

# NCD Waste Management Policy

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City of Port Moresby

# **NCD Waste Management Policy 2014**

Prepared for the National Capital District Commission by the NCD Waste  
Management Policy Working Committee

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## **Abbreviation**

<b>DEC</b>	Department of Environment and Conservation
<b>DLPP</b>	Department of Lands and Physical Planning
<b>IRC</b>	Internal Revenue Commission
<b>JICA</b>	Japanese International Corporation Agency
<b>MKA</b>	Motu Koitabu Assembly
<b>NCD</b>	National Capital District
<b>NCDC</b>	National Capital District Commission.
<b>PPP</b>	Polluter-Pays-Principle
<b>USP</b>	User-Pays-Principle
<b>EMR</b>	Extended Manufacturer Responsibility
<b>IDP</b>	Integrated Development Plan

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Without their support and contributions together with those who assisted one way or another, the production of this NCD Waste Policy would not have been possible.

All Governments Sectors', Business Communities' and Corporate Organizations', Citizens and Motu Koitabu Council who produce waste are urged to utilize this document in an endeavor to effectively manage waste from generation right through to disposal in a safe and environmentally friendly manner to improve, protect and sustain the living environment and public health of NCD residents.

## Foreword

The last four decades saw unprecedented improvements in the material wellbeing of most provinces and swift increase in population all around Papua New Guinea, including the National Capital District. But change came at a cost, rapid development meant more waste, placing undue stress on local urban authorities to seek out effective strategies to manage and regulate the generation, collection, storage, transportation and disposal of waste in order to protect the environment and public health natural systems supporting life.

In pursuing the NCDC's Corporate Vision of "living and working together to build the best capital city in the South Pacific", NCDC's administrative and operational capacities in providing and managing municipal services in the city of Port Moresby is inevitably challenged with rapid economic growth and population increase.

Waste management services being one of the cores functions remains a challenge given the lack of legislative frameworks, infrastructures, technical capacities and management strategies that impacts on effective management, public health and environmental outcomes.

In both the short and long term, the action involved in effective waste management will require multi sectorial cooperation and interactions at all levels. Waste policies must be developed, coordinated and implemented with sustainable waste management strategies. Establishment of a national policy and legal framework, training of professional and raising public awareness are essential elements for sustainable waste management.

The absence of a National Waste Policy framework has moved NCDC to develop this policy to guide the management of waste in NCD. The Policy is designed to address both current and emerging challenges of waste management and maps out a way forward for NCDC to ultimately realize its Vision.



Leslie Alu

**City Manager**



Hon. Powes Parkop, MP

**Governor of NCD**

## **Introduction**

The Policy statement is in two parts. Part One provides the context for the development of a Waste Policy for the National Capital District (NCD) and the roles and responsibilities of the NCD community. It highlights the current issues and challenges in relation to waste management and the resources and drivers for change.

Part Two presents the NCD Waste Management Policy. It defines the problem of increasing waste generation, identifies guiding principles set by legislation and policy (national and international) and sets out the vision, purpose, scope, objectives, outcomes, directions, implementation and strategies for action.

# Part One – Context

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## **Current Status of Waste Management in the National Capital District.**

Waste Management is a vital function of any municipal authority throughout the world and the National Capital District Commission (NCDC) is no different. Rapid urbanization and changing lifestyles have led to the generation of huge volumes of waste over the years. As the city authority, NCDC is charged with the responsibility of managing the city's diverse streams of waste with the ultimate aim of protecting public health and the environment from the impacts of waste. This service is provided in accordance with existing legislative and policy frameworks to achieve Commission's vision and objectives on Environment and Public Health which are reflected in the organization's Corporate Plan and Integrated Development Plan (IDP) 2013 – 2017.

The current waste management practices are restricted to collection, transportation and disposal and are performed below the accepted international standards and practices such as the waste segregation, treatment and minimization. This is compounded with lack of regulative and policy guidelines, infrastructure and facilities, human resource capacity, management strategies and political will and support. This places considerable burden on NCDC's capacity and resources in attempting to provide the service as demanded by the ratepayers.

NCDC recognizes its responsibilities to manage waste and accordingly is required to regulate the interventions, mechanisms and technologies applied within the city's boundaries to minimize and manage waste in a sustainable, effective, equitable and efficient manner that will minimize social, environmental and economic impacts as far as practically possible.

This Policy sets the foundation for effective waste management strategies operating within an enabling institutional and organizational framework. It will enable the NCDC to cope with uncertainty, rapid change and the need for decisions concerning waste management in the NCD.

The Policy will be reviewed after 5 years of implementation commencing 01<sup>st</sup> January 2014 or when and if a National Waste Policy becomes available in future, whichever comes first.

## **Organization and Management Roles and Responsibilities**

### **Commission's responsibility**

Develop a coherent and comprehensive Waste Management Plan capturing administrative and operational management strategies targeted at addressing current and emerging challenges associated with waste production, storage, collection, transportation and disposal services integrated with progressive data collection, research, research and capacity building

Waste Disposal facilities must be designed, constructed, managed and operated in accordance with the legislative requirements on Environment and Public Health.

