Number of pollution guidelines and standards developed	DoH, DEPC, DLA, MIPU, private sector, public, NGOs, CSOs, development partners, PGCs, MCs	50,000	
		Identify priority areas for guidelines and standards				DEPC, MCs, PGCs, BV, MoH, DGMWR, NGOs, CSOs
		Develop guidelines and standards for priority areas				DEPC, MCs, PGCs, BV, MoH, DGMWR, NGOs, CSOs public, private sector, development partners
		Implement and ensure compliance with guidelines and standards.				

THEMATIC 1: POLICY, LEGISLATION AND ENFORMENT					
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget
	By 2020, vehicle emissions standards are developed and included in annual roadworthy inspections	Develop vehicle emission standards	Proportion of vehicles that comply with emission standards.	PWD, DEPC, VNSO, MCs, PGCs, MoH, DoPM, industry, private sector, development partners	50,000
		Purchase monitoring equipment			
	By 2020, a NATPLAN (as required under the International Convention for the Prevention of Pollution from Ships (MARPOL) is approved.	Finalize and implement Oceans Policy	Proportion of Oceans Policy implemented	DEPC, DoFA, SLO, MCCA, Police, MCs, PGCs, DoF, VFD, DoPM, Tourism, Customs, BV, NGOs, CSOs, MARPOL Secretariat	50,000
		Finalize the draft NATPLAN	NATPLAN approved		
To ensure environmentally sound long-term land use planning is the basis of all development decision-making and empower provincial and municipal planning authorities.	By 2018, amendments to the Public Health Act are gazetted.	Develop standards on the design and performance of sanitation systems and the types of sanitary devices and standards for sanitary devices for use in Vanuatu	Design and performance standards for sanitation systems and standards for sanitary devices developed.	DoH, DEPC, DLA, MIPU, Private sector, public, NGOs, CSOs, SLO, development partners	100,000
	By 2020, standards for sanitation systems are developed.				
	By 2020, at least two pollution guidelines/standards are in force	a) Develop standards on the design and performance of sanitation systems and the types of sanitary devises and standards for sanitary devices for use in Vanuatu.	Number of pollution guidelines and standards developed	DoH, DEPC, DLA, MIPU, private sector, public, NGOs, CSOs, development partners, PGCs, MCs	50,000
b) Identify priority areas for guidelines and standards					
c) Develop guidelines and standards for priority areas					

THEMATIC 1: POLICY, LEGISLATION AND ENFORMENT					
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget
		d) Implement and ensure compliance with guidelines and standards/		CSOs, public, private sector, development partners.	
					Total = 1,120,000

Table 12: Implementation Plan for Thematic Area 2

Key: Purple Text: Included in the NEPIP

THEMATIC 2: SUSTAINABLE FINANCING					
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget
To make waste management systems and programmes financially self-sustaining. (Establish incentive schemes that implement the polluter pays principle by encouraging cleaner production and waste recovery)	By 2017, identify investment opportunities from bilateral, multilateral, international agencies for waste management and pollution control	Establish private-public partnerships in Vanuatu	Signed agreement on partnership	DEPC, PGs, MCs, private sectors, NGOs, communities and donor partners	500,000
		Secure investment opportunities	Availability of funds and other resources for waste management and pollution control		
		Establish waste and pollution control permit allocation in Environment Trust fund 2015	Waste and pollution control permit fees collected directed to Environment trust fund.		
	By 2020, an incentive scheme is established under the Waste Management Act	a) Review previous consultants reports (e.g. on container deposit legislation and waste oil recycling)	Regulations are in place.	DEPC, SLO, Customs Dept, private sector, communities, BV, MoH, PGCs, MCs, DGMWR, PWD, NGOs, CSOs, DoPM, MoE, VCCI, NDMO and development partners	100,000
		b) Develop a Container Deposit regulation to support the polluter pays principle			
					Total = 600,000

