MINISTRY OF TOURISM AND WILDLIFE

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) GUIDELINES FOR THE TOURISM SECTOR IN KENYA

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TABLE

No

1. INTRODUCTION

1.1 Background to EIA Guidelines

The development of the EIA guidelines has been undertaken in compliance with the Environmental Management and Coordination Act (1999) and the Environmental Impact Assessment and Audit Regulations (2003). The latter, stipulates under section 12, subsection (2) that: "*sectoral Environmental Impact Assessment Guidelines shall be developed by the lead agency in consultation with the National Environmental Management Authority (NEMA).*" The EIA guidelines have been formulated in a broad-based consultative process, through gathering and assessing inputs from all established sectoral players in the tourism industry.

This Environmental Guidelines for the tourism[1] industry are the culmination of several consultative activities undertaken by the consultants with assistance of the Ministry of Tourism and Wildlife (MoTW), Tourism Trust Fund (TTF), and Working Committee, set up by the MoTW to facilitate preparation of the guidelines. The guidelines have also benefited greatly from consultations with stakeholders on the key environmental issues that should be taken into account in preparation of Environmental Impact Assessment (EIA) for tourism projects. These consultative workshops were held in all tourist regions namely: Coast, Nairobi, Southern Rift Valley, Central Rift Valley, North Rift Valley, Eastern, Central, Western and Nyanza. International case studies on best practices were also undertaken in Tanzania and South Africa.

1.2 Tourism Sector in Kenya

Tourism is a major world industry and one of the fastest growing sectors of global trade. In Kenya, it can be traced back to early 1930's when the first foreign visitors started coming into the country mainly for big-game hunting expeditions which were locally referred to by the Swahili word "Safari" thus its entry into the travel world literature. The main attractions to Kenya are its relatively pristine wildlife in natural habitats, captivating landscapes and expansive beaches.

Tourism products in Kenya have been broken down into seven, namely:- Beach; Wildlife; Cultural; Sports; Scenic; Adventure; and Specialized tourism which includes educational tourism, slum tourism etc. Tourism's social, economic and environmental impacts are immense and complex, not least because tourism concentrates on vulnerable natural and cultural sites. Positive impacts arising from tourism include foreign exchange earning, improved livelihoods through provision of employment cross cultural exchange, infrastructural development, and conservation.

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[1] Tourism is "the temporary movement of people to destinations outside their normal places of work and residence, the activities undertaken during their stay in those destinations, and the facilities created to cater to their needs" (Mathieson & Wall, 1982). On the other hand "ecotourism include: conservation of biological and cultural diversity, meaningful community participation and economically sustainable" (IUCN). Put very simply, tourism is travel for leisure and all the activities and facilities devoted to such travel.

1.3 Tourism's Impact on the Environment

Although all that important, tourism is essentially nature-based and has considerable ability to influence environmental quality, including destroying biological and cultural diversity unless properly planned. A major feature of Kenya's tourism has been the heavy visitation to just a few of the better-known parks and reserves, and preoccupation with the beaches. This has led to rapid deterioration of facilities due to heavy usage, inadequate regulation, and poor management of both the infrastructure and visitor behaviour.

Potential negative impacts arising from the tourism industry on environment include: pollution of water resources, land degradation and unsustainable use of land, air pollution and noise, solid wastes and littering, sewage pollution, aesthetic pollution and introduction of invasive species, physical impacts arising from infrastructure, destruction of marine ecosystems, trampling of vegetation due to off road driving and hiking, anchoring, destruction of fragile ecosystems due to marine sports, and alteration of ecosystems and animal natural behavior due to intense tourism activities. The challenge is therefore to ensure that tourism is developed in harmony with environmental standards.

1.4 Purpose and Objectives of the Tourism Sector EIA Guidelines

The purpose of the EIA guidelines for the tourism sector is to ensure sustainable tourism development in Kenya.

The objectives of the guidelines are:-

a. To streamline activities and infrastructure for sustainable development in the tourism sector
b. To guide tourism development to conform with existing regulatory framework
c. To ensure integrated approach to sustainable management of natural resources within tourism sector

2. ENVIRONMENTAL IMPACT ASSESSMENT PROCEDURE AND PROCESS

2.1 Administration of EIA in Kenya

The National Environment Management Authority (NEMA) as per EMCA (1999) and the Environmental Impact Assessment and Audit Regulations (2003) administer EIA in Kenya.

Experts registered by NEMA undertake EIA in Kenya on behalf of the project proponents. Experts are either individuals or firms, and after undertaking the EIA, submit the reports to NEMA. Lead agencies have a key role in facilitating decision making on EIA reports by NEMA

2.2 EIA Process in Kenya

EIA, is a planning and management tool for proposed projects which is used to predict the environmental consequences or impacts of any development project with a view of recommending mitigation measures. EIA ensures that the potential adverse environmental impacts are foreseen and addressed at an early stage in the project planning and design. The possible environmental consequences of projects include ecological, economic, cultural, aesthetic, health and safety, social, and amenity impacts.

Guiding Principles of EIA

- Do EIA before decisions are taken.
- Conduct an independent review.
- Include post-project analysis.
- Involve the public.
- Include alternatives.
- Consider both biophysical and socio-economic impacts.
- Include consideration of transboundary issues.

Stages of EIA Process in Kenya

1. Screening: This stage decides whether the nature of the proposed project, and its impacts should be subjected to an EIA. This is significant as it enables the application of an EIA only to those projects, which generate significant impacts. Screening therefore helps in decision-making regarding which projects undergo an EIA and which ones do not.

2. Scoping: This determines the extent and approach of the EIA at an early stage in the planning process. Among the key issues addressed by the scoping mission include:

- Identify key issues and concerns of interested parties
- Identify what should be carried out
- Determination of the procedures to be followed
- Identification of all possible significant environmental impacts to be investigated in EIA.

3. Consultation and Public Participation: Consultation and Public Participation (CPP) is very important in undertaking of EIA and should be undertaken all through the life of a project. Exhaustive consultations should be undertaken on the proposed project during its design, planning, construction and operations. Consultations should also be undertaken with the lead agency form the very beginning, in this case, the Ministry of Tourism and Wildlife, and the Kenya Wildlife Service in the event that the proposed development is with protected conservation areas.

CPP involves seeking public comments on the project, especially from those persons affected by the project. Views may be sought through interviews with various stakeholders and interested parties or by publicizing the project, its benefits and impacts e.g. by posters around project site, or through the media.

Identification of various stakeholders involved in or potentially affected by the proposed project should thus be undertaken from the very beginning and should include those from governmental, non-governmental, private sectors (particularly those from the tourism sector), and indigenous and local communities.

Generally, public participation enhances sourcing of information, its analysis and appropriate interpretation. It also improves public perception of the project, its environmental, social and economic implications, and the project options and proposed impacts mitigating measures. Public involvement may be extended beyond the affected community in the project area, to involve any member of the public that may be knowledgeable on the impacts of the project or may be better informed on environmental trends of the project area. This may require consultations with experts and interested parties.

The following are good practice principles to ensure successful public participation:-

1. Getting written comments and submissions from the lead agency namely the Ministry of Tourism and Wildlife and the Kenya Wildlife Service if applicable;
2. Developing a public participation framework as early as possible;
3. Identifying stakeholders and their representatives as not all persons can or should be consulted on every detail of the project;
4. Identifying appropriate techniques of public participation/communication and disseminating information in a way that is easily understandable;
5. Holding public consultation events at venues and times that allow for maximum attendance and free exchange of information;
6. Allowing stakeholders enough time to assimilate information, consider their implication and present their views; and
7. Ensuring that responses and feedback are given on any issues and concerns about the project raised during consultation.

4. Baseline Information: This is a record of what exists in an area prior to an action. It is a description of the current state of the environment before the project commences, and on-going activities. It includes physical characteristics like temperature, rainfall etc; biological like vegetation and biodiversity; human/social characteristics like settlements, population and its density etc. The baseline study requires both fieldwork and a review of existing documents.

5. Impact Prediction and Evaluation: This addresses the prediction of the magnitude and significance of the environmental impact. Whenever possible or feasible to determine the magnitude and significance of impacts, it is generally agreed that the quantitative change due to the impact be compared. Some environmental impacts associated with tourism projects are:

- Destruction of unique and sensitive habitats e.g. beaches and corals
- Destruction of cultural, historical and archaeological sites

- Degradation of land resources e.g. soil erosion and siltation
- Pollution (air, water, vegetation and soils)
- Loss of environmental functions provided by the natural systems
- Loss of rare, endangered, threatened, species of special concern and species of economic importance
- Encroachment of ecosystems e.g. disturbance to breeding and nesting grounds
- Animal behaviour

6. Impacts Mitigation: These are measures that will eliminate or reduce the intensity or compensate for the losses or potential adverse environmental impacts. Mitigation measures proposed should also be evaluated for their effectiveness. Mitigation measures may include:

- Abandoning or modifying a project proposal
- Substitution of techniques using Best Available Technology Not Entailing Excessive Costs
- Correct impact by repairing,
- Compensate for the impact by replacing or providing substitute resources e.g. reforestation when forests are destroyed, rehabilitating or restoring existing environment.

