



NATIONAL WASTE MANAGEMENT AND POLLUTION CONTROL STRATEGY AND IMPLEMENTATION PLAN 2016 - 2020



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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) and 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 but let us now apply it to ourselves as waste practitioners. Let us no longer allow poor waste disposal and poor waste management to take place in our streets, towns, communities and villages. 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.

Hon Ham Lini Vanuaroroa (MP)

Minister for Climate Change Adaptation, Meteo & Geo-Hazards, Energy, Environment & NDMO

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 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.

Mr. Jason Raubani
Director – Department of Environmental Protection and Conservation

Acronyms

| | |
|------------|--|
| ACM | Asbestos Containing Materials |
| ADB | Asian Development Bank |
| APTC | Australia Pacific Technical College |
| BV | Biosecurity Vanuatu |
| CC | Climate Change |
| CSO | Civil Society Organisation |
| 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 |
| LDC | Least Developed Country |
| LMC | Luganville Municipality |
| LTMC | Lenakel Town Municipal Council |
| MCCA | Ministry of Climate Change Adaptation, Meteorology, Geo-Hazards, Environment, Energy and National Disaster management Office |
| 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 |
| PBDE | Poly Brominated Diphenyl Ether |
| 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 |
| SLO | State Law Office |
| SPREP | Secretariat of the Pacific Regional Environment Programme |
| SWM | Solid Waste Management |
| 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 |
| VCH | Vila Central Hospital |
| VIT | Vanuatu Institute of Technology |
| VNTC | Vanuatu National Training Council |
| VT | Vatu |
| WSB | Wan Smol Bag |
| WHO-WPRO | World Health Organization Western Pacific Regional Office |

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 focussed 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. |

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 Action 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). |

| THEMATIC AREA | OBJECTIVES |
|--------------------------------|---|
| 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. |
| 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 | To increase public awareness on their WM responsibilities. To introduce and enhance community participation on waste management. |

The implementation of this Strategy will be coordinated by the Department of Environmental Protection and Conservation. It should be noted, however, that the Strategy calls for the establishment of a National Waste 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 See appendix 4: Vanuatu Map. 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 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 talk 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.

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.

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 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 – 300 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.

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.

¹² Vanuatu Meteorological Services, Weather Update 2016, Bulletin.

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.

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 reduce pollution. 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 national waste management and pollution control plans and practices in place to minimize terrestrial, atmospheric and marine pollution, hazardous waste, solid waste and other land-based sources of pollution.

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.

Vision:

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

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 – 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 and 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 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 human resources within DEPC 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 and 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.

A] WHERE ARE WE NOW?

I. Policies and legislation

I. Policies

The following national policies 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)

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)

| 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 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 |

| MEA | Date ratified, acceded, approved or accepted | Focal Point | Ratification, accession, approval or acceptance legislation |
|-----|--|-------------|---|
| | | | 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 less 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 here. 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 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 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 Adaptation, Meteorology, Geo-Hazards, Environment and Energy (MCCA). 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) is. 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 Port Vila Municipal Council (PVMC), LMC (Luganville Municipal Council) and LTMC (Lenakel Town Municipal Council). One of the activities under phase 1 of J-PRISM Project was to carryout waste characterisation studies within the three municipalities 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 2: Domestic Waste Composition in the three municipalities (2014)

| Waste Category | PVMC | LMC | LTMC | Comment |
|---------------------------|------|--------|--------|--|
| Vegetable/Putrescible | 51% | 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 3: 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 and Vanuatu Beverage, 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.



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 4: 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 (1) |
| | | 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 Luganville Municipal Council. 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 Biosecurity Department 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.



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 5: 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 TVL to collect used mobiles 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 results 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 6: Hazardous HCW 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.



7. MARINE & 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
- Pacific Oceans Pollution Prevention Programme (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)



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 Adaptation, Meteorology, Geo-Hazard, Environment and Energy.

BJ WHERE DO WE WANT TO GET TO?

4.1 Guiding Principles

To achieve our vision and goals, the Department of Environmental Protection and Conservation 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:

| 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) |

4.2 Thematic areas

| 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. |

C] HOW WILL WE GET THERE?