Table 13: Implementation Plan for Thematic Area 3

Key: **Green** text: Included in the NSDP

Purple text: Included in the NEPIP

THEMATIC 3: CAPACITY DEVELOPMENT					
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget
To develop skilled and trained people in Vanuatu to effectively manage waste management and pollution control systems.	By 2016, a Senior Chemical and Ozone Officer is appointed by PSC to enforce the Ozone Layer Protection (OLP) Act and Regulation	Recruitment of the Senior Chemical and Ozone Officer at DEPC by PSC	Appointment Letter from PSC	DEPC, PSC and MOCCE CSU	
	By 2016, a Pollution Control Officer is appointed by PSC to enforce the Pollution Control Act	Recruitment of the Pollution Control Officer at DEPC by PSC	Appointment Letter from PSC	DEPC, PSC and MOCCE CSU	
	By 2018, at least 20% capacity for enforcement of Waste Management and Pollution Control laws is enforced	Identify authorized/enforcement officers from relevant agencies (Health Dept, Police, customs etc.) and train them on aspects of enforcing the legislation through training workshops.	Number of enforcement officers trained and certified.	SLO, DEPC, MoH, PGCs, MCs, Police commission, Customs, development partners	200,000
	By 2019, a waste management training module is developed and available at the local institution	Develop and deliver Training of Trainers (TOT) program on waste management, pollution control and clean production.	Course material, syllabus, official course schedule	DEPC, PGs, MCs, VNTC, VIT, APTC, TVET, MoE, VQA	100,000
	By 2020, a terms of reference is produced to assess the institutional capacity for DEPC and the councils waste management (in particular policy development and planning, funding and assessment,	Develop institutional capacity for waste management at the municipal, provincial and government levels.	Capacity assessment report produced.	DEPC, PGs, MCs, development partners	

THEMATIC 3: CAPACITY DEVELOPMENT					
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget
	project cycle management)				
	Tools and opportunities provided by international conventions are used (e.g. funding opportunities, technology, partnerships etc.).	<p>a) Attend meetings and workshops on international conventions and treaties</p> <p>b) Participate in regional meetings and activities</p> <p>c) Access funding available under international systems to implement national activities to meet international obligations</p>	Number of meetings and workshops on international conventions and treaties attended	DEPC, PMO, DoFA, MCCA, NAB, VFD, DoPM, other relevant government agencies, convention secretariats, regional organisations (e.g. SPREP, SPC), development partners, NGOs, CSOs	
	By 2020, 70% of environmental obligations within international conventions and treaties are incorporated into Corporate Plans	<p>a) Identify obligations within international conventions and treaties</p> <p>b) Amend Corporate Plans and Business Plans to include obligations</p>	Number of environmental obligations within international conventions and treaties incorporated into Corporated Plans	Relevant government agencies	1,000,000
					Total = 1,300,000

Table 14: Implementation Plan for Thematic Area 4

THEMATIC 4: WASTE MINIMIZATION					
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget
To reduce the amount of waste generated and landfilled.	By 2018, a waste minimization plan is developed and implemented. (Includes, 3Rs, Composting, characterization, source separation etc.)	Develop a waste minimization plan.	Endorsed Waste Minimization Plan.	DEPC, PGCs, MCs, Private Sector, NGOs, Development Partners.	100,000
					Total = 100,000

Table 15: Implementation Plan for Thematic Area 5

THEMATIC 5: INTEGRATED WASTE MANAGEMENT					
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget
To implement effective waste collection and disposal throughout Vanuatu and limit the impact of waste and pollution on urban areas and ecosystems.	By 2018, establish waste collection services in the provincial centers and municipal councils	Develop collection system.	Collection system established	DEPC, PGs, MCs, development partners	100,000
	By 2020, all provinces has at least 1 or 2 approved treatment and storage facility.	Develop and establish appropriate treatment and storage facilities in consultation with relevant stakeholders.	Number of treatment and storage facility established	DEPC, PGs, MCs, MIPU, customs dept. development partners	100,000
To improve waste and pollution control management infrastructure and support sustainable operation and maintenance.	By 2019, New Pollution Control equipment's installed for monitoring and compliance	Secure with development partners and government on financing of new pollution control monitoring equipments	Installation of Pollution Control Monitoring equipments	DEPC, PGs, MCs, MIPU, customs dept. development partners	500,000
	By 2019, install weighbridge at the Bouffa landfill for waste data and information	Develop concept note and proposal for funding.	Weighbridge purchased and installed.	DEPC, PGs, MCs, development partners	500,000
	By 2020, Luganville and Lenakel dumpsites are upgraded into landfills	Develop and establish landfills for Luganville and Lenakel.	Landfills established and in operation.	DEPC, PGs, MCs, MIPU, development partners	1,000,000
					Total = 2,200,000