7. Analysis of alternatives: This is a review of all available alternative actions related to a given project e.g. alternative sites, alternative techniques/technology, alternative projects and no-action alternative. The purpose of considering alternatives is to adopt those that minimize damage to the environment or which allow the use of mitigation measures to the environment. The search for alternatives must be genuine, well documented and carried out before a choice is made. Alternatives should also be compared in terms of environmental, social and economic gains and losses

8. Reporting: A report is written according to the requirements of the EIA/EA Regulations, which in Kenya means either an EIA Project Report or an EIA Study Report. The report is then submitted to the National Environmental Management Authority; NEMA who reviews it and either approves or reject it. When rejected, reasons are given and can be appealed.

9. Implementation, Monitoring and Evaluation: If approved, the project is implemented. During implementation stage, there is continuous monitoring and auditing of the project. Environmental monitoring is the systematic observation of the state of the environment during the project life. Monitoring is done to ensure that the development adheres to the mitigation measures documented and compliance with all aspects. Also, some impacts may have been unforeseen and may be used for future consideration of such projects.

2.3 Types of EIA Reports

As per the Environmental Management (Environmental Impact Assessment and Environmental Audit Regulations (EIA/EA), the EIA process in Kenya is in two stages

a. EIA Project Report a decision is reached within 45 days after receipt

b. EIA Study Report, a decision is reached within 90 days, and which requires more public consultations, using public notices and gazettement, and radio announcement

Project Report : The project report constitute the following:

(a) The nature of the project
(b) The location of the project including the physical area that may be affected by the project's activities;
(c) The activities that shall be undertaken during the project construction, operation and decommissioning phases;
(d) The design of the project
(e) The materials to be used, products and by-products, including waste to be generated by the project and the methods of their disposal;
(f) The potential environmental impacts of the project and the mitigation measures to be taken during and after implementation of the project.
(g) An action plan for the prevention and management of possible accidents during the project cycle;
(h) A plan to ensure the health and safety of the workers and neighbouring communities;
(i) The economic socio-cultural impacts to the local community and the nation in general;
(j) The project budget and
(k) Any other information the Authority may require.

EIA Study Report:- This includes the following

(a) A non-technical summary outlining the key findings, conclusions and recommendations of the study and shall be signed by the proponent and environmental impact assessment experts involved in its preparation.
(b) The proposed location of the project;
(c) A concise description of the national environmental legislative and regulatory framework, baseline information, and any other relevant information related to the project;
(d) The objectives of the project;
(e) The technology, procedures and processes to be used, in the implementation of the project;
(f) The materials to be used in the construction and implementation of the project;
(g) A description of the potentially affected environment;

(h) The products, by-products and waste generated by the project;
(i) The environmental effects of the project including the social and cultural effects and the direct, indirect, cumulative, irreversible, short-term and long-term effects anticipated;
(j) Alternative technologies and processes available and reasons for preferring the chosen technology and processes;
(k) Analysis of alternatives including project site, design and technologies and reasons for preferring the proposed sites, design and technologies;
(l) An environmental management plan proposing the measures for eliminating, minimizing or mitigating adverse impacts on the environment; including the cost, time frame and responsibility to implement the measures;
(m) Provision of an action plan for the prevention and management of foreseeable accidents and hazardous industrial and other development projects;
(n) The measures to prevent health hazards and to ensure securing in the working environment for the employees and for the management of emergencies;
(o) An identification of gaps in knowledge and uncertainties which were encountered in compiling the information;
(p) An economic and social analysis of the project;
(q) An indication of whether the environment of any other state is likely to be affected and the available alternatives and mitigating measures; and
(r) Such other matters as the Authority may require.

It is important to note that, for the EIA study report:

(a) The **Terms of Reference** are prepared by the proponent and approved by NEMA. The ToR includes considerations under the Second Schedule of EMCA, the general environmental impact assessment guidelines, and sector environmental impact assessment guidelines e.g. Tourism Sector EIA guidelines.

(b) **Advertisements and Public meetings:** NEMA shall, at the expense of the proponent, publish for two successive weeks in the Gazette and in a newspaper with a nation-wide circulation, a public notice once a week inviting the public to submit oral or written comments on the environmental impact assessment study report; and make an announcement of the notice in both official and local languages at least once a week for two consecutive weeks in a radio with a nation-wide coverage. The proponent will also hold at least three public meetings with the affected parties and communities to explain the project and its effects, and to receive their oral written comments. NEMA may also call for a public meeting.

2.4 Submission and Review of EIA Reports

Ordinarily, ten copies of both the EIA Project Report and EIA Study Report are submitted to NEMA Headquarters. NEMA, reviews and determines the project report,

within the stipulated times, namely, forty-five and ninety days for the Project and Study reports respectively.

Important in the review process is the participation of lead agencies and district environmental committees who receive copies of the EIA reports and are expected to submit their comments within 21 days of receipt. Where more than one district is involved, the report is also sent to the relevant Provincial Environment Committee. In undertaking the EIA, it is thus important to consult the lead agencies and the local environment committees so as to adequately address their concerns.

For the study report, where NEMA is satisfied that the project will have no significant impact on the environment or that the project report discloses sufficient mitigation measures, an EIA licence is issued at this stage. On the other hand, where the authority finds that the project will have a significant impact on the environment, and the project report discloses no sufficient mitigation measures, the authority shall require that the proponent undertake an environmental impact assessment study.

A proponent who is dissatisfied with the Authority's decision that an environmental impact assessment study is required may within fourteen days of the authority's decision appeal against the decision to National Environment Tribunal. Likewise, in the case of the EIA study report where no license is issued, a person who is aggrieved by the decision of the Authority may also appeal to the Tribunal against NEMA's decision.

3. TOURISM ENTERPRISES REQUIRING EIA

According to EMCA, it is mandatory for all new projects under the Second Schedule of EMCA to undergo an EIA. Such project include:

1. General

    (a) an activity out of character with its surrounding;
    (b) any structure of a scale not in keeping with its surrounding;
    (c) major changes in land use

2. Urban Development including: -

    (a) designation of new townships;
    (b) establishment of industrial estates
    (c) establishment or expansion of recreational areas;
    (d) establishment or expansion of recreational townships in mountain areas, national parks and game reserves;
    (e) shopping centres and complexes.

Most tourism enterprises would fall under these two categories of the second schedule. These include:-

Facilities

- New facilities such as hotels, lodges, Villas, Cottages, Eco-lodges, Farm Stay/Home Stay, Guest Houses, Hostels, Motels, Restaurants, Retreat Lodges, Serviced Apartments, Time Share, Town Hotel, and Vacation Hotels, tented camps
- Tourism activities out of character with its surrounding;
- New tourism structures of a scale not in keeping with its surrounding;
- Tourism facilities/activities involving major changes in land use
- Tourism activities involving establishment or expansion of recreational areas;
- Tourism facilities involving establishment or expansion of recreational areas in mountain areas, national parks and game reserves;
- Tourism facilities involving creation or expansion of airports or airfields
- Tourism facilities involved in the river diversions and water transfer between catchments; storage dams, barrages and piers; or drilling for the purpose of utilising ground water resources
- Tourism facilities/activities dealing with the commercial exploitation of natural fauna and flora
- Beach development – beach tourism
- Expansion of facilities – putting up of new structures not covered in the Initial EIA report

<u>Activities</u>

- Commercial filming
- White water rafting
- Deep Sea Diving
- Golfing
- Par gliding
- Ballooning/ balloon safaris
- Board walks
- Nature trails
- Tramlines/canopy walk
- Jet skies
- Any other tourism activity of facility that may have significant impacts

4. KEY COMPONENTS OF TOURISM SECTOR EIA REPORTS

4.1 Description of the Proposed Project

The proponent should clearly describe the kind and form of tourism facility and activities they intend to establish. The definitions for hotel, lodges, tented camps, motels, restaurants etc, should be consulted in describing the proposed project.