Multi-disciplinary approaches to reducing and managing waste and pollutants must be pursued during implementation of the National Waste Management and Pollution Control Strategy 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

Implementation Plan Thematic Area 1

Activities listed are also aligned with the NEPIP and NSDP

| POLICY, LEGISLATION AND ENFORCEMENT | | | | | |
|--|--|--|---|---|------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| To support Waste Management (WM) and Pollution Control activities with practical, effective and enforceable legislation. | By 2020, waste management guidelines are in force and implemented. | Develop guidelines for Waste Management Operations and standards for Pollution Control Permits | Number of guidelines developed under Waste Management Act Number of guidelines and standards developed under Pollution Control Act | DoH, DEPC, DLA, MIPU, private sector, public, NGOs, CSOs, development partners, PGCs, MCs | 200,000 |
| | By 2020, at least two Pollution Control guidelines and standards are developed and enforced. | a) 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 | 200,000 |
| | | b) Identify priority areas for guidelines and standards | | DEPC, MCs, PGCs, BV, MoH, DGMWR, NGOs, CSOs | |
| | | c) Develop guidelines and standards for priority areas | | DEPC, MCs, PGCs, BV, MoH, DGMWR, NGOs, CSOs, public, private sector, development partners | |
| | | d) Implement and ensure compliance with guidelines and standards | | | |
| 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 | 100,000 | |
| *By 2020, 100% of provincial governments have a Waste Management Plan *By 2020, provincial | Finalize Waste Management Plans | Number of Waste Management Plans approved by PGCs and MCs | PGCs, MCs, DEPC, MoH, BV, development partners, private sector, communities | 500,000 | |

| POLICY, LEGISLATION AND ENFORCEMENT | | | | | |
|-------------------------------------|---|---|--|--|------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| | governments have implemented 20% of their Waste Management Plans | | | | |
| | By 2020, a NATPLAN (as required under the International Convention for the Prevention of Pollution from Ships (MARPOL)) is approved | a) 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 | 500,000 |
| | | b) Finalize draft NATPLAN | NATPLAN approved | | |
| | *By 2020, vehicle emissions standards are developed and included in annual roadworthy inspections | a) Develop emission standards b) Purchase monitoring equipment | Proportion of vehicles that comply with emission standards | PWD, DEPC, VNSO, MCs, PGCs, MoH, DoPM, industry, private sector, development partners | 1,000,000 |
| | *By 2025, 50% of registered vehicles comply with emission standards | Work with MCs & PWD to integrate standards into roadworthy inspections | | | |
| | By 2020, Accede to Chemical Conventions (Basel, Rotterdam, Minamata) | a) Develop accession instruments and submit to respective secretariats | Accession instruments | DEPC (Foreign Affairs and Customs Dept) | 300,000 |
| | | b) Source funding for accession documents. | Source funding | | |
| | By 2019, policy and procedures for managing disaster waste is developed and approved | a) Convene a stakeholder meeting to develop the draft policy and procedures for managing disaster waste | Meeting convened with minutes | NDMO, DEPC, PGCs, MCs, Private Sector, CSOs, development partners | 200,000 |
| | | b) Prepare the draft policy and procedures, taking into account | Policy and procedures drafted | | |

| POLICY, LEGISLATION AND ENFORCEMENT | | | | | |
|-------------------------------------|---|--|--|---|------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| | | lessons from other islands such as Cook Islands and Samoa and circulate for comments. | | | |
| | | c) Present draft policy and procedures to Council of Ministers for approval | Policy and procedures approved | | |
| | By 2017, a waste minimization strategy is developed and enforced. | Development of waste minimization Strategy/Policy | Endorsed waste Minimization Strategy. | DEPC, PGs, MCs, private sector, NGOs, development partners | 200,000 |
| | By 2017, 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, a National Action Plan for liquid waste and air pollution is developed and enforced. | Development of National Action Plan for liquid waste and air pollution in 2016 | Endorsed Action Plan for liquid waste and air pollution | DEPC, MoH, MIPU, development partners | 300,000 |
| | 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 | 50,000 |
| | From 2016 – 2020, ongoing development of national waste management inventories for both provinces and municipalities. | Ongoing development of national and provincial waste inventories. | National waste inventories developed in 2016 Provincial waste inventories developed yearly. | DEPC, PGs, MCs, development partners | 200,000 |
| | By 2018, Waste Oil stewardship system is established and enforced | Work with State Law office to finalize waste oil stewardship collection system for Vanuatu | Waste Oil stewardship system established and implemented | DEPC, MCs, PGs, Private sector, Development partners | 200,000 |
| | | Conduct consultation with stakeholders and inform them about the stewardship | | | |