Table 16: Implementation Plan for Thematic Area 6

THEMATIC 6: NATIONAL COORDINATION					
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget
To better coordinate national waste management activities and ensure that the NWMS is implemented and periodically reviewed and updated to achieve the stated goal and purpose.	By 2017, a national waste management and pollution control coordinating committee is established.	Develop TOR and appointment letters for the coordinating committee members	Committee launched for coordination	DEPC, relevant government agencies and development partners	10,000
	By 2018, develop an environmental monitoring program for closed dumpsites, existing dumpsites and landfills and other contaminated sites.	Develop a monitoring program	Monitoring program developed and implemented	DEPC, relevant government agencies and development partners	100,000
	By 2018, establish multi sectorial partnerships in Vanuatu (NGOs, local business community)	Develop and sign MOUs and based on discussions	Number of MOUs and agreements	DEPC, PGs, MCs, NGOs, private sector, development partners	20,000
					Total = 130,000

Table 17: Implementation Plan for Thematic Area 7

Key: **Green text:** Included in the NSDP
Purple text: Included in the NEPIP

THEMATIC 7: PUBLIC AWARENESS					
Objective	Targets	Activities	Indicators	Key Partners	Indicative Budget
To increase public awareness on their (provinces and municipal councils) waste management responsibilities	By 2017, improve awareness on the responsibilities of the designated waste management operators under the Waste Management Act No. 24 of 2014	Develop awareness materials and disseminate to relevant stakeholders.	Awareness materials developed and disseminated	DEPC, PGs, MCs, NGOs, private sector, development partners	200,000
	By 2020, at least one school in each province is an environment model school and environment ambassador (Clean School Programme)	a) Identify schools to be model schools and environment ambassadors	Number of model schools implementing environmental 3Rs (Reduce, Reuse, Recycle) programmes.	DEPC, MoE, MALFFB, DGMWR, SPREP, MCCA, development partners, NGOs, CSOs, VANGO, schools, communities, vocational training centres.	300,000
		b) Hold regular information sessions with model schools and environment ambassadors			
To introduce and enhance community participation on waste management.	By 2018, develop a waste and pollution public awareness plan (Clean school and clean community programme)	Develop a public awareness plan for Waste Management and Pollution Control	Awareness plan endorsed and implemented	DEPC, PGs, MCs, NGOs, private sector, development partners	50,000
	Ongoing annual Clean up Campaigns for communities, schools and provincial centers.	Develop annual clean-up campaign plan	Campaign plan implemented	DEPC, PGs, MCs, NGOs, private sector, development partners	200,000
					Total = 750,000

OVERALL TOTAL COST OF IMPLEMENTATION = 6,200,000 Vatu

Monitoring and Evaluation

Monitoring and Measuring Performance

To monitor the strategy, DEPC will require Provinces and Municipalities to provide annual report of their WMPs. The purpose of the WMPs is to ensure effectiveness and efficiency in implementation of the National Strategy to the Province, Municipal and community levels. The WMP is a requirement under the Waste Management Act No. 24 of 2014 for all designated waste management operators (Provinces and Municipalities). A monitoring form is proposed in appendix 2.

Terminal Evaluation

This five year revised strategy is for 2016 to 2020. A terminal evaluation of this strategy is planned for September 2020 to review the actions and priorities to cater for all Wastes, Chemicals and Pollutants in-line with the Cleaner Pacific Regional Strategy for 2016-2025.

Glossary

Term	Definition
Asbestos	Naturally occurring minerals composed of long, thin fibres and fibre bundles. The mineral has high tensile strength, good insulating properties and is a fire retardant. Medical information has indicated that inhalation of asbestos fibres may result in serious health issues including cancers in human.
Electrical and Electronic wastes	E-waste typically refers to end-of-life electrical and electronic products including computers, printers, photocopy machines, television sets, washing machines, radios, mobile phones and toys, which are made of sophisticated blends of plastics, metals, and other materials.
Medical Wastes	These wastes include infectious wastes, body part wastes, chemical or pharmaceutical wastes, expired pharmaceuticals, soiled bandages and dressings, contaminated sharps and radioactive and cytotoxic wastes and broken thermometers.
National Environment Policy and Implementation Plan (NEPIP)	The NEPIP is an illustration of the Government's commitment to environmental sustainability and fulfils the requirements of a national policy and plan set out in the <i>Environmental Protection and Conservation Act</i> [Cap. 283]. Importantly, the NEPIP sets a solid policy platform for long term planning and action to respond to priority environmental issues currently addressed by the Government and its partners. In formulating this policy, the Government focused on the sustainable management of its environmental assets and the protection of its people.
Used-Oil	Used oil is any semi-solid or liquid used product consisting totally or partially of petroleum-based or synthetic oil, oily residues from tanks, and oil-water mixtures (Technical Working Group of the Basel Convention, 1997). Used oil includes-but is not restricted to-used engine oils, transmission fluids, refrigeration oils, compressors oils, metal working fluids and oils, electrical insulating oil, and hydraulic fluids.