### **Business Communities' and Corporate Organization's Responsibilities**

Manage waste production, storage, collection and disposal in compliance with legislative requirements, standards (international and national) obligations and conventions.

### **Citizen's Responsibilities**

Citizens must manage waste in accordance with the legislative requirements and policies to ensure public health and sanitation and environment sustainability.

### **Motu Koitabu Assembly (MKA)**

Management of waste produced in Motu-Koitabu Villages located within the boundaries NCD is the responsibility of Motu Koitabu Assembly (MKA) as per Section 36 (j) of *Motu Koitabu Assembly Act of 2007*. Technical support and assistance by NCDC is available should it be requested.

### **National Governments' Responsibilities**

Government Departments, Institutions and Offices must put in place waste policies and guidelines for their line agencies and businesses under their respective jurisdictions to ensure proper waste storage and disposal.

### **Contractors' Responsibility**

#### **Contractor – Waste Collection, Transportation, Segregation and Disposal**

All Contractors are required to collect, transport, segregate and dispose waste as per their respective contractual obligations.

#### **Contractor – Sanitary Landfill Management**

Manage and operate commission authorized sanitary land fill site in accordance with the terms and conditions of their contract.

### **Contractor – Data Collection**

All contractors' are to be involved in effective participation through progressive data collections as per the contract requirements.

### **General Requirements for Short Term Collection and Disposal Services**

All other engagements on temporary arrangement will be subject to terms and conditions set by the management.

## **Building on Current Efforts**

### **Collection and Transportation**

These services are provided by the Commission's agents by way of contracts for different categories of waste defined as commercial, industrial and domestic waste. This arrangement is required in terms of service delivery and costs.

### **Disposal – Baruni Open Landfill**

Disposal of waste is done using open uncontrolled dumping with no prior treatment, an act that fails to comply with Department of Environment and Conservation's *Code of Practice for Sanitary Landfill Sites in PNG*.

However given the lack of resources, funds, facilities, infrastructure and technical expertise and skills, this current practice is considered as best that NCDC can afford at present with plans underway to improve the dump to sanitary landfill status.

PNG Government through the office of National Planning and NCDC in partnership with Japanese International Corporation Agency (JICA) is currently working on improving the Sanitary Landfill in Port Moresby through technical support and counterpart funding.

### **Commission Plans**

Therefore as a way forward, the Commission intends to adopt a strategic approach to sustainably manage all types of waste including generation, segregation, collection, transportation, sorting, treatment and disposal in an integrated manner through Private Public Partnership (PPP)

The Commission will develop and implement necessary policies, enabling regulations, by-laws and strategies to achieve sustainable waste management in the city. Important waste infrastructure and facilities will be required to complement the plans.

### **Legal Basis**

The policy is developed in consultation with various legislations', policies and plans', which is provided in Annexure 3.

# Part Two – The Policy

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## **Vision**

Clean, green and safe environment for National Capital District (NCD).

## **Purpose**

This policy sets out to provide a framework for the effective management of solid waste generation, storage, Collection, transportation, treatment and disposal.

## **Goal**

It is envisioned that the implementation of this policy will protect public health and the environment from the adverse impacts of solid waste.

## **Scope**

The policy applies to municipal solid wastes generated within the boundaries of NCD. It includes household hazardous waste.

## **Principles to Guide Actions**

The five principles to guide our actions in managing waste effectively are:

1. *Responsible*: Manage waste in accordance with National and International laws and Conventions.
2. *Waste Hierarchy*: Waste will be managed in accordance with the universally accepted waste hierarchy, which advocates for Reduce, Reuse and Recycle of waste before final disposal.
3. *Sustainability*: Provide waste management services that can be able to sustain themselves and be affordable by residents.
4. *Credibility*: Relying on well-researched scientific data for informed decision-making and continuous improvement.
5. *Good governance*: Develop waste management plans and strategies to achieve overall national government's objectives and policies.

## **Outcomes**

1. Waste Management Plan for NCD.
2. NCD Waste Committee established to provide advice on waste management.
3. NCD communities are informed on their roles and responsibilities in managing waste.
4. Appropriate and relevant Policies, By-Laws and contract documents.

5. Baruni Dump is upgraded to Sanitary Landfill status and land acquired for future development.
6. Appropriate and adequate waste infrastructure/facilities and well managed landfills.
7. Waste Information System and database established for NCD.
8. Community and Industry participation and implementation of waste management principles and minimization initiatives.
9. Maximized revenue generation to sustain operations.
10. Recover valuable resources (where economically viable).
11. NCDC manages and disposes all waste including hazardous waste in an environmentally friendly, safe and clean manner ensuring a healthy and sustainable environment.

### **Directions – The seven (7) Key Areas**

To achieve these outcomes, the policy sets seven (7) key directions and identifies 11 priority strategies that would benefit from a coordinated approach. These strategies will be delivered by NCDC through collaboration and an integrated government approach inclusive of all relevant stakeholders. These are described below and further detailed in the Annexure: Key Area Strategies.