The description should also include: -

- Summary of the proposed project;
- Objectives of the project;
- Project proponent;
- Estimated outcomes and possible impacts
- Scale and types of tourism development or activities proposed;
- Key attractions for the tourism facility;
- A description of the stages of development;
- What the facility will provide in terms of tourist activities and infrastructure development:- restaurant, bar, accommodation, disco, swimming,
- On-site and off-site activities proposed e.g. hiking, game drives, tennis;
- Various structures and stakeholders that may be involved at each stage of development;
- Geographical description including recreation opportunity zones;
- Identity and any special features of the surrounding environments and biodiversity;
- Nature and extent of human-resource requirements and plans for their procurement;
- Socio-economic impacts
- Public consultations
- Other developments in the project area

4.2 Location of the project

The project location is very critical in tourism related projects in order to ensure that minimum impacts on the environment. The project proponent should therefore give a concise description of where the tourism enterprise will be located:-

- Indicate project location, the division, district, land registration number,
- Indicate status/ownership of land – private, government, leased (attach relevant documents)
- Indicate how far the project is from sensitive ecological habitats, and water bodies
- Indicate what infrastructure is in place, health facilities, water, roads, telephone,
- Indicate accessibility to project site – distances from major roads, airstrips etc
- Indicate security measures to be put in place e.g. distance from the nearest police station/police post
- Proximity of the site to human settlements, industries and communities;

- Ecological aspects of the site and its surroundings, including indication of any protected areas;

In general, when sitting a tourist facility, the project proponent must ensure that the tourism enterprise is located: -

- Where ecosystems are at least able to absorb a managed level of visitation without damage;
- In a community where residents are aware of the potential opportunities, risks and changes involved due to the tourism enterprise and are interested in receiving visitors; and
- Where there are no threats to indigenous culture and traditions.
- At an appropriate distance from areas of cultural significance or heritage value including sacred sites;
- In stable environmental conditions (geological, hydrological and marine) exist for access, building construction and visitor and management use patterns;
- In an area where soil types are suitable for and capable of holding tourism development;
- Proposed buildings and infrastructure are located at a good distance to avoid risks of damage from landslide, flooding, coastal processes
- At an appropriate distance from insect breeding sites, such as those of mosquitoes and biting midges, are avoided;
- Where risks and hazards to visitors are minimized e.g. not building on flood plains
- Away from areas of declared rare or priority flora and fauna species
- Away from areas of important breeding areas especially of endangered species like sea turtles
- Where possible, the potential for further expansion or upgrading can be accommodated without significant impact on the environment;
- Where potential impacts upon sensitive ecological habitats, fish habitat protection areas and other sensitive marine environments are minimized;
- Where possible, access to suitable artesian water sources is available;
- Where minimal impacts or alterations to the natural topography will be undertaken;
- A distance from the 30 metre high water mark if along the Coast
- A distance from gazetted fish landing sites if near a water body

4.3 Baseline Information

This should indicate the current environmental status of the project site and area. It should include information on:

- Current economic and social data
  - Population of the area,
  - Poverty Levels
  - Education
  - Infrastructure e.g. roads, water sources, telephone, internet
  - Planned tourism development and activities and their overall positive and negative impacts
  - Development and activities in other sectors;

- The proximity of the site to human settlements and communities, sites used by people from those settlements and communities as part of their livelihoods and traditional activities, and heritage, cultural or sacred sites
- Identification of various stakeholders involved in or potentially affected by the proposed project;
- The perceived roles of local stakeholders in the proposed development
- Current land use practices in the area
- Benefits from, and costs of, tourism project to indigenous and local communities

♦ Environmental conditions;
- Climatic data e.g. rainfall, altitude;
- Description of geology, topography and soils of the area;
- Environmental and biodiversity resources and processes, including any special features and sites of particular importance
- Protected areas, including identification of those resources that may be off bounds to development due to their particular fragility
- Natural resources in the project area and their existing threats
- Any flora, fauna and ecosystems that could be affected by the tourism development or activities, including keystone, rare, endangered or endemic species;
- Ecological aspects of the site and its surroundings, including indication of any protected areas; specifications on the ecosystems, habitats, and species; quantitative and qualitative information on the loss of habitats and species;
- Ecologically sensitive zones and zones where ecological disasters have or will most likely take place;
- Existing zones, ecological zones and existing tourism zones within the ecological zones
- Information on damage done to the environment in the past
- Information on sources of indigenous knowledge of environmental management including indigenous and local communities and how this has worked in maintaining the environment's integrity in the past; and

Baseline data can also include maps, sketches, geographical information systems and other visual tools, including already identified zoning schemes. Baseline data should also collect samples of water; soil and other relevant matter for testing in NEMA accredited laboratories.

4.4. Legal, Regulatory and Institutional Framework

Certain tourism enterprises fall under specific legislative and regulatory frameworks. Proponents should thus ensure that these legislation and regulatory frames are consulted to ensure that the proposed tourism establishment, and activities therein, are in line national laws. Some international conventions, treaties and protocols also need to be looked at in certain areas e.g. Ramsar Sites, World Heritage Sites, and Coastal areas.

Below are some of the key legislations and treaties that apply to the tourism sector

Legislation	Applicability	Institution
Environmental Management and Coordination Act (EMCA) 1999	- EIA licence - EIA/EA compliance	NEMA
Tourism Industry Licensing Act Cap 381	- Licencing of all tourism and travel enterprises - Inspection of facilities to ensure standards	Ministry of Tourism and Wildlife
The Hotels and Restaurant Act Cap 494	- Licensing of hotels, restaurants and managers - Imposition of levies - Registration of guests - Regulation of hotels	Ministry of Tourism and Wildlife
The Wildlife (Conservation and Management)Act, Cap. 376	- Establishment of National Parks, Reserves and Sanctuaries - Establishment of mines within parks - Code of Conduct within the park: off road driving, introduction of invasive species, collecting of trophies, and animal disturbance - Flying restrictions (<1500ft)	Ministry of Tourism and Wildlife
National Museums and Heritage Act 2006	Acquisition of land and monuments, sacred sites and forests of cultural significance	National Museums of Kenya
Fisheries Act, Cap 378 1989	Regulates trout fishing Protection of fish and turtle breeding sites, Prohibits gathering of corals whether alive or dead, use of explosives in fishing Provides a list of gazzetted fish landing sites	Department of Fisheries
Mining Act Cap 306 revised 1987	Licencing of mines Provides for rehabilitation of mines after decomissioning	Department of Geology
Plant Protection Act Cap 324	Provides for prevention and introduction of diseases that are destructive to plants. Prohibits introduction of exotic species into the country Provides for quarantine and prescribed offenses	Kenya Plant Health Inspectorate
Suppression of Noxious Weeds Cap 325	Provides for clearing of noxious weeds such as *Datura Stramonium, and Eichhornia crassipes* (Water hyacinth)	Ministry of Agriculture
Environmental Management and Coordination (Conservation of Biodiversity, Access to Genetic Resources and Benefit Sharing) Regulations 2006	- Protection of endangered species, environmentally sinificant areas, provision of access permits, material transfere agreements and benefit sharing	NEMA
Water Act 2002	- Management of water resources - Regulation of rights to use water, and supply - Provision of water permits - Provision of sewerage services - Prevention of water pollution	Ministry of Water and Irrigation
Environmental Management and Coordination(Water Quality) Regulations 2006	- Provides for the protection of water sources - Water pollution prevention - Provides for effluent discharge in aquatic and sewerage system standards	NEMA
Environmental Management and Coordination (Waste	- Provides standards for handling, transportation and disposal of different types of wastes	NEMA

Legislation	Applicability	Institution
Management) Regulations 2006		
Agriculture Act Cap 318	- Principal land use statute - Prohibits any land use practices that may intensify soil erosion - Provides for protection of riparian zones up to 30 meters high water mark	Ministry of Agriculture
Public Health Act Cap 242	- Provision of clean and sanitary premises - Protection of public health - Prevention of public nuisance	Local Authorities
Local Government Act Cap 265	- Provision of sewerage services - Pollution prevention through enforcement of the law	Local Authorities
Factories and Other Places of Work Act Cap 514	- Provision of Occupation Health and Safety of workers - Inspection of places of works	Ministry of Labour
Physical Planning Act, 1999	- Provides for zonation of land for physical development - All developments must be authorised and approved - Provides for advertizement of proposed developments	Local Authorities
Government Lands Act Cap 280	- Prohibits obstruction of public access roads, streets, highways or waterways	Ministry of Lands and Housing
Land Planning Act Cap 303	- Provides for soliciting of comments from affected parties before approval and any development is undertaken	Ministry of Lands and Housing
Penal Code Cap 63	- Provides for prosecution of persons polluting water bodies, or causing injury to human health	GoK
Food, Drugs and Chemical Substances Act Cap 254	- Prohibits selling of food substances that are adulterated, or expired - All food substances should be labelled with a sell-by-date	Ministry of Health
Traffic Act Cap 403	- Prohibits air pollution from motor vehicles	GoK
Environmental Management and Coordination (Fossil Fuel Emission Control) Regulations 2006	- Provides for acceptable emission standards by motor vehicles, and generators - Any use of unpermitted fuel catalysts must be disclosed for approval	NEMA
Radiation Protection Act Cap 243	- Provides for protection of public and radition workers from ionizing radiation - Prohibits unauthorized manufacture, use, and disposal of radioactive materials	NEMA
The Maritime Zones Act Cap 371	- Provides for conservation and management of marine resources - Prescribes the limits of national jurisdiction	Kenya Maritime Authority
Maritime Authority Act 2006	- Provides for the establishment of New Maritime Authority	Kenya Maritime Authority
Continental Shelf Act Cap 312	- Governs the exploration of natural resources-living and non-living within the sea bed or subsoil	Kenya Maritime Authority
Employment Act Cap 226/	- Terms and conditions of employment,	Ministry of Labour

Legislation	Applicability	Institution
Wages and Regulations of Employment Act Cap 229	Remuneration of wages, leaves, health, welfare, contract of service	
Occupier's Liability Act Cap 34	- Prvides for duty of care upon persons residing within the premises	Local Authorities

International Agreements Applicable in Kenya:

Kenya has ratified various international conventions on environment that are applicable to tourism. Conventions are agreements that *are* legally binding on states that have become parties to them. Kenya has the *International Convention on Biological Diversity* (1992), which promotes the protection of ecosystems, and natural habitats, respect the traditional lifestyles of indigenous communities, and sustainable resource use of resources.