APPENDICES

APPENDIX 1: NATIONAL WASTE MANAGEMENT AND POLLUTION CONTROL COORDINATING COMMITTEE MEMBER ORGANIZATION

Organization	Responsibility	Urban	Peri-urban/Rural
Municipal Council	Landfill Management		✓
	Waste Separation and Collection Points	✓	
	Market waste collection and transport	✓	
	Waste collection and transport	✓	
	Municipal Solid Waste Management	✓	
Provincial Government Council	Waste Collection, Transport and Disposal		✓
Biosecurity Dept	Biosecurity Waste Management	✓	
Pacific Petroleum Oil Company	Waste oil collection and transport	✓	
Energy Dept	Waste oil collection and transport	✓	
Wan Smol Bag	Waste Management awareness	✓	✓
Live & Learn Vanuatu	Waste Management awareness	✓	✓
Tourism Dept	Urban beautification	✓	✓
	Coordination with tourism operators and associations	✓	✓
Water Resource Dept	Pollution Control to Water Sources	✓	✓
Ministry of Infrastructure and Public Utilities	Pollution Control from drainage and road constructions	✓	✓
	Vehicle Emissions	✓	✓
Public Health Dept	Medical Waste Management	✓	✓
	Sanitation awareness	✓	✓
Telecommunication Regulator	E-waste Disposal	✓	✓
Customs Dept	Financial Incentive schemes	✓	✓
	Extended Producer Responsibility (EPR) scheme	✓	✓
Ministry of Foreign Affairs and External trade Dept	Facilitate ratification/amendments of Multilateral Environmental Agreements (Conventions)	✓	✓
Ports and Harbor Dept	Garbage Record Book for domestic vessels	✓	✓
	Marine Pollution Control	✓	✓
Agriculture Dept	Compost training	✓	✓
Ministry of Education	Awareness coordination for primary and secondary schools	✓	✓
	Waste Management Curriculum	✓	✓
Vanuatu Christian Council	Awareness coordination for churches	✓	✓
National Disaster Management Office	Disaster Waste Coordination	✓	✓
Chamber of Commerce and Industry	Private Sector Partnership coordination	✓	✓

APPENDIX 2: ANNUAL MONITORING AND REPORTING FORM

ACTIVITIES (as given in the Implementation Plan)	DESCRIBE PROGRESS (Achievements/Challenges/way forward)	DATE OF PROGRESS (completion date for activity implementation)
Policy and legislation		
Sustainable financing		
Capacity development		
Waste minimization		
Integrated waste management		
National coordination		
Public awareness		

APPENDIX 3: ROLES AND FUNCTIONS OF DESIGNATED WASTE MANAGEMENT OPERATORS (DWMO) UNDER THE WASTE MANAGEMENT ACT NO.24 OF 2014

This information applies to the head of the relevant Designated Waste Management Operator (DWMO);

- ✓ In relation to a municipal council – the Municipal Town Clerk
- ✓ In relation to a provincial government council – the Secretary General
- ✓ In relation to department – Director of the Department of Environmental Protection and Conservation

Duties and responsibilities of DWMOs

Duties and responsibilities of waste management operators – Municipal and Province			
Item No.	Provisions in the Waste Management Act No. 24 of 2014	Description	Type of designated waste management operator
1	[7] 4)	Manage a waste dump or a waste disposal site	Municipal Province
2	[8]	Cleaning streets and public areas Providing waste disposal receptacle in public places	Municipal Province
3	[9] 4)	Collaborate with relevant designated waste management operator and the ministry or government responsible for managing waste in formulating policies, strategies and programs	Municipal Province
4	[10] 1)	Formulate, adopt and implement an annual Waste Management Plan	Municipal Province
5	[10] 2)	Ensure that owners, occupiers of premises within the waste service area and licensed waste operators operating within the service area are given an adequate opportunity to express their views and interests during the formulation of the waste management plan	Municipal Province
6	[10] 3)	Consult with the Director during the formulation of the Waste Management Plan	Municipal Province
7	[10] 4)	In the same waste service area must consult each other in the preparation of their waste management plan	Municipal Province
8	[12] 2)	Undertake or participate in any audit of waste generated or disposed of during any period as required by the Director	Municipal Province
9	[13] 2)	Serve a written notice on a person who appears to own or control the object, substance or thing declaring any particular object, substance or thing to be waste or a hazardous waste	Municipal Province
10	[18] 1)	Responsible for waste management in the designated waste service areas	Municipal Province
11	[19] 1)	Designated waste management operator for each waste service area	Municipal Province
12	[19] 2)	Make by-laws after consultation with the Department	Municipal Province
13	[20] 1) (a)	Carryout relevant waste service responsibilities under section 7	Municipal Province
14	[20] 1) (b)	Formulate, adopt and implement a National Waste Management Strategy under section 9	Municipal Province
15	[20] 1) (c)	Assist the Director to administer the license regime of private waste operators under section 15	Municipal Province
16	[20] 1) (d)	Collect fees under Division 3 in the designated waste management operator's service area	Municipal Province