1. **NCD Community taking Responsibility** - Shared responsibility for reducing the environmental health and safety hazards associated with generation, storage, collection, transportation and disposal by all sectors of the NCD Community.
2. **Developing Policies, By- Laws and Contract Documents** - Develop new and review existing policies, by-laws and contract documents to enable effective regulation of waste management activities.
3. **Developing NCD Waste Management Plan** – Developing a waste management plan as a road map guiding NCDC to effectively manage waste into the future.
4. **Establishing Infrastructure and Facilities** – Providing appropriate and adequate infrastructure and facilities in collaboration and partnership with stakeholders to facilitate waste management and minimization initiatives.
5. **Developing Waste Information System**- Creating a waste database for NCD on all categories of waste for the purpose of informed decision making and planning.
6. **Identifying and regulating potentially hazardous waste** – Regulate potentially hazardous contents of waste and ensuring consistent, and safe waste recovery, handling and disposal.
7. **Implementing the Principles of Waste Management** - Encourage and ensure implementation of Waste Management Hierarchy (avoid, reuse, recycle, energy recovery & disposal) and principles including:

- a) Polluters Pays Principles
- b) User Pay Principle
- c) Product Stewardship Principle/ Extended Producers responsibility
- d) Environmental values to be enhanced and valued.

## **11. Implementation**

This Waste Management Policy will be implemented by individuals and collective action by all sectors of the NCD community to ensure a safe, healthy, sustainable, and sound economic environment.

The roles and responsibilities of stakeholders have been articulated and set out in the Annexure: Key Area Strategies.

Progressive action on collaborative strategies will be undertaken by NCDC in consultation with relevant government sectors as part of the on-going work to progress and improve on waste management services in NCD.

## **12. Monitoring Reporting and Evaluation**

A monitoring, reporting and evaluation schedule will be captured in the Implementation Plan to track progress and monitor performance.

## Annexure 1: Key Area Strategies

### KEY AREA 1: NCD COMMUNITY TAKING RESPONSIBILITY

<b>Taking Responsibility</b>	Shared responsibility for waste from production, minimization, storage, collection and final disposal	
<b>Objective: All sectors of the communities in NCD from production right through to disposal must manage waste effectively to ensure public health and environment sustainability</b>		
Strategy	Results	Responsibility
<b>1.</b> NCDC will consult with stakeholders to form a NCD Waste Committee that will ensure improved waste management services to create a safe, healthy and sustainable environment for NCD residents. <b>Key outcomes: 9.2</b>	<ul style="list-style-type: none"><li>▪ NCD Waste Committee formed, comprising representatives from all sectors' of the community including government, business houses', industries and non-government organizations.</li></ul>	<ul style="list-style-type: none"><li>▪ NCDC will initiate the formation of NCD Waste Committee.</li><li>▪ The Committee will be dedicated to best practice waste management aiming to provide sustainable solution by open discussions and participation on waste management issues</li></ul>
<b>2.</b> NCDC will encourage and promote improvements in waste management through public awareness and education. <b>Key outcomes: 9.3</b>	<ul style="list-style-type: none"><li>▪ NCD communities are informed of their roles and responsibilities in managing their waste efficiently and in compliance with legislative requirements.</li></ul>	<ul style="list-style-type: none"><li>▪ NCDC and stakeholders</li></ul>
<b>3.</b> NCDC will improve and maintain waste storage, collection, transportation and disposal services <b>Key outcomes: 9.6,9.11,</b>	<ul style="list-style-type: none"><li>▪ Efficient and timely collection, storage, transportation and disposal of waste. All premises using approved rubbish bins appropriate for the type and volume of waste produced</li></ul>	<ul style="list-style-type: none"><li>▪ NCDC</li><li>▪ Contractors</li><li>▪ NCD Community is required to provide rubbish bins for waste arising within their premises.</li></ul>
<b>4.</b> NCDC will discourage and impose fines on residents and public of NCD who engage in indiscriminate and illegal disposal of waste in public places and fringes of the city boundaries <b>Key outcome: 9.11</b>	<ul style="list-style-type: none"><li>▪ Public places such as bus-stop, shop fronts are clean and free of indiscriminate refuse disposal.</li><li>▪ Fringes and surrounding environment of the city boundary clean and free of illegal disposal.</li><li>▪ Sign board advising public not to practice illegal disposal.</li></ul>	<ul style="list-style-type: none"><li>▪ All NCD residents and public including visitors have a role in assisting NCDC in maintaining the city clean and free of indiscriminate waste disposal by refraining from the practice</li><li>▪ NCDC must raise awareness on the impacts of such acts and behaviors and draft and/or enforce the laws where necessary to discourage and prevent persons from such illegal practice.</li></ul>