Kenya is also party to the *World Heritage Convention* (1972), which is concerned with cultural and natural heritage. The convention deals with monuments and areas that are deemed to be of "outstanding universal value" in terms of beauty, science and/or conservation. Kenya has several sites that have been declared World Heritage Sites such as Lamu town, Mt. Kenya's natural forests, and Sibiloi National Park near Lake Turkana. Any deterioration or disappearance of such heritage is a loss to all the nations of the world.

The importance of wetlands and water birds are also covered under the *Ramsar Convention* 1971, which governs wetlands of international importance. The convention entered into force in Kenya in 1990 and it governs Lake Nakuru, Lake Baringo, and Lake Natron which is a shared ecosystem between Kenya and Tanzania. Kenya is therefore committed to avoid degradation of wetlands under its jurisdiction. Kenya has also ratified the *Agreement of the Conservation of Eurasian Migratory Water birds* in 2001 and the *African Convention on the Conservation of Nature and Natural Resources* (1968), the Convention on International Trade in Endangered Species (CITES 1973) of Wildlife Fauna and Flora which prohibits trade in species such as Dugongs, and Ivory. The Kenya Wildlife Service is the charged with managing the Ramsar Sites in Kenya.

Tourism in Kenya is in most cases nature-based. Therefore one way of abiding by the international conventions is to ensure that proponents undertake an Environmental Impact Assessment before commencement of project as prescribed in section 58 of the Environmental Management and Coordination Act 1999.

4.5 Tourism Project Cycle Management

As with other projects, a tourism enterprise will have a cycle with key components, which should be taken into account. The key components re:

1. **Preparatory/Pre-construction:** This is the project planning stage of the project and involves designing the project and entering into collaborative

agreements with various stakeholders, like contractors, landowners, surveyors, quantity surveyors and architects. It also involves seeking various permits and licences, including carrying out of the environmental impact assessment. Pre-construction may also involve fencing off the project site, and putting up of a temporary camp for construction workers.

2. **Construction stage:** This stage sees the putting up of the tourism facility and could have several adverse impacts on the environment. Several considerations should thus be looked at in terms of actual activities, their timing, their scale, and the sourcing of materials. Issues of health and safety should also be considered for both workers and neighbouring communities and facilities. The basic principle during the construction stage is to ensure that the transformation from natural to built environment will have minimum impact on environment. The planned activities will not lead to significant land degradation, but a better and well-managed environment.

3. **Operations stage:** This is the most critical area in terms of environmental and social impacts and needs critical considerations while undertaking EIA.

4. **Decommissioning stage:** The decommissioning phase of a project considers what would happen at the end of the project, in this case the tourism enterprise. It thus looks at what would happen to the buildings and structures put up, and how to phase the project in an environmentally friendly way e.g. what happens to the swimming pool, or the soak pits after the end of the project. Other factors to be considered in decommissioning are health and safety.

In all these stages, special environmental issues need to be considered while undertaking an EIA.

Issues	Considerations
1. Preparatory/Pre-construction Stage	
Architechural designs	♦ The proposed architectural style should be in line and character with the surroundings; This is both in terms of colour, size, architecture etc. ♦ The proposed structures should consider local landscape design and construction materials should reflect local elements; ♦ Building structures within the national parks and game reserves should blend with the natural surroundings; ♦ The proposed structures should avoid being visual pollutants by taking into consideration land forms, contours of the area, visual context and resources, general landscape, vegetation, prominent features in the area, and views of the area;
Natural lighting	♦ Designs of the proposed structures should allow sufficient, natural lighting;
Unfriendly desings	♦ The designs should take into account safety consideration and access for physically challenged visitors e.g. provision for ramps, supports in sanitary facilities for the elderly
Blocking of public access roads	♦ Designs and layouts should ensure locals have access to key environmental resources e.g. fishermen to land their fish; herders to water their livestock, and public access to beaches.
Visual pollution	♦ Designs and general layout of the structures should also consider blockage of view and access of scenic sites like beaches, oceans, mountains for those behind them;

Issues	Considerations
Air reticulation	♦ Designs should allow proper ventilation and air circulation of rooms and common areas
Siting of septic tanks	♦ Locate septic tanks away from water bodies (minimum 6 meter from highest water point as per Environmental Management and Coordination (Water Quality Regulations 2006)
Storm water management	♦ The designs should include storm water drainages and roof catchments and storage facility
2. Construction stage	
Poor practices by contractors	♦ Proponents should develop on-site guidelines or controls for contractors, specifying appropriate construction practices
Site disruption through clearing and excavation	♦ Construction practices should ensure minimal site disruption. As such, there should be very little change to landform, ,and topography to accommodate buildings and infrastructure ♦ Construction should ensure conservation of landscapes and biodiversity and that disturbance or loss of natural vegetation is minimized or avoided; ♦ Construction should minimize cut and fill and vegetation removal, and follow natural contours;
Poor siting of access roads	♦ Construction of access roads and car parks should be sensitively designed to address environmental constraints. They should involve minimal cut and fill activities and also consider natural contours for flood water flow ♦ Roads should direct traffic away from environmentally sensitive areas; ♦ Roads, tracks and paths should be aligned and constructed to minimize disruption of native fauna movement patterns.
Building on cliffs	♦ Impacts on visually prominent areas such as headlands, cliffs and ridges should be avoided;
Dust	♦ Watering should be done where appropriate during construction; ♦ Provide workers with dust masks
Safety	♦ All construction should be undertaken taking into consideration the building code in force; ♦ Build scaffolds
Noise	♦ Construction should be undertaken at times with minimum impact on neighbours e.g. during the day.
Heat	♦ Construction, especially in hot areas, should maximize roof ventilation, and also provide for shaded outdoor living areas such as porches and decks; ♦ Construction should orient building in such a way to take advantage of natural lighting and cooling breezes; ♦ Use elongated or segmented floor plans to minimize internal heat gain and maximize ♦ Construction should isolate heat-generating functions such as kitchens and laundries from living areas;
Visual pollution arising from poor location of storage tanks, and waste bins	♦ Water supply and storage facilities should be located in a way that minimizes environmental and visual impact upon landscape. ♦ Waste bins should be located in secluded places
Seepage of septic tanks	♦ Use water proof cement in building septic tanks
Trampling on fragilie vegetation	♦ In fragile environments, boardwalks and fenced walkways should be provided.
Materials	
Deforestation	♦ Materials should be sourced from sustainable sources ♦ Use fallen trees
Fire risks	♦ Volatile and highly flammable materials should not be used
	♦ That materials used should be appropriate for the location, are visually friendly and have low reflective qualities that closely complement the visual amenity of the area;

Issues	Considerations
Decorating using harmful materials	♦ Construction and decoration materials should not produce or release harmful chemicals during or after manufacture
Use of health risk construction materials	♦ Avoid roofing materials with asbestos
Landscaping	
Heavy water use for irrigation	♦ Vegetation chosen for landscaping should not be of high water demand ♦ Endemic species given preference with little of no alien species introduced; ♦ Watering should be undertaken early morning and evening ♦ Use of drip irrigation to conserve water
Introduction of invasive species	♦ No invasive species should be introduced in both protected or non protected areas;
Introduction of alien species	♦ No alien species should be introduced in protected areas
	♦ Landscaping should not be out of character with the surroundings ♦ Vegetation should be planted considering for screening and windbreaks
Replacing ground cover with stones on lawns	♦ Landscaping should be undertaken to restore the environment and improve the aesthetic value ♦ Allow for natural grounds to minimize heat
Neglected grounds	♦ Ensure that weeds are monitored and eradicated where appropriate
3. Operations Stage	
Heavy water use	♦ Efficient use of water; ♦ Metering and reporting on usage of potable water; ♦ Re-use of grey water (water from kitchens and bathrooms) ♦ Harnessing and use of water from sustainable sources, with collection of rainwater being a priority.
Energy	♦ Use of renewable energy sources; ♦ Using of energy saving bulbs and appliances; ♦ Minimizing use of energy intensive practices; ♦ Reporting on fuel usage costs and possible green house gases (CO2) emissions ♦ Usage of alternate and other energy sources, including solar, biomass, small-scale hydro energy, and methane based composting systems ♦ Minimizing lighting which may affect nocturnal or breeding animals; ♦ Services, including power lines are located below ground, where possible; ♦ Putting in place programs to control air conditioning (having air-conditioning on when visitors are outside their rooms)
Solid Waste and Effluents	♦ Compliance with national legislation and international conventions/agreements (MEAs) ♦ Optimal use of Non-corrosive biodegradable chemicals / cleaning products ♦ Recycled / eco-friendly products, recycled paper and products ♦ Reduction of non renewable resources where possible
Pollution	♦ Assessment and mitigation of noise and air pollution ♦ Provision of acoustics in noise prone areas such as discotheques, bars; ♦ Minimal use and disposal of chemical cleaning products should be encouraged. Where disposal is unavoidable, low-impact products should be sought.
Materials used	♦ Purchasing of local food and equipment from local community where possible ♦ Provision of information on quality of products and quality standards ♦ Promotion and public encouragement of environmentally and social practices within supply chain ♦ Product purchasing should minimize life cycle costs of products and maximizes use, re-use and recycling.