Duties and responsibilities of waste management operators – Municipal and Province			
Item No.	Provisions in the Waste Management Act No. 24 of 2014	Description	Type of designated waste management operator
17	[20] 1) (e)	Cooperate with the Director, authorized officers and public health officers in the discharge of their responsibilities relating to the monitoring of waste management processes and facilities	Municipal Province
18	[20] 1) (f)	Enforce rules, standards and cords of practice relating to the waste management services and facilities provided by or under the control of the designated waste management operator;	Municipal Province
19	[20] 1) (g)	Implement litter and waste control measures, including programs aimed at promoting reuse and recycling of waste, and minimizing the generation of waste	Municipal Province
20	[20] 1) (h)	Prepare reports in accordance with section 33, maintain statistical records relevant to the management of waste in their waste service area and assist the Director to conduct annual audits of waste generation and disposal under section 12	Municipal Province
21	[20] 1) (i)	Perform any other functions provided under any other written law	Municipal Province
22	[20] 2) (a)	Introduce programs for the collection and disposal of hazardous and bulk waste	Department
23	[20] 2) (b)	Monitor the development and management of landfill areas and approved dumping and waste storage sites incorporate comprehensive environmental management systems and measures	Department
24	[20] 2) (c)	Provide for other appropriate waste treatment, storage and disposal facilities	Department
25	[20] 2) (d)	Monitor waste management processes and facilities	Department
26	[20] 2) (e)	Assist the Director to compile statistics and prepare reports relevant to the management of waste in Vanuatu	Department
27	[20] 2) (f)	Raise public awareness on matters concerning the minimization of the generation of waste, the reuse and recycling of waste and the effective management of waste	Department
28	[20] 2) (g)	Formulate and implement policies, programs and initiatives aimed at reduction, reuse and recycling of waste	Department
29	[21] 1)	May exercise any power necessary or incidental to the discharge of its functions under the Act	Municipal Province
30	[22] 1)	May serve a waste management notice	Municipal Province Or Department
31	[24] 1) (a)	Determine the status of any premises as residential or commercial	Municipal Province
32	[24] 1) (b)	Determine the imposition of additional or increased fees under section 27 to particular premises	Municipal Province
33	[24] 1) (c)	Determine whether a particular service is provided as part of the normal garbage or waste collection service, or is another service for which an additional fee is to be imposed	Municipal Province
34	[27] 1)	May impose additional or increased fees	Municipal Province
35	[28]	May set the fee for the collection, storage or disposal of a particular hazardous waste, or for the provision of any other service if no sufficient or appropriate fee is prescribed	Municipal Province
36	[29]	May charge interest at the rate of 10% per annum on any fee not paid within 30 days of the date upon which payment is due	Municipal Province
37	[30]	May authorize the remission of a fee or interest charge imposed	Municipal Province
38	[31] 1)	Recover a fee or interest charge	Municipal

Duties and responsibilities of waste management operators – Municipal and Province			
Item No.	Provisions in the Waste Management Act No. 24 of 2014	Description	Type of designated waste management operator
			Province
39	[31] 4)	May enter into an arrangement for the collection of fees and interest charges by persons or organizations approved by the designated waste management operator to be collection agents	Municipal Province
40	[33] (a)	Prepare and submit reports relating to any aspect of waste management under its responsibility at the request of the Department, the Ministry of Health and the Department of Biosecurity	Municipal Province
41	[33] (b)	Ensure that the Ministry of Health is immediately notified of any matter related to waste management that comes to its notice which may adversely affect human health	Municipal Province
42	[33] (c)	Ensure that the Director is immediately notified of any matter related to waste management that comes to its notice which may adversely affect the environment	Municipal Province
43	[34] 1)	May enter into a contractual arrangement for the provision of services necessary to discharge its functions and to perform its waste management activities related to the collection, transportation, disposal and management of waste	Municipal Province
44	[35] 1)	Promote the reduction, reuse and recycling of waste and for this purpose rules, operating procedures, guidelines and codes of practice, signs and directions may be made, displayed or given in accordance with section 32	Municipal Province

The following six tables list the roles and responsibilities for waste management by topic area under the Waste Management Act of 2014.