**KEY AREA 1:**
**POLICIES & BY-LAWS**

KEY AREA 1: POLICIES & BY-LAWS		
Developing and Improving Policies and By-Laws	Develop new and review existing policies and by-laws to enable effective regulation of waste management activities.	
Objective: Develop appropriate and coherent policies initiatives and by-laws to enable effective waste management service.		
Strategy 5 a – Policy	Results	Responsibility
1. Develop appropriate policies and By – Laws  a) Waste Management Policy  <b>Key outcome : 9.4</b>	Waste Management Policy in place	This strategy is the responsibility of NCDC management, in particular the Waste Management Manager, working in consultation with internal and external stakeholders to develop the policy.
b) Financial Policy for Waste Management <b>Key outcome : 9.4,9.9</b>	▪ Financial Policy in place	▪ NCDC Management is responsible for implementing this strategy. The current waste management services either regulated or provided by NCDC is neither purely rates nor tariff funded. The basis of funding must therefore be determined by the nature and the type of service and related resources, equipment and infrastructure and whether a fee can be used to recover the cost of service (determined by NCDC). ▪ The funding should be provided for specific waste management aspects and that is: ➤ Capital funds that may include but not limited to technical and feasibility investigations/studies/ fees, land acquisition, infrastructure development, equipment acquisition, new building and facilities (i.e. liners for landfills, transfer station, drop-off or recycling centers, composting plant etc.) ➤ Operational funds to cover the cost associated with maintenance, repairs, staffing and

		<p>administration of waste collection, diversion, minimization, treatment and disposal</p> <ul style="list-style-type: none"> <li>▪ Manager Revenue and must work in consultation with Manager Waste Management to initiate formulation of the policy.</li> </ul>
<p>c) Tariff Policy</p> <p><b>Key Outcomes: 9.4,9.9</b></p>	<ul style="list-style-type: none"> <li>▪ Tariff Policy in place</li> </ul>	<ul style="list-style-type: none"> <li>▪ Manager – Revenue is responsible for initiating the formulation of the policy. Policy must include tariff schedule that will reflect the fees that can be used to cover the cost of service.</li> </ul>
<p>d) Beach Cleaning Policy</p> <p><b>Key Outcomes: 9.4,9.11</b></p>	<ul style="list-style-type: none"> <li>▪ Beach Cleaning Policy in place</li> </ul>	<ul style="list-style-type: none"> <li>▪ Manager Waste Management and Manager Parks and Gardens are responsible for initiating the policy. Stakeholders must be consulted on the policy that will not only be restricted to cleaning but the general management of the coastline and the impacts on the marine biology from pollution.</li> </ul>
<p>e) High Metal Recovery</p> <p><b>Key Outcomes: 9.4,9.8,9.9,9.10,9.11</b></p>	<ul style="list-style-type: none"> <li>▪ High Metal Recovery Policy in place</li> </ul>	<ul style="list-style-type: none"> <li>▪ Manager Waste Management is responsible for the formulation of this policy in consultation with internal and external stakeholders. With the increasing economic development in NCD and the country as a whole, there is an urgent need to put in place a policy to regulate metal recovery.</li> </ul>
<p>f) Waste Contract Document</p> <p><b>Key outcome: 9.7</b></p>	<ul style="list-style-type: none"> <li>▪ Comprehensive Contract Document</li> </ul>	<ul style="list-style-type: none"> <li>▪ Manager Waste Management to initiate Waste Contract Document in line with Central Supply Tenders Board.</li> </ul>
<p>g) Credit Control &amp; Debt Recovery Policy</p> <p><b>Key outcome: 9.4</b></p>	<p>Credit Control &amp; Debt Recovery Policy</p>	<ul style="list-style-type: none"> <li>▪ Manager Revenue in consultation with Manager Waste Management must work on this strategy. The policy will contribute to the sustenance of waste services.</li> </ul>

h) Management of Building Development & Construction Waste <b>Key outcomes: 9.1,9.5,9.11</b>	▪ On-site Waste Management Plan	▪ Managers Building and Waste Management in consultation with Legal Division.
i) Public Place Cleaning Policy <b>Key outcome: 9.4,9.5,9.11,</b>	▪ Public Place Cleaning Policy in place	▪ Managers Waste Management, Revenue and Parks and Gardens
j) Illegal Waste Disposal Policy <b>Key outcomes: 9.4,9.5,9.11</b>	▪ Illegal Waste Disposal Policy in place	▪ Manager Waste Management
<b>Strategy 5b By-Laws</b>		
a) Waste Management By Law <b>Key outcome: 9.4,9.5</b>	▪ Waste Management By Law in place	Manager Waste Management in consultation with Legal division
b) Tariff By-Law & Credit Control & Debt Recovery By Law in line with s.41 (f)(g) of the NCDC Act 2001. <b>Key outcome: 9.4</b>	▪ By Law in place	▪ Managers Revenue & Waste Management in consultation with Legal division.
c) Beach Cleaning By-Law, Public Place Cleaning By-Law and Litter Illegal Waste Disposal By-Law in line with s.41 (f)(g) and (h) of the NCDC Act 2001. <b>Key outcomes: 9.4</b>	▪ By Law in place	▪ Managers Waste, Revenue and Parks & Gardens, in consultation with Legal Division.
d) By-Law for the collection of Industrial and Commercial Waste in line with s41 of the NCDC Act 2001 <b>Key outcome: 9.4</b>	▪ By-Law in place	▪ Manager Waste Management in consultation with Legal Division.

