



## ITEN MUNICIPALITY

### ITEN MUNICIPALITY IDEP ANNEX: ENVIRONMENT & SOCIAL IMPACT ASSESSMENT AND MANAGEMENT CHAPTER FOUR

#### Environmental and Natural Resources Management for Iten Municipality

##### Introduction

This report outlines the key environmental and natural resources issues in Iten Municipality, highlighting the challenges and proposing mitigation measures. Effective environmental management is crucial for the sustainable development of Iten Municipality. The report also outlines the strategies and measures implemented to manage the environment, addressing key issues and ensuring the well-being of the community and natural resources. This report is intended to be part of the Iten Municipality Integrated Development Plan (IDP) to ensure sustainable management of the municipality's environment and natural resources.

##### Environmental and Natural Resources Issues

###### 1. Water Scarcity

- **Description:** Iten Municipality faces significant water scarcity issues, impacting both domestic and agricultural water supply.
- **Challenges:** Limited water resources, over-reliance on seasonal rivers, and inadequate water infrastructure.
- **Mitigation Measures:**
  - Development of sustainable water management systems.
  - Implementation of rainwater harvesting techniques.
  - Rehabilitation and expansion of existing water infrastructure.

###### 2. Solid Waste Management

- **Description:** Inefficient solid waste management practices leading to environmental pollution.
- **Challenges:** Lack of proper waste segregation, inadequate waste collection and disposal systems, and limited public awareness.
- **Mitigation Measures:**
  - Establishment of a comprehensive solid waste management plan.
  - Introduction of waste segregation at source.
  - Enhancement of waste collection and disposal infrastructure.
  - Public awareness campaigns on waste management.

###### 3. Deforestation and Loss of Biodiversity

- **Description:** Deforestation and habitat destruction due to agricultural expansion and urban development.
- **Challenges:** Loss of forest cover, decline in biodiversity, and increased soil erosion.

- **Mitigation Measures:**
  - Implementation of reforestation and afforestation programs.
  - Promotion of sustainable agricultural practices.
  - Protection and conservation of existing natural habitats.

#### 4. Soil Erosion

- **Description:** Soil erosion caused by deforestation, overgrazing, and poor land management practices.
- **Challenges:** Loss of fertile topsoil, reduced agricultural productivity, and sedimentation of water bodies.
- **Mitigation Measures:**
  - Adoption of soil conservation techniques such as terracing and contour farming.
  - Reforestation and planting of cover crops.
  - Implementation of sustainable grazing practices.

#### 5. Air and Noise Pollution

- **Description:** Air and noise pollution from construction activities, vehicular emissions, and industrial operations.
- **Challenges:** Health risks to residents, degradation of air quality, and disturbance to local communities.
- **Mitigation Measures:**
  - Enforcement of air quality standards and regulations.
  - Promotion of cleaner technologies and renewable energy sources.
  - Implementation of noise control measures in construction and industrial areas.

### Environmental Management Strategies

#### 1. Sustainable Land Use Planning

- **Description:** Implementing land use plans that balance development needs with environmental conservation.
- **Measures:**
  - Zoning regulations to protect natural habitats and agricultural land.
  - Promotion of green spaces and urban forestry.
  - Encouraging sustainable agricultural practices.

#### 2. Water Resource Management

- **Description:** Ensuring the sustainable use and protection of water resources.
- **Measures:**
  - Development of water conservation programs.
  - Implementation of efficient irrigation systems.
  - Protection of water catchment areas and wetlands.

#### 3. Waste Management

- **Description:** Reducing, reusing, and recycling waste to minimize environmental pollution.
- **Measures:**
  - Establishment of recycling facilities and programs.
  - Promotion of waste segregation at the source.

- Development of waste-to-energy projects.

#### 4. Air Quality Management

- **Description:** Monitoring and controlling air pollution to protect public health and the environment.
- **Measures:**
  - Enforcement of air quality standards and regulations.
  - Promotion of cleaner technologies and renewable energy sources.
  - Implementation of green transportation initiatives.

#### 5. Biodiversity Conservation

- **Description:** Protecting and enhancing biodiversity within the municipality.
- **Measures:**
  - Establishment of protected areas and wildlife corridors.
  - Implementation of reforestation and afforestation programs.
  - Promotion of community-based conservation initiatives.
  -

#### 6. Climate Change Mitigation and Adaptation

- **Description:** Addressing the impacts of climate change through mitigation and adaptation strategies.
- **Measures:**
  - Development of climate action plans.
  - Promotion of renewable energy and energy efficiency.
  - Implementation of climate-resilient infrastructure projects.