Issues	Considerations
Technologies	♦ Automatic water taps that allow minimum flow of water at a given time. ♦ Water Cisterns that use minimum water. ♦ Energy saving bulbs, cooling systems, and water heating systems ♦ Coolers and Fridges that are Chloro Floral Carbon (CFC) free ♦ Standby generators that are automatic, of low noise. ♦ All technologies installed should not be emitting hazardous wastes?
Environmental Programmes and Practices	♦ Establish an environmental policy that can be shared with employees and visitors. ♦ Incorporate environmental training for staff, ♦ Support conservation practices and programmes in the project area. ♦ Encourage guests and staff to minimize any negative impacts and maximize positive impacts on biodiversity and local cultures associated with their consumption choices and behaviour, for example through voluntary initiatives – use of towels more than once, and learning local languages

4. Decommissioning: Reuse Applications for wastes during decommissioning

Material	Potential applications	Current recycling/disposal practices
Aggregate	Crushed used as bulk-filler, haul roads	50% 50 of demolition material is recycled as aggregate, 40% reused and remainder is sent to landfill for disposal.
Excavation soil	Re-profiling of land, reclamation of quarries and borrow pits.	Low demand for waste soil unless it has high nutrients for use in agricultural improvement or landscape gardening. Most topsoil used for on-site applications like landscaping or ground raising.
Road gravel	Re-processed for reuse on or off-site for construction or repair of roads.	Most road gravel reused in road construction.
Timber	Reused around site for fencing or sent to be processed into chipboard.	Some timber from buildings demolition is recycled and the remainder is sold as firewood.
Concrete	Crushed into aggregate, and bulk filler haul roads.	Approximately 90 per cent concrete is used in some form.
Reclaimed Bricks and Blocks	Brick and blocks used for restorations work and new buildings for fireplaces and other interior work.	High demand for certain types of old bricks and block work typically those of rarer stone types such as granite.
Steel	Sent off-site for recycling	Steel readily segregated from other demolition wastes and recycled due to the high demand and market value.
Plastics	Remould into an alternative use by a specialist re-processor such as fences, roofing material and so on	Plastic recycling is in its infancy at the moment. Processes are likely to be refined and new applications developed in coming years.
Glass	Specialist reprocessing, and used in concrete as an aggregate replacement, filter material etc.	Windowpane glass from building demolition is recycled. The majority of recycled glass comes from bottles and glass containers.
Non-ferrous metal (Al, Cu, Zn)	Sold and sent to scrap merchants or fed directly back into the production stream where they form part of new metal products.	Currently an unknown percentage of waste non-ferrous metals from building are recycled and the remainder is sent to landfill as controlled waste.

4.6 Wastes Management

Wastes are a key consideration all through the life cycle of the project and can have adverse impacts if their management is not adequately addressed. Wastes can be looked at in terms of solid wastes and waste water/effluent.

4.6.1 Solid wastes

Solid wastes impact negatively on tourism enterprises by being an eyesore, producing unpleasant odours, pollutants leaching into groundwater and rubbish dispersal from strong winds. Solid wastes can either be re-used, or disposed off through several ways. Overall, proponents should look out for a waste management plan that minimizes wastes production and maximizes use and recycling. Considerations should thus include:

- Method of wastes disposal e.g. land fill, incineration, burning, collection by contracted firm;
- Wastes management before collection – stored in bins, waste baskets, special room etc
- State of wastes disposal area on site – covered, refrigerated, fenced off;
- Location of wastes disposal areas on site relative to other structures e.g. kitchen, restaurant etc.
- Whether there is a management plan for waste disposal area e.g. times cleaned, sprayed, by whom, costs etc.
- Any forms of wastes separation;
- Separate bins, areas for different wastes;
- Technologies used for handling solid wastes – composting, burning, recycling or designing special bins where wastes go in but animals cannot gain access to it. (on site or off site)
- Wastes re-use e.g. compost for landscaping;
- Eating of wastes by animals changes their behaviour.

4.6.2 Waste water management

Sewage treatment presents a considerable environmental constraint for tourism facilities in Kenya. This is because most facilities are located in un-serviced locations and thus has to come up with their own treatment systems. Most of this includes septic tanks system and occasionally, wastewater treatment plants. Choosing a good wastewater treatment plant is very important for tourism enterprises. The choice of treatment is however fairly complex as each system has it's pro and cons.

Conventional septic systems can have leaching of nutrients and other pollutants when constructed without waterproof cement. This is critically important especially for establishments near marine water bodies, which are more sensitive to nitrogen. In addition, coral reef systems are very low in nutrients and small increases can result in a significant ecosystem impacts. Impacts from alternative treatment still produce effluent containing nutrients, metals and sludge, which require disposal. Evaporative or digestion ponds may produce odour, are fairly highly visible and represent a risk to the environment if containment mechanisms (e.g. plastic or clay lining) fail. Tertiary treatment on the other hand is fairly expensive and could be even un-economical for small–scale development.

Key considerations should thus include:

- Waste water disposal treatment system for tourism establishment;
- Limitation and impacts arising from waste water system chosen;
- Monitoring plan for waste water treatment;
- Contingency plans for cases of infrastructure failure or where minimum criteria are not met;
- Distance of treatment system from water bodies (Should not be within 100 m of beaches, rivers or wetlands)
- Location of treatment plant within tourism establishment – distance from kitchen, restaurant, rooms;
- Manner of discharging treated waste water and to where (treated sewage will be disposed via trickle irrigation to natural vegetation (not within) or evaporation ponds rather than disposal to the marine environment or groundwater aquifer via injection);
- Sewage treatment infrastructure should produce minimal odour and be appropriately separated from permanent tourist accommodation developments.
- Discharge into public sewer systems should comply with the Environmental Management and Coordination (Water Quality) Regulations 2006 Fifth Schedule.
- Recycled water for irrigating hotel lawns should not exceed 200mg/100ml of coliform as per Environmental Management and Coordination (Water Quality) Regulations 2006 Eighth Schedule.

4.7 Adverse Impacts Prediction and Mitigation

A well-undertaken Environmental Impact Assessment should be able to predict most of the adverse potential impacts that will arise from the development of a tourism enterprise. Impacts prediction should thus look at all be impacts, be they short term or long term; reversible or irreversible; direct or indirect; or be they cumulative.

The EIA should also come up with adequate mitigation measures for the perceived impacts in order to do away with them or to alleviate their adverseness. Mitigation measures to be considered include the no-go-option which requires that the project be suspended if significant impacts cannot be mitigated.

Certain impacts will occur off-site i.e. away from the tourism facility. These impacts should be predicted and mitigated while undertaking the EIA.

Impacts	**Mitigation Measures**
Destruction of unique and sensitive habitats; destruction of cultural, historical and archaeological sites; Alterations to habitats and ecosystems with subsequent loss of environmental functions provided by the natural systems;	Changing of site for tourism establishment
Damage to or destruction of ecosystems and habitats, including deforestation, draining of wetlands,	Changing of site for tourism establishment; afforestation and replacement of tree and shrubs destroyed;
Increased risk of soil erosion and resultant siltation of water bodies;	Keeping distances from water bodies; soil erosion prevention measures like terraces and gabions