### KEY AREA 3: WASTE MANAGEMENT PLAN

Developing NCD Waste Management Plan	Waste Management Plan is a tool that will guide and ensure waste is managed in accordance the national and international laws, conventions and standards to achieve the desired outcome in terms of public health and environment sustainability locally and globally	
Objective: Develop Waste Management Plan to guide the management of waste in NCD in terms of planning budgeting and implementation, monitoring and evaluation to ensure waste is managed effectively		
Strategy 6	Results	Responsibility
1. Manager- Waste Management must initiate and develop a Waste Management Plan for NCD. Key outcome: 9.1	<ul style="list-style-type: none"><li>A Comprehensive Waste Management Plan in place to guide management and operations of waste services</li></ul>	<ul style="list-style-type: none"><li>NCDC Management, in particular Manager - Waste Management in consultation with relevant stakeholders.</li></ul>

### KEY AREA 4: INFRASTRUCTURES & FACILITIES

Establishing Infrastructure and Facilities	Appropriate and adequate infrastructure and facilities including associated resources to compliment and improve on current and future waste management services and minimization strategies.	
Objective: Upgrade Baruni Landfill to Sanitary landfill Status, acquire land for future landfill sites and build infrastructure including physical developments' that will facilitate waste hierarchy and waste minimization principles.		
Strategy 7	Results	Responsibility
1. Upgrade and Improve Baruni Dump to Sanitary Landfill Status in accordance with “Codes of Practice on Sanitary Landfill in PNG” with development of operational and management plan for the following: <ul style="list-style-type: none"><li>Disposal and surface management(soil cover)</li><li>Leach ate collection and Treatment pond</li><li>Road accessibility</li><li>Water Connection for fire and dust control</li><li>Site management &amp; beautification</li><li>Appropriate facilities and infrastructure</li><li>Vector and rodent</li></ul> Key outcomes: 9.5,9.6,	<ul style="list-style-type: none"><li>Baruni Sanitary Landfill developed and improved meeting the requirements of the Codes of Practice on Sanitary Landfill Sites in PNG</li><li>Developed management plan for Baruni Sanitary Landfill</li><li>Plan implemented in compliance with stated health and environmental requirements</li><li>Preventing environmental degradation, greenhouse gas emissions and recovery or salvaging for environment sustainability</li><li>Constructed building on landfill site</li><li>Constructed Weight bridge</li></ul>	<ul style="list-style-type: none"><li>NCDC, National Government (Office of National Planning) and Japanese International Corporation Agency (JICA).</li><li>General public and users of Baruni Sanitary Landfill to observe and adhere to operational practices and guidelines on the use. Sanitary Landfill Contractors to work within the confines of the contract agreement in the management and operations of the dump.</li><li>Collection and Disposal Contractors using the dump daily to observe and adhere to contract agreement on disposal of waste at the Landfill.</li></ul>
Strategy 8 Acquire land for future Landfill development Key outcome 9.5, 9.6.	<ul style="list-style-type: none"><li>Land identified</li></ul>	<ul style="list-style-type: none"><li>NCDC, DLPP, MKA</li></ul>

### KEY AREA 5: WASTE INFORMATION SYSTEM

KEY AREA 3: WASTE INFORMATION SYSTEM		
Waste Information System for NCD	Information gathering through effective data collection methodologies on waste is a requirement that will form the basis for waste management planning. NCDC is required to establish a NCD Waste Information System for future use and planning for waste management services in Port Moresby	
Objective: NCDC will establish a Waste Information System.		
Strategy 9	Results	Responsibility
1. NCDC to establish a waste information system (WIS) for NCD in consultation and collaboration with stakeholders.  Key outcomes: 9.7	▪ NCD Waste Information (WIS) in place for use and planning purposes	▪ Waste Management in consultation with Information Technology and Revenue.

### KEY AREA 6: POTENTIALLY HAZARDOUS WASTE

KEY AREA C: POTENTIALLY HAZARDOUS WASTE		
Reducing Hazards and Risks	Potentially hazardous content of waste is reduced and waste recovery, handling and disposal is consistent, safe and accountable	
Objective: A comprehensive integrated system of identification, collection, treatment, disposal and monitoring of potentially hazardous waste is established to comply with international obligations standards and laws		
Strategy 10	Results	Responsibility
<div>1. NCDC in collaboration with relevant stakeholder will ensure that:</div> <div><ul style="list-style-type: none"><li>▪ PNGs’ international laws and obligations are met;</li><li>▪ Hazardous materials entering the waste stream are reduced;</li><li>▪ Trans-boundary movement of hazardous waste is effectively and efficiently managed within the requirements of international laws;</li><li>▪ Product stewardship is adopted to provide for the impacts of a product with potentially hazardous materials being responsibility managed during and at the end of its life; and</li><li>▪ Facilities are available to handle and dispose off hazardous substances that become waste in an</li></ul></div>	<div><ul style="list-style-type: none"><li>▪ An assessment of the current practices and management of hazardous waste is done with a view to improve in the following:<ul style="list-style-type: none"><li>➢ Production, distribution and use of materials are done in compliance with national and international laws and obligations with the aim to reduce waste and safe guard environment.</li><li>➢ Government systems, and policy frameworks are aligned to ensure appropriate Trans-boundary movement and treatment of hazardous waste and disposal as well as ensuring monitoring and reporting system is integrated with national pollutant inventory.</li><li>➢ Appropriate policies and legislations for hazardous</li></ul></li></ul></div>	<div><ul style="list-style-type: none"><li>▪ NCDC in consultation with Department of Environment and Conservation is responsible for ensuring compliance of international laws and establishing relevant policy framework to regulate hazardous waste and an effective system of reporting</li><li>▪ Department of Environment and Conservation is responsible for setting up a national monitoring program for:<ul style="list-style-type: none"><li>○ chemicals listed under the Stockholm Convention and</li><li>○ Trans-boundary movement of waste.</li></ul></li><li>▪ NCDC is responsible for establishing a monitoring program for chemicals</li></ul></div>