1. Identifying waste

Role	Responsible agency		
	DEPC	Provincial and municipal councils	Other
Expand the definition of 'waste'	Make regulations and/or notices declaring any object, substance or thing to be a waste under section 13.	Make notices declaring any object, substance or thing to be a waste under section 13.	
Identify waste through waste audits	Annually audit the waste generated and disposed of in Vanuatu (section 12).	Participate in audits as required by DEPC (section 12).	Licence holders and other persons involved in waste related operations or services: Participate in audits as required by DEPC (section 12).

2. Collecting waste

Role	Responsible agency		
	DEPC	Provincial and municipal councils	Other
Collect waste	<p>Impose requirements for the collection of waste that cannot be managed by normal waste collection services (subsection 7(5)).</p> <p>Introduce programs for the collection of bulk waste under section 20.</p>	<p>Provide waste collection services to residential and commercial premises (section 7(3)).</p> <p>Collect fees under part 4, division 3. Note: This includes determining whether a premise is residential or commercial and whether a particular service is provided as part of normal collection services. Determine that certain services are compulsory under section 21. Engage contractors under section 34.</p>	<p>Ministry of Health: Collect medical waste (subsection 7(6)).</p> <p>Department of Biosecurity: Collect biosecurity waste (subsection 7(7)).</p>

3. Disposing of waste

Role	Responsible agency		
	DEPC	Provincial and municipal councils	Other
Manage waste dumps and waste disposal facilities	<p>Manage waste dumps and waste disposal sites where there is a need for additional technical and operational capacity for the proper disposal of waste (paragraph 7(4) (c)).</p> <p>Impose requirements for the disposal of waste that cannot be managed by normal waste collection services (subsection 7(5)).</p> <p>Introduce programs for the disposal of bulk waste under section 20.</p> <p>Provide for other appropriate waste treatment, storage and disposal facilities (section 20).</p> <p>Issue licences to persons (other than designated waste management operators) under section 15. Persons who wish to operate landfills, waste dumps and waste facilities or undertake any waste operation or service</p>	<p>Manage waste dumps and waste disposal sites (paragraph 7(4) (a)).</p> <p>Engage contractors under section 34.</p>	<p>Ministry of Health: Manage waste dumps and waste disposal sites for medical waste (paragraph 7(4)(b)) and dispose of all medical waste (subsection 7(6)).</p> <p>Department of Biosecurity: Manage waste dumps and waste disposal sites for biosecurity waste (paragraph 7(4)(b)) and dispose of all biosecurity waste (subsection 7(7)).</p> <p>Licence holders: Comply with relevant legal controls (subsection 16(2)).</p>

Role	Responsible agency		
	DEPC	Provincial and municipal councils	Other
	prescribed by the Minister require a licence under this section.		

4. Planning and other waste controls

Role	Responsible agency		
	DEPC	Provincial and municipal councils	Other
Plan for waste management and control	Formulate and implement a National Waste Management Strategy (the strategy) under section 9. Implement programs and projects to support the strategy under section 9.	Formulate, adopt and implement the strategy (section 20). Formulate policies, strategies and programs for the municipality or province under subsection 9(4). Formulate, adopt and implement an annual Waste Management Plan under section 10.	
Encourage the reduction, reuse and recycling of waste	Raise awareness about the generation, reuse, recycling and management of waste (paragraph 20(2) (f)). Formulate and implement policies, programs and initiatives aimed at reduction, reuse and recycling of waste and promote reduction, reuse and recycling (paragraph 20(2) (g) and section 35). Make regulations to require commercial waste recyclers to be registered or licensed (section 35).	Implement litter and waste control measures including programs that promote reuse and recycling and waste minimisation (paragraph 20(1) (g)). Promote the reduction, reuse and recycling of waste (section 35).	
Control the importation, use and storage of things that might become waste	Make regulations for controlling certain waste under section 14. For example, regulations imposing requirements on the importation, use and storage of objects, substances or things that may become wastes and that have adverse impacts on the environment or human health.	Assist in the administration of the licence regime (paragraph 20(1) (c)).	
Manage waste by keeping the streets clean		Clean streets and public areas (section 8). Provide waste disposal receptacles in public places (section 8).	
Other waste controls	Approve environmental standards for waste	Comply with relevant environmental standards (section 11).	People identified in environmental