| POLICY, LEGISLATION AND ENFORCEMENT | | | | | |
|---|--|---|--|---|------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| | | system. | | | |
| | By 2016, an Ozone officer is appointed by PSC to enforce the Ozone Layer Protection Act | Ozone layer protection unit appointed under the Ozone Layer Protection Act | Enforcement of Ozone Act by Ozone Officers | DEPC, Customs Dept, development partners | |
| | By 2017, appointment of enforcement officers under waste management and Pollution Control acts are gazetted. | Gazetting of officers under the pollution and waste management Acts | Enforcement of the Pollution and Waste Management Acts | DEPC, PGs, MCs, NGO, private sector, development partners | 50,000 |
| To ensure environmentally sound long-term land use planning is the basis of all development decision-making and empower provincial and municipal planning authorities | 95% of households have improved access to sanitation by 2030 (15% by 2020) | a) Amendments to the Public Health Act passed and gazetted | Number of design and performance standards for sanitation systems and standards for sanitary devices developed | DoH, DEPC, DLA, Ministry of Infrastructure and Public Utilities (MIPU), private sector, public, NGOs, CSOs, development partners, PGCs, MCs | 200,000 |
| | | b) 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 | | | |
| 90% of the urban sanitation systems have a treatment or re-use system 2030 (10% by 2020) | | a) Amendments to the Public Health Act passed and gazetted | Systems for treating, reusing or recycling human waste in urban areas are established | DoH, DEPC, DLA, MIPU, private sector, public, NGOs, CSOs, development partners, PGCs, MCs, PMO | 200,000 |
| | | b) From 2016, 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 | | | |
| | | c) From 2016, Construct and maintain the Seepage Treatment Plant at Bouffa | | | |
| | | d) From 2016, Investigate opportunities for developing a | | | |

| POLICY, LEGISLATION AND ENFORCEMENT | | | | | |
|-------------------------------------|---------|---|------------|--------------|--------------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| | | reticulated sewerage system for Port Vila | | | |
| | | e) From 2017, Develop waste water discharge standards from contaminated sources i.e. sewage treatment plants etc. | | | |
| | | | | | Total Budget: 4,600,000 |

Implementation Plan Thematic Area 2

Activities listed are also aligned with the NEPIP and NSDP

| SUSTAINABLE FINANCING | | | | | |
|--|---|--|---|---|------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| 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 2025, at least one incentive scheme is established under the Waste Management Act | a) Review previous consultant's reports (e.g., on container deposit legislation and waste oil recycling) | Regulations are in place | DEPC, BV, MoH, PGCs, MCs, DGMWR, PWD, NGOs, CSOs, DoPM, MoE, VCCI, NDMO, communities, private sector (e.g., waste collectors), donor partners, MFEM | 500,000 |
| | | b) Develop regulations to support the polluter pays principle | | | |
| | By 2017 Identification of investment opportunities from bilateral, multilateral, international agencies for waste management and pollution control. | a) Establish private-public partnerships in Vanuatu. | Signed agreement and partnership. | DEPC, PGs, MGs, private sectors, NGOs, communities and donor partners | 200,000 |
| | | b) Secure investment opportunities | Availability of funds and other resources for waste management and pollution control. | | |
| c) Establish Waste permit allocation in Environment Trust | Waste Permit Fees collected directed to Environment trust fund | | | | |

| SUSTAINABLE FINANCING | | | | | |
|-----------------------|---------|------------|------------|--------------|------------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| | | Fund 2015 | | | |
| | | | | | Total Budget: 700,000 |

Implementation Plan Thematic Area 3

Activities listed are also aligned with the NEPIP and NSDP

| CAPACITY DEVELOPMENT | | | | | |
|--|---|--|---|---|---------------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| To develop skilled and trained people in Vanuatu to effectively manage waste management and pollution control systems. | By 2020, at least 20% capacity for enforcement of Waste Management and Pollution Control laws is enforced. | Identify enforcement officers from relevant agencies (e.g. Health Dept, Police, 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, development partners | 500,000 |
| | By 2019, a terms of reference is produced to assess the institutional capacity for DEPC and Councils for waste management (in particular policy development and planning, funding and assessment, project cycle management) | Develop institutional capacity for waste management at the municipal, provincial and national levels | Terms of Reference for consultancy contract and capacity assessment report produced | DEPC, MoH, PGCs, MCs, Development partners | 500,000 |
| | By 2018, module developed and available at 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, PHGs, MCs, VNTC, VIT, APTC | 500,000 |
| | | | | | Total Budget: 1, 500,000 |