Impacts	Mitigation Measures
Disturbance of wild species, disrupting their normal behaviour and potentially affecting mortality and reproductive success;	Changing of siting of tourism enterprise; ensuring that wildlife corridors are left intact;
Disturbance to breeding and nesting grounds;	Changing of site for tourism establishment; ensuring lighting does not affect breeding animals; protecting of nesting grounds form erosion and other impacts
Loss of rare, endangered, threatened, species of special concern and species of economic importance	Changing of site for tourism establishment;
Increased risk of fires;	Having of a fire management system
Unsustainable consumption of flora and fauna by tourists	Sourcing of construction materials from known sustainable sources
Increased risk of introduction of alien species;	Determining actual qualities of species; use of known and local species
Intensive water demand from tourism;	Ensuring water use is sustainable; water recycling; water savings; water harvesting
Pollution of water bodies	Ensuring establishment is away from water bodies; effluent treatment before release; use of water proof cement in septic tanks; water recycling; Water abstraction should be within the stipulated rules on water permits and according to Water Act 2002; Pollution of water sources through effluent disposal should not be allowed as it punishable by law as stipulated in Environmental Management and Co-ordination (Water Quality) Regulations 2006.
Causing disturbance to sensitive habitats	Controlling visitor flows around sensitive sites of the establishment; Establishing appropriate activities in different designated zones; Promoting appropriate behaviour by visitors to minimize impacts
Environmental pollution and land degradation	Establishing environmental policy and incorporating environmental best practices and lessons learnt from other hotels; Reducing, minimizing and preventing pollution and waste e.g. solid and liquid waste, emissions to air, and transport); Conserving flora, fauna and ecosystems; Preventing introduction of alien species; Conserving landscapes, cultural and natural heritage; Ensuring respect for sacred sites, customary users, and waters traditionally occupied or used by locals; Promoting environmental education, and awareness-raising; Ensuring that the tourist establishment has adequate standards of waste disposal
Visual pollution	Developing facilities that are not out of character with the surroundings; Promoting the design of facilities that are more eco-efficient, which adopt the cleaner production approach, and use environmentally sound technologies
Over crowding	Incorporating tourist carrying capacity to avoid overburdening of the ecosystem; Regulating number and size of vehicles in critical habitats; Diversify visitor activities within protected parks including having low-impacts pursuits such as walking safaris and viewing wildlife from vantage points or hides; Distributing tourist facilities/activities within parks/country; Implement a differential pricing system in parks to ease number of tourists in popular parks; Planning for the optimum number of tourist lodges and hotels especially in protected areas.
Health and safety	Having contingency plans for handling accidents and emergencies which may threaten the environment and the conservation and sustainable use of biodiversity;

Impacts	Mitigation Measures
Off site impacts	
Unsustainable sourcing of construction materials	All materials should be sourced from registered quarries, and timber suppliers
Off road driving in parks	Ensure that drivers uphold the codes of conduct as stipulated in the Wildlife Act by following the designated routes; Over crowding animals should be discouraged; Visitors should be informed that it is unethical to force the drivers to go off-road as it is detrimental to the environment and causes disturbance to animals.
Littering and trampling while hiking Wildlife disturbance and feeding	Ensure that visitors have proper hiking gear and protective clothing where necessary; Visitors should be encouraged to carry maps, geographical positioning systems, and two way radio systems when unaccompanied by a guide; Inform visitors to maintain the designated routes and avoid trampling of vegetations; Litter should be dumped only in designated bins, or taken back to the hotel for disposal
Boating activities	All boats carrying visitors should be insured; They should also have protective gears; Oil spills should not be allowed; Water sports should not be undertaken around marine parks among other sensitive ecological habitats.

4.8 Socio-Economic Impacts of the Project

The quality of life and uplifting of the human living standard is at the centre of all development activities. Indeed, it is commonly recognised that sustainable tourism is more than just environmental conservation of a natural area, but that is must also address the satisfaction of the visitor and the quality of life host communities. As such, all development activities impact on the socio-economic and cultural environment of humans and are thus also considered while undertaking an Environmental Impact Assessment.

Potential beneficial positive impacts

- Revenue creation for the maintenance of natural resources of the area;
- Contributions to economic and social development, for example:
- Funding the development of infrastructure and services;
- Providing jobs;
- Providing funds for development or maintenance of sustainable practices;
- Providing alternative and supplementary ways for communities to receive revenue from biological diversity;
- Generating incomes;
- Education and empowerment;
- Poverty reduction, through the generation of sufficient revenues and employment to effectively reduce threats to biodiversity in indigenous and local communities;
- Protection of indigenous livelihoods, resources and of access to those resources;
- Access by indigenous and local communities to infrastructure, transport, communications and healthcare provisions laid on for tourists;

Potential adverse impacts and their mitigation

Potential Adverse Socio-Economic Impacts	Mitigation Measures
Displacement of human populations	Compensate displaced people taking into account various options such as land for land, and monetary compensation commensurate with the level of negatives socio-economic impacts
Rise in property values beyond the reach of local people	Adequate compensations; ensuring that communities regain rights over communal rights
Erosion of socio and cultural values and traditions	Capacity building of communities to safeguard their customs; education to tourists to respect local cultures and traditional values
Influx of people and social degradation (e.g. local prostitution, drug abuse, etc.);	Give priorities for employment to local communities; tourism education
Vulnerability to the changes in the flow of tourist arrivals which may result in sudden loss of income and jobs in times of downturn;	Encourage other business linkages to buffer communities; Encourage community participation in tourism and wildlife management; procure produce from the local communities, or engage in contract farming to improve the communities' livelihood; involve and support local communities to engage in income generating activities e.g. making of handicrafts
Cultural and social degradation (e.g. local prostitution, drug abuse etc)	Capacity building of communities; Assist communities to adjust to the new conditions; Signing ethical codes addressing the issues of child prostitution, HIV/Aids
Intergenerational conflicts and changed gender relationships;	Encourage and assist in the establishment of community based enterprise development projects; involve and support local communities to engage in income generating activities e.g. making of handicrafts
Loss of access by indigenous and local communities to their land and resources as well as sacred sites, which are integral to the maintenance of traditional knowledge systems and traditional lifestyles.	Accessibility for public and local community to beaches and attractions and special consideration given regarding local rates and membership
Strain on the existing infrastructure services and goods due to influx of people to tourist centres	Expand other infrastructure; Planning gains-infrastructure or public building (e.g. hospitals) that are donated through development
Loss of livelihood of local communities	Fair and equitable sharing of benefits of tourism activities, with emphasis on the specific needs of the indigenous and local communities concerned;
Skewed and unfair employment conditions	Due considerations of labour laws; abolishment of child labour, and sexual discrimination; recognition of right of employee to be represented by trade unions or other associations; compliance with International Labour Organization conventions; evidence of recruiting local residents for posts including management positions; established wages consistent with national standard; access to health care, vacation pay, maternity rights, meals or food allowance, transportation allowance, travel, performance bonuses; on-the job training for skills and upgrading of skills; fair redundancy, compensation and termination terms

4.9 Occupational Health and Safety

The environmental impact assessment should also identify all health and safety risks that the proposed tourism project will have in order to put safeguards and mitigation measures in place from the pre-construction to decommissioning stages. In listing the occupational health and safety issues, ensure the following:-

- Information flow to employees and neighbouring community of any health and safety risks as well as occupational hazards/diseases/health risks;
- Establishing systems to respond to and prevent identified threat and emergencies
- Developing house keeping standards on cleanliness and hygiene;
- Putting systems in place to address issues social issues like AIDS/HIV;
- Installation of fire fighting equipment in strategic places
- Showing and having signage on fire escape routes, and assembly points
- Formulating a clear policy (written) and guidelines on safety;
- Ensuring that a First Aid Kit is available in facilities, vehicles, boats, etc for emergencies
- Developing a programme for training workers on health and safety
- Establishing operation plans that will ensure workplace safety on Machinery operation; Chemical use; Electrical installations; and Construction
- Availing material safety data sheets are accessible to employees
- Outlining what compensation measures will be put in place in case of accidents e.g. workman compensation or insurance
- Providing an insurance cover for the project
- Provision of ample ventilation in rooms, and avoiding overcrowding in common areas
- Maintaining minimum thermal conditions in the kitchen by installing chimneys with functional air ducts.
- Underground rooms, theatres, discotheques, parking area are fitted with air conditionals and air ducts
- Ensuring that visitors observe rules and regulation off-site e.g. in protected areas
- Ensuring that designated transportation vehicles are fitted with communication equipment.

4.10 Analysis of alternatives

All alternatives in terms of siting and available technologies should be given in the EIA process. Reasons for choosing the present site and technologies proposed must also be given in the EIA report. The no-project alternative should also be considered in circumstances where significant adverse impacts cannot be mitigated. Key considerations here should be aesthetic beauty or attraction for tourism activities, ownership, available technologies, and costs. In looking at alternatives, it should also be considered that certain environmental and social impacts are bound to occur in given localities even without the establishment of tourism facilities and activities. Such impacts should be noted while undertaking the EIA.

4.11 Transboundary Issues

Transboundary considerations apply when project activities in one country have significant impact on the environment of another country. When a proposed project may lead to impacts across jurisdictional boundaries, the country of origin and the project developer should ensure that the affected country and its citizens within the area of likely impact are given the opportunity to participate in the environmental impact assessment. The country of origin should thus provide information on the assessment an early stage in the assessment process, when a decision to apply an EIA is made or when the scope of the assessment is determined.

Key considerations include:

- Undertaking appropriate and effective measures to prevent, reduce and control significant adverse transboundary environmental impact from proposed activities.

- Ensuring that affected parties are notified of a proposed activity that is likely to cause a significant adverse transboundary impact.