<p>environmentally friendly manner.</p> <p><b>Key outcomes 9.11</b></p>	<p>waste, including medical waste.</p> <ul style="list-style-type: none"> <li>▪ Provision of appropriate and adequate treatment of hazardous waste.</li> <li>▪ A monitoring program in NCD for chemicals listed under the Stockholm Conventions and integrates with the national inventory for continuous data updates and consistency.</li> </ul>	<p>listed under the Stockholm Convention for NCD and integrates with DEC.</p>
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#### KEY AREA 7: WASTE MANAGEEMNT PRINCIPLES

Principles of Waste Management		A comprehensive integration of the waste management principles adopting waste management hierarchy, polluter pays user pay, product stewardship and minimization initiatives.	
Objective: Adopt and integrate waste management principles with NCD waste management plan to enable budget estimates, monitoring/evaluation and implementation of the plan			
Strategy 11		Results	Responsibility
1. NCDC in collaboration with the stakeholders will ensure that the principles of waste management are adopted and implemented as follows:		<ul style="list-style-type: none"><li>▪ Waste Management Principles being implemented to improve current practices of waste management and involves minimizing and reducing the volume of waste entering the landfill.</li><li>▪ Communities to take ownership and participate in the management of waste in their respective community setting.</li></ul>	<ul style="list-style-type: none"><li>▪ NCDC in collaboration with the stakeholders and general community of NCD.</li></ul>
a) Waste Hierarchy – NCDC undertakes to promote waste avoidance, reuse, recycle recovery and disposal as a priority initiative that will encourages and involve the communities’ participation.  <b>Key outcomes: 9.8,9.9,9.10,9.11,</b>			
b) Polluter Pays – NCDC will ensure that all costs associated with the management of waste should, if practical will be borne by the person(s) who generate the waste  <b>Key outcomes: 9.8,9.9,9.11</b>		<ul style="list-style-type: none"><li>▪ Generators of waste meeting cost associated with the management of their waste.</li></ul>	<ul style="list-style-type: none"><li>▪ NCDC (Waste Management &amp; Revenue), Internal Revenue Commission, DEC and other lead agencies (as identified)</li></ul>
c) User Pay- NCDC will ensure that all costs associated with the use of a resource should, if practical be included in the prices of goods and services		<ul style="list-style-type: none"><li>▪ Users of resources and services will pay for the costs associated with management of their waste.</li><li>▪ Appropriate legislation and policy regulating the design</li></ul>	<ul style="list-style-type: none"><li>▪ NCDC, NCD Business communities engaged in production, use, sale and importation of goods and services, Internal Revenue Commission, and Department</li></ul>

<p>(including municipal services) that result from the use.</p> <p><b>Key outcome: 9.9,9.11,</b></p>	<p>and production of goods and services to minimize and reduce environmental harm.</p> <ul style="list-style-type: none"> <li>Environmental values are enhanced and protected</li> </ul>	<p>of Environment and Conservation</p>
<p>d) Product Stewardship or EMR requires:</p> <ul style="list-style-type: none"> <li>the producer of a product to plan its design and production to minimize the environmental harm that may be caused by the waste generated from production, proper use of the product; or</li> </ul>	<ul style="list-style-type: none"> <li>Design of product is regulated and volume of waste produced is reduced as a result</li> <li>Appropriate legislation and policy regulating the design and production of goods and services to minimize and reduce environmental harm.</li> <li>Environmental values are enhanced and protected</li> </ul>	<ul style="list-style-type: none"> <li>NCDC Waste Management</li> <li>Department of Environment and Conservation</li> <li>Internal Revenue Commission</li> <li>Business Sectors</li> <li>Private Citizens</li> </ul>
<ul style="list-style-type: none"> <li>The importer of a product to take all reasonable steps to minimize the environmental harm that may be caused by the waste generated from the importation, proper use or disposal of the product.</li> </ul> <p><b>Key outcome: 9.5,9.8,9.11</b></p>	<ul style="list-style-type: none"> <li>Importer of product complies with the laws in ensuring waste generated as a result of importation is properly handled, stored and dispose with minimal or no adverse health or environmental impact.</li> </ul>	
<p>e) Environmental Values to be Enhanced are:</p> <ul style="list-style-type: none"> <li>Life, health and well-being of people.</li> <li>The diversity of the ecological processes and associate ecosystem.</li> <li>Land use capability, having regard to economic considerations.</li> </ul> <p><b>Key outcome: 9.11</b></p>	<ul style="list-style-type: none"> <li>Safe and sustainable environment.</li> <li>Clean and aesthetic value of environment.</li> <li>Ecosystems protected</li> <li>Healthy Population.</li> </ul>	
		<ul style="list-style-type: none"> <li>NCDC and NCD Community.</li> </ul>