Implementation Plan Thematic Area 4

Activities listed are also aligned with the NEPIP and NSDP

| WASTE MINIMIZATION | | | | | | |
|---|--|---|----------------------------------|---------------------------------------|--------------------------------------|---------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) | |
| To reduce the amount of waste generated and landfilled. | By 2019, 80% of all Provincial Centers and Municipal Councils conduct waste characterization studies in their respective waste service areas | Conduct waste characterization study in Provincial Centers and Municipal Councils to identify the main waste components | Waste Characterization Reports | DEPC, PHGs, MSs, development partners | 100,000 | |
| | By 2020, 60% of segregated organic wastes is composted. | Segregation of yard and kitchen waste at home by promoting and demonstrating composting. | Backyard home composting | DEPC, PGs, MCs, development partners | 100,000 | |
| | By 2017, a waste minimization plan is developed and implemented | a) Develop waste minimization plan | Endorsed Waste Minimization Plan | | DEPC, PGs, MCs, development partners | 200,000 |
| | | b) Implement waste minimization plan | | | | |
| | | | | | Total Budget: 400,000 | |

Implementation Plan Thematic Area 5

Activities listed are also aligned with the NEPIP and NSDP

| INTEGRATED WASTE MANAGEMENT | | | | | |
|---|--|---|--|--|------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| To implement effective waste collection and disposal throughout Vanuatu and limit the impact of waste and pollution on urban areas and ecosystems | By 2030, every province has a controlled waste disposal facility (at least 3 provinces by 2020) | a) Identify disposal sites | Number of controlled waste disposal facilities | DEPC, MCs, PGCs, MoH, BV, SPREP, development partners, private sector, communities | 500,000 |
| | | b) Develop controlled waste disposal facilities and landfills | | | |
| | | c) Investigate opportunities for developing recycling centers | | | |
| | By 2025, at least two chemical storage and disposal facility is established (at least one by 2020) | a) Identify disposal sites | Number of chemical storage and disposal facilities | DEPC, MCs, PGCs, MoH, BV, SPREP, development partners, private sector | 500,000 |
| b) Develop chemical disposal facilities, including port facilities | | | | | |
| By 2020, 50% of both | a) Develop appropriate | Waste collection system | DEPC, PGs, MCs, | 200,000 | |

| INTEGRATED WASTE MANAGEMENT | | | | | |
|--|--|---|--|--|---------------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| | Provincial centers and municipal councils implement proper waste collection services | collection services for the provincial centers b) Develop project proposal to implement additional recommendations from time and motion study which cannot be implemented with existing resources (e.g. procurement of additional garbage trucks, bins) and seek funding | improved Project proposals developed | development partners DEPC, PGs, MCs, development partners | |
| | By 2020, appropriate collection services for the provincial centers is established and implemented | a) seek technical assistance to conduct time and motion studies in Port Vila, Luganville and Lenakel plus other provincial centers | Studies conducted | DEPC, PGs, MCs, development partners | |
| To improve Waste and Pollution Control management infrastructure and support sustainable operation and maintenance | By 2020, Luganville and Lenakel dumpsites are upgraded into landfills | Prepared Luganville and Lenakel Landfill in 2017 | Luganville and Lenakel landfill in operation | DEPC, PGs, MCs, MIPU, development partners | 10,000,000 |
| | By 2020, New Garbage trucks and Pollution Control equipment's | Secure with Donor Partners and Government on financing of new garbage trucks and pollution control equipment's in 2017 | Garbage trucks and pollution control equipment's utilized for waste management activities. | DEPC, PGs, MCs, development partners | 7,000,000 |
| | | | | | Total Budget: 18,400,000 |