- Public participation should be made available to the public in the areas of likely impact on both sides of the border. The public of the affected country and of the origin of impact should receive the same information, and be given the same opportunity to participate in the assessment and comment on the results. Where necessary, translation of key documents should be provided for.

4.12 Environmental Management Plan

The Management Plan is one of the most critical outputs of an EIA. It details actions to be taken to minimise the adversity of impacts throughout the project cycles. It goes further to assign responsibilities and commitments proposed, time schedules and costs for the mitigation. The proposed environmental management plan should be line with the general management plans developed by the local authorities, wildlife forums in the project area

In formulating the environmental management plan, focus should be on:-

a) Formulating an environmental policy and objectives taking into account legislative requirements and information about significant environmental impacts. The policy formulated should include a commitment to continual improvement of environmental quality and prevention of pollution, and should be documented and communicated to all employees and visitors

b) Determining environmental aspects in all activities to determine those that impact on the environment and subsequently implement, maintain and improve on the environmental management system. Aspects will include emissions (into air) of gases, releases to water, waste management, contamination of land, use of raw materials and natural resources, and other local environmental and community issues among others.

c) Determining priorities and set objectives and targets to be met by the environmental management plan. A reporting mechanism should also be established so as to determine whether the targets are met or not, and for records purposes.

d) Establishing environmental management programmes to be undertaken within given time frames and by particular persons/institutions to take corrective environmental measures and also for emergency preparedness and response. As such, roles and responsibilities shall be defined, documented and communicated for effective environmental management.

e) Identifying training needs vis-à-vis the environmental policy, objective and targets, and put a plan in pace for capacity building among staff.

Format for EMP Matrix

Project Activities	Potential Impact Description	Mitigation/ Enhancement Measures	Cost of Mitigation /Enhancement	Responsibility	Frequency	Verifiable indicators
1. Pre-Construction/Construction Phase						
Clearing of project site Excavation of site Sourcing of materials Landscaping			Kshs ……. Kshs Kshs			
2. Operation and Maintenance Phase						
Water abstraction Discharge of effluent Production process						
3. Socio-Economic Aspects						
Creating employment Education Promotion Improvement of roads						
4. Accidents, Health and Safety Plan						
Pre-construction and Construction Operation stage						
5. Decommissioning						
Alternative land uses Equipment Buildings Treatment ponds						

Key inputs for consideration in an EMP should include:-

- Environmental objectives;
- Monitoring and evaluation systems to be prepared and implemented;
- Staff training and environmental education programs to be established;
- Proposed management measures to avoid or minimize adverse impacts from the tourism development or activities, including verification of their functioning;

- Proposed measures for mitigation, decommissioning and compensation in the event of problems arising with the tourism development or activities;
- Proposed measures to maximize the local benefits of the tourism development or activities on surrounding human settlements and communities,

4.13 Environmental Monitoring and Evaluation

Environmental monitoring and auditing should be conducted to ensure that the predicted impacts are within environmentally acceptable limits. Information gathered through monitoring will be used to improve on the mitigation measures proposed in the EIA and the environmental management plan. Key areas to be monitored should include:-

- Effluent and solid waste discharge;
- Changes in species composition and abundance;
- Habitat changes;
- Water quality changes in water bodies;
- Number of people employed in the sector;
- Linkages with local communities – business, social services etc. ;
- Number of visitor days to the various categories of parks and reserves
- Number of public complaints
- Number of wildlife/human conflict incidents

5. ENVIRONMENTAL AUDIT

Environmental Management and Coordination Act (1999) defines environmental audit as a systematic, documented, periodic and objective evaluation of how well environmental organization, and management and equipment are performing in conserving or preserving the environment. Environmental audits fall under Part VII sections 67 -69 of EMCA.

Environmental audits are undertaken on ongoing projects, which commenced prior to the coming into force of EMCA; and on new projects undertaken after completion of an environmental impact assessment study report. Audits are carried out through questionnaires, site visits and test analysis of water, soil etc.

There are different types on audits, namely:-

1. An initial audit
2. Self audit
3. A control audit

1. Initial Environmental Audit: This is undertaken for existing projects and projects that have undertaken EIA and have been in operation for a year. The audit is conducted by Environmental Audit Experts registered by NEMA.

a. A precise description of the project:
b. The objective, the scope and the criteria of the audit;
c. Collection and review of all relevant environmental law and regulatory frameworks on health and safety, sustainable use of natural resources and on acceptable national and international standards;

d. Verification of the level compliance by owner with conditions of Environmental Management Plan (Regulation 28 (iii))
e. Evaluation of knowledge and awareness of, and responsibility for application of relevant legislation of the laws;
f. Reviewing of existing project documentation related to all infrastructural facilities and designs;
g. Examination of monitoring programmes parameters, and procedures in place for control and corrective actions;
h. Examination of records of incidents and accidents and the likelihood future occurrence;
i. Evaluation of the relationship with the authority or other relevant bodies;
j. Inspection of all buildings premises and yards in which manufacturing, testing, transportation within and without the project area as well as storage and disposal of goods is carried out, and give a record of all significant environmental risks associated with such activities;
k. Examination of and seeking views on health and safety issues from both the project employees, the local and other potentially affected communities; and
l. Preparation of a prioritised list of health and environmental concerns of past and on-going activities.

2. Self Audit ; Self-Audit is undertaken by the proponent or an environmental audit expert commissioned by the client annually. The audit is a summary of the environmental performance of the project vis-à-vis the initial audit undertaken prior. The proponent submits three hard copies and soft copy to the Authority. The content of the report should thus include the following:

a. NEMA's file reference number;
b. Company name, address and telephone number;
c. Summary of the environmental performance of the facility / enterprise vis-à-vis the initial environmental audit including:
d. Mention of any legal / regulatory change impacting on the operations;
e. Brief description of internal environmental policy as well as capacity to implement it;
f. A brief but concise description of immediate environment.
g. Report on quantities / values of materials used, by products and waste generated and describe how they are managed with respect to legal especially environmental and health provisions. Describe changes in relation to previous years;
h. Test results from NEMA accredited laboratories showing status in the quality of water, wastewater, noise levels, soil and air emissions where applicable;
i. Report on consultation with employees, neighbours and other affected communities on the operations of the facility;
j. A matrix indicating compliance and progress in the implementation of your environmental management plan;
k. Any other relevant information;
l. Name and signature of the chief executive.

3. The Environmental Audit Report: The Environmental Audit report should indicate what measures exist under the Environmental Management Plan for bringing the project up to an acceptable environmental standard and how environmental impacts

will be addressed and controlled. The proponent submits three hard copies and a soft copy to the authority. The report should contain:

a. A non-technical summary outlining the key findings and the auditor's conclusions.
b. A presentation of the type of activity.
c. Indication of the various material including non-manufactured material, the final products and by-products.
d. A description of the different technical activities, process and operations.
e. A concise description of the national environmental legislative and regulatory frameworks on ecological and socio-economic matters.
f. A description of the potentially affected environment on ecological and socio-economical matters.
g. Identification of all environmental and occupational health hazard concerns.
h. Prioritisation of all past and on-going concerns of the project and action plan.
i. Efficacy and adequacy of the Environmental Management Plan of the project.
j. Detailed recommendations for corrective activities, their cost, timetable and mechanism for the implementation.

Improvement Orders: The National Environment Management Authority may issue improvement orders for the carrying out of corrective measures for mitigation of environmental degradations revealed during the audit study. It is the duty of the proponent to ensure that the orders are implemented as per the requirements and report the same to NEMA.

6. STRATEGIC ENVIRONMENTAL ASSESSMENT

Strategic Environmental Assessment (SEA) is a systematic process of analysing environmental effects of polices plans and programmes and their alternatives, the preparation of report and the use of the findings in decision-making. SEA is a means of integrating environmental considerations into development policy-making and planning. SEA places environmental concerns at similar levels of importance as those aspects of (social, economic, political, technical) in decision-making. A good SEA process informs the interested and affected parties on the sustainability of strategic decisions, identifies best alternatives and ensures a democratic decision-making. Thus, a good SEA must be integrated, sustainability-led, focused, accountable, participative, and iterative.

Types of SEA: There are two types of SEA, namely:

1. Sectoral SEA consists of programmes falling within one sector i.e. policies, plans and programmes addressing one sector.
2. Regional SEA is for broad based economic development in one region e.g. a country, and addressing policies, plans and programmes in as many sectors.

SEA steps

These are similar to those of EIA but they are done for policies, plans and programmes. SEA process should ensure the following:

Process	Key Considerations
Screening	Carry out an appropriate assessment of all strategic decisions with significant environmental consequences.
Scoping:	Provide all relevant information is to judge whether (i) an initiative should proceed; and (ii) objectives could be achieved in a more environmentally friendly way (i.e. through alternative initiatives or approaches)
Participation	Involve the public and stakeholders to obtain sufficient information by an effective review mechanism
Timing	Avail results of the assessment sufficiently early for use in the preparation of the strategic decision.
Review	Enhance the quality of the process and information through an effective review mechanism
Documentation	Identify results, package them in a language understandable to all parties affected by the decision.
Other factors	Identify other factors including socio-economic considerations, either parallel to or integrated in the assessment.
Decision-making and accountability	Ensure that it is clear to all stakeholders and all parties affected how the results were taken into account in decision-making.
Post-decision:	Re-evaluate the actual impacts in the implementation stage to assess whether the decision should be amended.