Role	Responsible agency		
	DEPC	Provincial and municipal councils	Other
	<p>management practices (section 11).</p> <p>Make regulations for various matters including the collection, disposal and treatment of sanitary waste (section 44).</p> <p>Prescribe waste management operations or services (see subsection 15(2)).</p>	<p>In consultation with DEPC, make/impose by-laws, rules, operating procedures, guidelines and codes of practice relevant to waste management functions under sections 19 and 32.</p> <p>Do anything necessary to ensure that waste in Vanuatu is managed in an environmentally sound manner (section 21).</p> <p>Cooperate with DEPC and public health officers (paragraph 20(1)(e)).</p>	<p>standards: Comply with the relevant environmental standard (section 11).</p>

5. Reporting on waste management

Role	Responsible agency		
	DEPC	Provincial and municipal councils	Other
Provide information		Provide information to DEPC as required (section 17).	Any person conducting a waste related operation, business or activity: Provide information to DEPC as required (section 17).
Notify relevant parties about waste management issues		<p>Notify the Ministry of Health about waste management matters which may adversely affect human health (section 33).</p> <p>Notify DEPC about waste management matters, which may adversely affect the environment (section 33).</p>	
Prepare reports about waste management		Prepare reports as requested under section 33.	<p>Ministry of Health: If requested by DEPC, report on any aspect of waste management under its responsibility (subsection 7(6)).</p> <p>Department of Biosecurity: If requested by DEPC, report on any aspect of waste management under its responsibility (subsection 7(7)).</p>

6. Managing hazardous waste

Role	Responsible agency		
	DEPC	Provincial and municipal councils	Other
Expand the definition of hazardous waste	Make regulations and/or notices declaring any object, substance or thing to be a hazardous waste under section 13.	Make notices declaring any object, substance or thing to be a hazardous waste under section 13.	
Meet international obligations relating to the management of hazardous waste	<p>Implement international conventions and treaties under section 7(2).</p> <p>Introduce programs for the collection and disposal of hazardous waste (section 20).</p>		

APPENDIX 4: RELATED REGIONAL PROJECTS IMPLEMENTED BY SPREP TO MEMBER COUNTRIES - VANUATU

No.	Project Title	Main Activity	Donor	Duration	Outcome
1	AFD/SPREP Regional Solid Waste Management Initiative	Technical capacity building for improve solid waste management	Agence Française de Développement (AFD)	October 2011 – Sept 2015 (4 Year Project)	Ongoing capacity building for Vanuatu through training. Development of a used Oil Management programme – Stewardship system.
2	Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries	Human and institutional capacity base for sustainable Solid Waste Management in the Pacific Region is strengthened through implementation of the Pacific Regional Solid Waste Management Strategy (2010-2015) Sustainable management of solid waste in the Pacific region is enhanced based on Pacific Regional Waste and Pollution Management Strategy 2016-2025 (Cleaner Pacific 2025)	Japan International Cooperation Assistance (JICA)	Phase 1 February 2011 – February 2016 (5 Year Project) Phase 2 February 2017 – December 2021	Human and institutional capacity for solid waste management is strengthened through training of Port Vila, Luganville and Lenakel counterparts in the region and Japan. At the moment a Ni-Vanuatu counterpart was selected as a landfill expert for the region. Core human resources in the field of SWM in Vanuatu are fostered under the initiative of DEPC. A pilot study to establish a financial incentive scheme is conducted in a target site.
3	Pacific POPs Release Reduction Project (GEFPAS Persistent Organic Pollutants)	Reducing Persistent Organic Pollutants (POPs) in the Pacific region through the improved management of solid and hazardous waste. This project mainly targets the unintentional production of Persistent Organic Pollutants (uPOPs). The main sources of uPOPs are open burning, waste incinerators, waste oil spillage, industrial processes and burning of plastics, PVC, and electrical cables.	Global Environment Facility (GEF)	2013 – 2018 (5 Year Project)	Current ongoing project. So far two (2) participants from Vanuatu had attended the capacity building training at the Fiji National University (FNU). The purpose of this training is to build capacity for national waste management practitioners to be trainers in their home countries. The