Implementation Plan Thematic Area 6

Activities listed are also aligned with the NEPIP and NSDP

| NATIONAL COORDINATION | | | | | |
|---|---|--|------------------------------------|------------------------------------|------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| To better coordinate national waste management activities and ensure that | By 2017, a coordinating committee member is established | a) Identify the primary stakeholders for membership of the | TOR developed and meeting convened | DEPC, relevant government agencies | 20,000 |

| NATIONAL COORDINATION | | | | | |
|---|---|---|--|--|------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| the NWMS is implemented and periodically reviewed and updated to achieve the stated goal and purpose. | | committee and convene a meeting with these stakeholders to refine and finalize the draft TOR | | | |
| | | b) Launch the committee | Committee established | | |
| | By 2018, establish multi-sectorial partnerships in Vanuatu (NGOs, local business community) | a) Identify key stakeholders to develop partnerships with | Stakeholders identified | DEPC, PGs, MCs, NGOs, private sector, development partners | 20,000 |
| | | b) Invite stakeholders to planning session to discuss relevant sections of the National Waste Management and Pollution Control Strategy in detail | | | |
| | | c) Develop and sign MOUs and agreements based on discussions | Number of signed MOUs and agreements | | |
| | By 2018, develop an environmental monitoring program for closed dumpsites, existing dumpsites and landfills, and other contaminated sites | a) Convene a meeting/workshop with key stakeholders to identify initial sites to be monitored, items for monitoring (e.g. surface water such as rivers, ground water, gas), and existing capacity for monitoring. Discuss and agree a way forward | Meeting convened | DEPC, PGs, MCs, developing partners | 200,000 |
| | | b) Seek technical assistance to prepare the outline of the monitoring program (location, items for monitoring, methods, equipment needs, etc.) | Outline of environmental monitoring program prepared | | |
| | | c) Seek funding to implement the monitoring program | Funding secured and program implemented | | |

| NATIONAL COORDINATION | | | | | |
|-----------------------|---------|------------|------------|--------------|------------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| | | | | | Total Budget: 240,000 |

Implementation Plan Thematic Area 7

Activities listed are also aligned with the NEPIP and NSDP

| PUBLIC AWARENESS | | | | | |
|---|---|--|--|---|------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| To increase public awareness on their WM responsibilities | By 2017, improve awareness of waste minimization techniques by working together with key stakeholders | a) Convene a meeting with key stakeholders to discuss and agree on waste minimization focus (e.g. composting) and to develop a joint work program for awareness raising activities. Mechanisms for reporting on the joint work program must also be discussed and agreed. Schools and churches must be included as key stakeholders especially from rural subsistence communities. | Meeting convened | DEPC, WSB, Live & Learn, Chamber of Commerce, local business sector, Schools, Churches) NGOs, local business community | 500,000 |
| | | b) Sign MOU with key stakeholders based on discussions | Signed MOU | | |
| | | c) Implement the agreed joint work program | Number of awareness activities conducted | | |

| PUBLIC AWARENESS | | | | | |
|--|--|---|--------------------------|--|------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| To introduce and enhance community participation on waste management | By 2020, 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. | a) Develop concept notes and project proposals for upgrading existing facilities (e.g. purchase and installation of a weigh bridge at Bouffa landfill and Luganville dumpsite) and aggressively seek funding to implement them. | Concept notes | DEPC, PGs, MCs and development partners (JICA, SPREP, ADB, UNDP) | 20,000,000 |
| | | | Weighbridge installation | | |
| | | b) Develop landfill guidelines for Bouffa semi-aerobic landfill | Landfill guideline | Vanuatu Government, DEPC (PGs, MCs, Private companies and communities), Development partners (ADB) | 200,000 |
| | | c) Initiate dialogue with the Ministry of Infrastructure and Public Utilities (MIPU), which is the executing agency for the ADB Project that includes a review of the sanitation master plan. This dialogue should focus on identifying strategic linkages between the master | | DEPC, MIPU, Vanuatu Government, development partners (ADB) | |

| PUBLIC AWARENESS | | | | | |
|------------------|---------|--|------------|--|----------------------------------|
| Objective | Targets | Activities | Indicators | Key Partners | Indicative Budget (VT) |
| | | plan and this national waste management strategy, and opportunities for funding relevant activities in this strategy | | | |
| | | d) Undertake any actions identified during dialogue with MIPU | | DEPC, MIPU, Vanuatu Government, development partners (ADB) | |
| | | | | | Total Budget: 207,000,000 |

OVERALL TOTAL BUDGET = 232,840,000 VATU

Monitoring and Evaluation

Monitoring and Measuring Performance

To monitor the strategy, DEPC will require Provinces and Municipalities to provide annual report of their Waste Management Plans. The purpose of the Waste Management Plans is to ensure effectiveness and efficiency in implementation of the National Strategy to the Province, Municipal and community levels. The Waste Management Plan 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 2018 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.