## ANNEXURE 2 - STRATEGY - OUTCOME MATRIX

KEY AREAS & STRATEGIES			OUTCOMES										
KA	STRATEGY		9.1	9.2	9.3	4.9	9.5	9.6	9.7	9.8	9.9	9.10	9.11
1	1	NCDC will consult with stakeholders to form a NCD Waste Committee	x	x				x	x				
	2	NCDC will encourage and promote improvements in waste management through public awareness and education	x	x			x	x					x
	3	NCDC will improve waste storage, collection, transportation and transport					x	x	x	x	x		x
	4	NCDC will discourage and impose fines on residents and public of NCD who engage in indiscriminate and illegal disposal of waste in public places and fringes of the city boundaries				x	x						
2	5	Develop and formulate related policies and by-laws that will complement implementation of NCD Waste Policy	x			x	x	x	x	x	x	x	x
		a) Policies	x						x	x	x	x	x
		b) By-Laws				x	x						
3	6	Manager Waste Management must initiate in collaboration with stakeholders to develop a waste management plan	x						x				x
4	7	Upgrade and improve Baruni Dump and build new infrastructure and facilities to facilitate waste segregation and minimization initiatives						x					x
	8	Acquire land for future landfill development					x	x	x				
5	9	NCDC will establish a waste information system for NCD							x				
6	10	NCDC in collaboration with relevant stakeholders will ensure that a comprehensive integrated system of identification, collection, treatment disposal and monitoring of potentially hazardous waste is established to comply with international laws obligations' and laws				x	x		x				x
7	11	NCDC in collaboration with relevant stakeholders will ensure that principles of waste management are adopted and implemented					x			x	x	x	x

**ANNEXURE 3 – LINKAGES TO LEGISLATIONS', POLICIES', PLANS' & INTERNATIONAL CONVENTIONS & TREATIES**

<b>No</b>	<b>LEGISLATIONS</b>	<b>POLICIES</b>	<b>CODES OF PRACTISE</b>	<b>APPROVED PLANS /DOCUMENTS</b>
<u>1</u>	NCDC Act 2006	Trade Waste Policy - Eda Ranu (yet to be approved)		NCDC Integrated Development Plan 2010-2-15
<u>2</u>	Environment Act 2000	Health Care Waste Policy – NDOH (yet to be approved)		NCDC Corporate Plan 2010-20-15
<u>3</u>	Public Health Act 1973			Pacific Regional Waste Management Strategy 2010-2015
<u>4</u>	Public Health Regulation 1968			Effectiveness of Solid Waste Management in PNG – Office of Auditor General of PNG Performance report no.01/1010
<u>5</u>				World Health Organization (1996), Healthy Cities, Healthy Islands - Document Series no.6 , Guides for Municipal Solid Waste Management in Pacific Island Countries

**INTERNATIONAL CONVENTIONS & TREATIES**

<b>No</b>	<b>CONVENTIONS/TREATIES</b>	<b>SUBJECTS</b>	<b>REMARKS</b>
1	Basel Convention	Control of Trans boundary movement of hazardous waste and disposal	PNG government is a signatory to these conventions/treaties. As a government agent, NCDC is obliged to deliver the commitments & achieve outcomes
2	Stockholm Convention	Protecting human health and environment from persistent Organic Pollutant (POPs')	
3	The 1995 Waigani Convention	Treaty banning exporting of hazardous or radioactive waste to Pacific Island Forum Countries and prohibits Forum Island Countries importing such waste	
4	London Convention and Protocol	Prevention of Marine pollution by dumping of waste and other matter	

**NCDC Act 2001**

**Environment Act 2001**

**Public Health Act 1973**

**Policies**

**Trade Waste Policy – Eda Ranu**

**Codes of Practice**

**Environmental Code of Practice for sanitary Landfill Sites in PNG 2001**

**Plans and Documents**

**NCDC Integrated Development Plan 2013-2017**

**NCDC Corporate Plans 2010-2015**

**Pacific Regional Solid Waste Management Strategy 2010-2015**

**The Effectiveness of Solid Waste Management in PNG- Office of the Auditor –  
General of PNG Performance report no.01/2010**

**World Health Organization (1996), Healthy cities, Healthy Islands, Document  
Series no. 6, Guides for Municipal Solid Waste Management in Pacific Island  
Countries**

## **-22-GLOSSARY**

**“City Manager”** means the City Administrator or Manager appointed under Section 19 of the National Capital District Commission Act 1990.

**“Commission”** means the National Capital District Commission by Section 3 of the National Capital District Commission Act 1990 as amended.

**“Contractors”** refers to persons or companies providing waste collection, transportation and disposal services for and on behalf of NCDC.

**“Contract”** Refers to an agreed terms and conditions of engagement between NCDC and its waste collection, transportation and disposal service providers.