### Challenges in Environmental Management

#### 1. Limited Financial Resources

- Insufficient funding for environmental projects and programs.
- Reliance on external funding sources.

#### 2. Lack of Public Awareness

- Limited understanding of environmental issues among the community.
- Need for increased public education and engagement.

#### 3. Inadequate Infrastructure

- Insufficient waste management and water supply infrastructure.
- Need for investment in modern and efficient systems.

#### 4. Policy and Regulatory Gaps

- Inconsistent enforcement of environmental regulations.
- Need for comprehensive and updated environmental policies.

### Mitigation Measures

#### 1. Financial Strategies

- Diversification of funding sources, including public-private partnerships.
- Allocation of municipal budget for environmental projects.

- Insufficient funding for environmental projects and programs.
- Reliance on external funding sources.

## **2. Public Awareness Campaigns**

- Implementation of community education programs on environmental conservation.
- Engagement of local stakeholders in environmental initiatives.

## **3. Infrastructure Development**

- Investment in modern waste management and water supply systems.
- Development of green infrastructure projects.

## **4. Policy and Regulatory Improvements**

- Strengthening of environmental regulations and enforcement mechanisms.
- Development of comprehensive environmental policies and plans.

### **Guidelines on Management of Environmentally Significant Areas (ESAs) as per NEMA**

The guidelines for ESAs in Kenya are as follows:

- Identify, inventories, profile, map and develop management plans for all the ESAs in Iten Municipality under the guidance of Environmental Management Coordination Act, 1999 (Cap 387).
- The Environmental officer shall make recommendations on the process of management and gazettelement depending on the significance and the level of threat of a particular ESA and shall issue necessary notices and orders in order to stop degradation of ESAs
- Local institutions with legal mandates shall be involved in decision-making and management of ESAs. Interagency coordination and public-private partnership in planning and management of these resources shall be encouraged
- Environmental Inspectors and compliance officers shall also undertake necessary enforcement actions on such incidences in accordance with EMCA No.8 of 1999, Water Act 2002 and any other relevant legislation.
- Undertake Environmental and Social Impact Assessments for development activities which impact ESAs and promote activities which result in their preservation and enhancement.
- Prepare management plans for ESAs to promote best practices for their conservation and establish adequate buffer zones around ESAs where necessary.
- Preserve the aesthetic and biological values of ESAs. Where possible, provide controlled public access to ESAs, particularly for recreational and educational purposes.
- Promote co-management of ESAs by creating awareness to the local communities on the significance of ESAs and incorporating Indigenous Knowledge (IK) and practices in their conservation, planning and management.
- Promote the build-up of knowledge base on ESAs through scientific research, documentation of IK and monitoring.
- Provide for access and equitable benefit sharing to local communities commensurate with benefits accrued from ESAs.

## Conclusion

The management of the environment in Iten Municipality is essential for sustainable development and the well-being of its residents. By implementing the outlined strategies and addressing the challenges, the municipality can ensure the protection and conservation of its natural resources. This report serves as a foundation for integrating environmental management into the Iten Municipality Integrated Development Plan. Addressing the environmental and natural resources issues in Iten Municipality is crucial for sustainable development. By implementing the proposed mitigation measures, the municipality can enhance its environmental management practices and ensure the well-being of its residents. This report serves as a foundation for integrating environmental considerations into the Iten Municipality Integrated Development Plan.

Prepared by:

Lilian Kiprof

Sign: 

Environment Officer

Iten Municipality

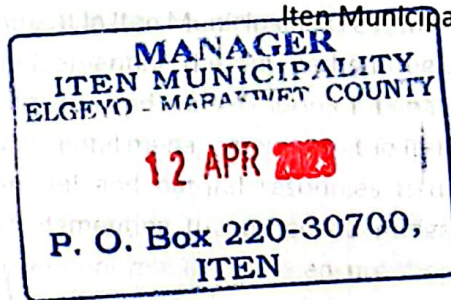
Checked by:

Raymond Omondi

Sign: 

Municipal Manager,

Iten Municipality



Prepared by:

Lilian Kiprof

Sign: .....

Environment Officer

Iten Municipality

Checked by:

Raymond Omondi

Sign: .....

Municipal Manager,

Iten Municipality