APPENDICES

APPENDIX 1: NATIONAL WASTE MANAGEMENT COORDINATING COMMITTEE MEMBER ORGANIZATION

| Organization | Responsibility | Urban | Peri-urban/Rural |
|---|--|-------|------------------|
| Municipal Councils | Landfill Management | | ✓ |
| | Waste Separation and Collection Points | ✓ | |
| | Market waste collection and transport | ✓ | |
| | Waste collection and transport | ✓ | |
| Provinces | Waste Collection, Transport and Disposal | | ✓ |
| Biosecurity Dept | Biosecurity waste disposal | ✓ | |
| 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 | ✓ | ✓ |
| Water Resource Dept | Pollution Control to Water Sources | ✓ | ✓ |
| Ministry of Infrastructure and Public Utilities | Pollution Control from drainage and road constructions | ✓ | ✓ |
| Public Health Dept | Sanitation and Medical Waste Disposal | ✓ | ✓ |
| Telecommunication Regulator | E-waste Disposal | ✓ | ✓ |
| External trade Dept | Conventions | ✓ | ✓ |
| Ports and Harbor Dept | Garbage Record Book for domestic vessels | ✓ | ✓ |
| | Marine Pollution Control | ✓ | ✓ |
| Agriculture Dept | Compost training | ✓ | ✓ |
| Education Dept | Awareness coordination for primary and secondary schools | ✓ | ✓ |
| Vanuatu Christian Council | Awareness coordination for churches | ✓ | ✓ |
| National Disaster Management Office | Disaster Waste | ✓ | ✓ |

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) |
|--|---|--|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

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 |

| 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 |
| 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) | After consultation with the Department make by-laws | 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 |
| 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 | 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 |
| | | 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 | 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 |

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 |
|----------|---|---|--|
| 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 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, | 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 |
| | | disposal and management of waste | |
| 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.

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). |

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)). 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)). 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)). Department of Biosecurity: Collect biosecurity waste (subsection 7(7)).</p> |

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</p> | <p>Manage waste dumps and waste disposal sites (paragraph 7(4) (a)).</p> | <p>Ministry of Health: Manage waste dumps and waste disposal sites for medical</p> |

| Role | Responsible agency | | |
|------|---|---|--|
| | DEPC | Provincial and municipal councils | Other |
| | <p>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 prescribed by the Minister require a licence under this section.</p> | <p>Engage contractors under section 34.</p> | <p>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> |

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 | Make regulations for | Assist in the administration of | |

| Role | Responsible agency | | |
|---|--|--|---|
| | DEPC | Provincial and municipal councils | Other |
| and storage of things that might become waste | 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. | 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 management practices (section 11). Make regulations for various matters including the collection, disposal and treatment of sanitary waste (section 44). Prescribe waste management operations or services (see subsection 15(2)). | Comply with relevant environmental standards (section 11). 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. Do anything necessary to ensure that waste in Vanuatu is managed in an | People identified in environmental standards: Comply with the relevant environmental standard (section 11). |

| Role | Responsible agency | | |
|------|--------------------|--|-------|
| | DEPC | Provincial and municipal councils | Other |
| | | environmentally sound manner (section 21). Cooperate with DEPC and public health officers (paragraph 20(1)(e)). | |

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 | | Notify the Ministry of Health about waste management matters which may adversely affect human health (section 33). Notify DEPC about waste management matters which may adversely affect the environment (section 33). | |
| Prepare reports about waste management | | Prepare reports as requested under section 33. | Ministry of Health: If requested by DEPC, report |

| Role | Responsible agency | | |
|------|--------------------|-----------------------------------|---|
| | DEPC | Provincial and municipal councils | Other |
| | | | <p>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> |

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 | Implement international conventions and treaties under section 7(2). Introduce programs for the collection and disposal of hazardous waste (section | | |

| Role | Responsible agency | | |
|------|--------------------|-----------------------------------|-------|
| | DEPC | Provincial and municipal councils | Other |
| | 20). | | |

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) | Japan International Cooperation Assistance (JICA) | Phase 1 February 2011 – February 2016 (5 Year Project) | 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. |
| 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 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 | Main activities include: ✓ Health care waste | European Union (EU) | May 2013 to March 2017 | Ongoing project. This year 5 incinerators to treat medical wastes were donated and installed |

| No. | Project Title | Main Activity | Donor | Duration | Outcome |
|-----|---------------|---|-------|----------|---|
| | | <ul style="list-style-type: none"> management ✓ Asbestos management ✓ E-waste management ✓ Atoll waste Management | | | <p>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.</p> |