No.	Project Title	Main Activity	Donor	Duration	Outcome
					training is still ongoing and more Ni-Vanuatu's from the councils and private companies will be able to attend to enhance capacity development in the field of waste management.
4	PacWaste	<p>Main activities include:</p> <ul style="list-style-type: none"> ✓ Health care waste management ✓ Asbestos management ✓ E-waste management 	European Union (EU)	<p>May 2013 to December 2017</p> <p>EDF11 to commence from 2018 to 2022</p>	<p>Ongoing project. This year 5 incinerators to treat medical wastes were donated and installed in five different hospitals of Vanuatu. These are: Vila Central Hospital (VCH), Northern District Hospital (NDH), Lolowai Hospital, Norsup Hospital and Lenakel Hospital. Trainings for manual operation will be conducted in February 2016. Works on Asbestos removal from targeted sites in Efate will be commencing in November 2016. The sites include; Vila Central Hospital, Malapoa College, Paunangisu Health Centre and Onesua Presbyterian College. An LOA for e-waste has been endorsed by the DEPC with SPREP for e-waste collection in Port Vila from 2016 targeting government buildings.</p>

Acronyms

ACM	Asbestos Containing Materials
ADB	Asian Development Bank
AFD	Agence Francais de Development
Al	Aluminium
APTC	Australia Pacific Technical College
BV	Biosecurity Vanuatu
CC	Climate Change
CSO	Civil Society Organisation
Cu	Copper
Customs	Vanuatu Customs and Inland Revenue Department
DARD	Department of Agriculture and Rural Development
DEPC	Department of Environmental Protection and Conservation
DGMWR	Department of Geology, Mines and Water Resources
DLA	Department of Local Authorities
DoE	Department of Energy
DoFA	Department of Foreign Affairs
DoH	Department of Health
DoPM	Department of Ports and Marine
DWMO	Designated Waste Management Operator
EPR	Extended Producer Responsibility
EU	European Union
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEF PAS	Pacific POPs Release Reduction Project
Government	Government of the Republic of Vanuatu
JICA	Japan International Cooperation Agency
HCW	Health Care Waste
HPDE 2	High Density Polyethylene
LDC	Least Developed Country
LDPE 6	Low Density Polyethylene
LMC	Luganville Municipality
LTMC	Lenakel Town Municipal Council
MCCA	Ministry of Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and
MEA	Multilateral Environment Agreement
MIPU	Ministry of Infrastructure and Public Utilities
MoH	Ministry of Health
MOU	Memorandum of Understanding
NDH	Northern District Hospital
NDMO	National Disaster Management Office
NEPIP	National Environment Policy and Implementation Plan
NGO	Non-Governmental Organization
NIP	National Implementation Plan
NSDP	National Sustainable Development Plan
NWMS	National Waste Management Strategy
NWMPCS	National Waste Management and Pollution Control Strategy
NZAID	New Zealand Agency for International Development
PACPOL	Pacific Oceans Pollution Prevention Programme
PBDE	Poly Brominated Diphenyl Ether
PET 1	Polyethylene Terephthalate
PGCs	Provincial Government Council
PHD	Public Health Department
PIFACC	Pacific Islands Framework for Action on Climate Change
POPs	Persistent Organic Pollutants
PPC	Pacific Petroleum Company
PVMC	Port Vila Municipality
PWD	Public Works Department
SAMOA Pathway	Small Island Developing States Accelerated Modalities of Action Pathway
SC	Stockholm Convention
SHEFA	SHEFA Provincial Council
SLO	State Law Office
SPREP	Secretariat of the Pacific Regional Environment Programme
SRIMP-Pac	Shipping Related Invasive Marine Pest in the Pacific Islands
SWM	Solid Waste Management
TAFEA	TAFEA Provincial Council
TOT	Training of Trainers
TVL	Telecom Vanuatu Limited
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UPOPs	Unintentional Persistent Organic Pollutants
USP	University of the South Pacific
VB	Vanuatu Beverage
VBL	Vanuatu Brewery Limited

VCH	Vila Central Hospital
VIT	Vanuatu Institute of Technology
VNTC	Vanuatu National Training Council
VT	Vatu
WSB	Wan Smol Bag
WMP	Waste Management Plans
WMPC	Waste Management and Pollution Control
WHO-WPRO	World Health Organization Western Pacific Regional Office