**“Citizen”** Refers to permanent resident of Port Moresby who resides within the boundaries as delineated under the constitution and the NCDC Act.

The term also applies to corporate entities that are resident within the city of Port Moresby

**“Commercial & Industrial Waste”** Refer to waste generated from commercial and industrial operations but not limited to processing and manufacturing industries, service sector, and trade and transport sectors.

**“Construction and Demolition Waste”** refers to all types of waste generated from building construction and demolition and include the removal of materials from building sites prior to construction as well as waste from construction process

**“Extended Manufacturer Responsibility”** Refers to producers/manufacturers, dealers and distributors who produce or distribute such goods or consumables whose end of life management and treatment as waste is beyond the Commission’s capacity to collect back and treat or send back to country of origin to re-use, recycle or treat before disposal.

**“Hazardous Waste”** Refers to waste that poses substantial or potential threats to public health or the environment and exhibits one or more of the these characteristics

- Carcinogenic
- Ignitable (i.e. flammable)
- Oxidant
- Corrosive
- Toxic
- Radioactive
- Explosive

And includes ashes, sludge, waste oil, waste acids and alkali, wet and dry cell batteries, electronic gadgets and not including health care and radio-active wastes.

**“Health Care Waste”** refers to all waste arising from health care establishments as defined in the draft health care waste management policy other than office or administration waste which should include contaminated blood and blood products, pathological wastes, cultures, tissues, expired drugs, soiled dressings, sharps, swabs, gynecological and obstetrics wastes, etc., excluding nuclear and radioactive wastes.

**23-“Illegal Dumping”** hereinafter refers to the act of willful disposal of litter and any other solid waste at undesignated areas in an act to avoid the dump user pay fees.

**“Indiscriminate Disposal”** refers to willful discharge of waste including litter carelessly at public places from static and mobile automobiles by persons.

**“Illegal Disposal”** Disposal of waste in locations other than the commission authorized sanitary landfill sites.

**“Liquid Waste”** – refers to liquid waste from construction sites, surface and storm waste run - off and not liquid waste defined under Eda Ranu Trade Waste Policy.

**“Litter”** refers to bottles, tins, cans, cartons, wrappers, packages, papers, grass, betel nut skin, spittle, or other refuse, rubbish or garbage or any other matter or thing unwanted or abandoned or part thereof that is disposed by a person in a public place established under the National Capital District Commission Litter Law of 1999.

**“Municipal solid waste”** refers to wastes other than industrial waste and includes households domestic waste set aside for kerb-side collection, other types of domestic waste such furniture and residential garden waste, local council generated waste such as waste from street sweeping, litter bins and parks and commercial waste generated from food preparation premises.

**“Municipality”** relating to NCDC hereinafter refers to local self-government/district enjoying the benefits of self-Governance as appointed under section 4 of the constitution and also known as the Local Medical Authority as appointed under Public Health Act Chapter 226 Part II, section 4.

**“Municipal Authority”** refers to powers vested on the municipality by the National Government as mandated

**“Polluter Pays Principle” (PPP)** is the *polluter pays principle* is the principle that all costs associated with the management of waste should, if practicable, be borne by the persons who generated the waste.

**“User pays principle” (UPP) - *User Pay Principle (UPP)*** is the principle that all costs associated with the use of a resource should, if practicable, be included in the prices of the goods and services (including municipal services) that result from the use.

**Product Stewardship Principle** is a waste management principle that requires

- (a) the producer of a product to plan its design and production to minimize the environmental harm that may be caused by waste generated from the production, proper use or disposal of the product; and
- (b) the importer of a product to take all reasonable steps to minimize the environmental harm that may be caused by waste generated from the importation, proper use or disposal of the product.

**“Public Place”** refers to:

- (a) Any street, road lane, thorough fare or road and drainage reserves
- (b) Any park, garden reserve or other public place for recreation
- (c) Any market or mini market established under section 2 of National Capital Market and Street Selling Law 1983.
- (d) Any beach, water frontage or any river, creek, waterway, canals, bays, lakes (whether natural or artificial) or lagoon.
- (e) Any place in the open air to which public has access
- (f) Any pier, wharf, jetty.

**“Recycling”** Diversion of waste away from landfill or incineration and collection and processing of those wastes either into the same product or new product.

**“Reduce”** refers to minimizing or reducing the amount of waste being produced

**“Reuse”** To continually reuse an item in order to eliminate the use of resources in making new item to dispose the remaining

**“3R Principal”** is a waste management practice that employs reduce, re-use and recycle methods to reduce and manage waste at source before collection and disposal

**“Waste”** refers to:

- any substance that is discarded, emitted or deposited in the environment in such volume, constituency or manner so as to cause an alteration in the environment.

- any discarded, rejected, unwanted, surplus or abandoned substance.
- any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery or purification by a separate operation from that which produced the substance

Includes bulky refuse, ashes, sludge, waste oil, waste acid and alkali, carcasses and other filth or other unnecessary matter, which are in solids states and excluding liquid state

**“Waste Hierarchy”** refers to list of different ways of dealing with waste in order of preference – avoid, reduce, reuse recovery (recycling, composting, and energy) and disposal