SEA Report Format

The report format of SEA should contain the following

1. Executive Summary,
2. Introduction-containing scope and methodology
3. Proposed policy
    - The purpose and rationale
    - Alternative policy, Option and Strategies
    - Areas affected
    - Proposed activities
4. Environmental Analysis
    - Description of baseline environmental conditions focusing on area potentially affected.
    - Overview of consultation and public participation activities undertaken
    - Prediction and evaluation of impacts including cumulative effects
    - Alternative policy options. Considered and compared against environmental indicators
    - Ongoing project and their relationship to the proposed policy plan or programme
5. Recommendations
    - Recommended policy changes

- Identification of mitigation measures
- Draft an Environmental Management Plan

Submission of SEA Report: The report is submitted to NEMA for review. The authority then distributes the copies to Lead Agencies and other stakeholders for comments, before a decision is made.

7. DEFINITION OF TERMS

A. EIA Definitions as adapted from the Environmental Management and Coordination Act, 1999; and the Environmental Regulations (Environmental Impact Assessments and Audits) 2003.

"analysis" means the testing or examination of any matter, substance or process for the purpose of determining its composition or qualities or its effect (whether physical, chemical or biological) on any segment of the environment or examination of emissions or recording of noise or sub-sonic vibrations to determine the level or other characteristics of the noise or sub-sonic vibration or its effect on any segments of the environment;

"biodiversity or biological diversity" means the variability among living organisms from all sources including, terrestrial ecosystems, aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, among species, and of ecosystems;

"chemical" means a chemical substance in any form whether by itself or in a mixture or preparation, whether manufactured or derived from nature and for the purpose of the this Act includes industrial chemicals, pesticides, fertilizers and drugs;

"Developer" means a person who is developing a project, which is subject to an environmental impact assessment process under the Act;

"economic analysis" means the use of analytical methods, which take into account economic, socio-cultural, and environmental issues in an integrated manner in the assessment of projects;

"ecosystem' means a dynamic complex of plant, animal, micro-organism communities and their non-living environment interacting as a functional unit;

"effluent" means gaseous waste, water or liquid or other fluid of domestic, agricultural, trade or industrial origin treated or untreated and discharged directly or indirectly into the aquatic environment;

"environment" includes the physical factors of the surroundings of human beings including land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics and includes both the natural and the built environment;

"environmental audit" means the systematic, documented, periodic and objective evaluation of how well environmental organisation, management and equipment are performing in conserving or preserving the environment;

"environmental audit study" means a systematic evaluation of activities and process of an ongoing project to determine how far these activities and programmes conform with the approved environmental management plan of that specific project and sound environmental management practices.

"environmental control audit system" means a mechanism or procedure put in place by the proponent or proprietor in consultation with the Authority to determine compliance with environmental standards;

"environmental education" includes the process of recognising values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter-relatedness among man, his culture and his biophysical surroundings;

"environmental impact assessment" means a systematic examination conducted to determine whether or not a programme, activity or project will have any adverse impacts on the environment;

"environmental impact assessment study report" means the report produced at the end of the environmental impact assessment study process under section 58 of the Act regulation 14 and includes a lead expert and an associate expert;

"environmental impact assessment expert" means an individual expert or firm of experts registered under regulation 14 and includes a lead expert and an associate expert;

"environmental management" includes the protection, conservation and sustainable use of the various elements or components of the environment;

"environmental management plan" means all details of project activities, impacts, mitigation measures, time schedule, costs, responsibilities and commitments proposed to minimize environmental impacts of activities, including monitoring and environmental audits during implementation and decommissioning phases of a project;

"environmental monitoring" means continuous or periodic determination of actual and potential effects of any activity or phenomenon of the environment whether short-term or long-term;

"environmental planning" means both long-term and short-term planning that takes into account environmental exigencies;

"environmental resources" includes the resources of air, land, flora, fauna and water together with their aesthetical qualities;

"environmental restoration order" means an order issued under section 108;

"environmental friendly" includes any phenomenon or activity that does not cause harm or degradation to the environment;

"genetic resources" means genetic material of actual or potential value;

"good environmental practice" means practice that is in accordance with the provisions of the Act or any other relevant law;

"guidelines" means the guidelines describing the methodology for implementation of environmental impact assessment requirements adopted by the Authority under section 58 of the Act;

"hazardous substance" means any chemical, waste, gas, medicine, drug, plant, animal or micro organism, which is likely to be injurious to human health or the environment;

"hazardous waste" means any waste which has been determined by the Authority to be hazardous waste or to belong to any other category of waste provided for in section 91;

"lead agency" means any Government ministry, department, parastatal, state corporations or local authority, in which any law vests functions of control or management of any element of the environment or natural resource;

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"mitigation measures" include engineering works, technological improvements, management and ways and means of minimizing negative aspects, which may include socio-economic and cultural losses suffered by communities and individuals, whilst enhancing positive aspects of the project.

"natural resources" include resources of the air, land, water, animals and plants including their aesthetic qualities;

"noise" means any undesirable sound that is intrinsically objectionable or that may cause adverse effects on human health or the environment;

"owner" in relation to any premises means –

(a) the registered proprietor of the premises;

the lessee, including a sub-leasee of the premises;

(b) the agent or trustee of any other owners described in paragraphs (a) and (b) of this interpretation section or where such owner cannot be traced or has died, his legal personal representative;

(c) the person for the time being receiving the rent of the premises whether on his own account or as agent or trustee for any other person or as receiver or who would receive the rent if such premises were let to a tenant; and

"ozone layer" means the layer of the atmospheric zone above the planetary boundary layer as defined in the Vienna Convention for the Protection of the Ozone Layer, 1985;

"pollutant" includes any substance whether liquid, solid or gaseous which –

(a) may directly or indirectly alter the quality of any element of the receiving environment;

(b) is hazardous or potentially hazardous to human health or the environment; and

includes objectionable odours, radioactivity, noise, temperature change or physical, chemical or biological change to any segment or element of the environment;

"polluter-pays principle" means that the cost of cleaning up any element of the environment damaged by pollution, compensating victims of pollution, cost of beneficial uses lost as a result of an act of pollution and other costs that are connected with or incidental to the foregoing, is to be paid or borne by the person convicted of pollution under this Act or any other applicable law;

"pollution" means any direct or indirect alteration of the physical, thermal, biological, or radio-active properties of any part of the environment by discharging, emitting, or depositing wastes so as to affect any beneficial use adversely, to cause a condition which is hazardous or potentially hazardous to public health, safety or welfare, or to animals, birds, wildlife, fish or aquatic life, or to plants or to cause contravention of any condition, limitation, or restriction which is subject to a licence under this Act;

"premises" include mesuages, buildings, lands, and hereditaments in every tenure and machinery, plant or vehicle used in connection with any trade carried on at any premises;

"project" includes any project, programme or policy that leads to projects which may have an impact on the environment;

"project report" means a summary statement of the likely environmental effects of a proposed development referred to in section 58;

"proponent" means a person proposing or executing a project, programme or an undertaking specified in the Second Schedule;

"Public Complaints Committee" means the Public Complaints Committee established under section 31;

"review" means a process of checking the adequacy of an environmental impact study to ensure that it meets the legal requirement and ensure wide acceptance of the environmental impact study to ensure that it meets the legal requirement and ensure wide acceptance of the environmental impact study findings;

"social analysis" means assessing or estimating in advance the social consequences from specific policy actions or project development including social justice and equity, social uncertainty, social cohesion, social networks and interactions, social status and gender desegregation;

"soil" includes earth, sand, rock, shales, minerals, vegetation, and the flora and fauna in the soil and derivatives thereof such as dust;

"standard" means the limits of discharge or emissions established under this Act or under regulations made pursuant to this Act or any other written law;

"sustainable development" means development that meets the needs of the present generation without compromising the ability of the future generations to meet their needs by maintaining the carrying capacity of the supporting ecosystems;

"sustainable use" means present use of the environment or natural resources which does not compromise the ability to use the same by future generations or degrade the carrying capacity of supporting ecosystems;

"territorial waters" means territorial waters provided for under section 3 of the Maritime Zones Act;

"trade" means any trade, business or undertaking whether originally carried on at fixed premises or at varying places which may result in the discharge of substances and energy and includes any activity prescribed to be a trade, business or undertaking for the purpose of this Act;

"trans-boundary impacts" means impacts beyond the Kenyan borders;

"Tribunal" means the National Environment Tribunal established under section 125;

"waste" includes any matter prescribed to be waste and any matter whether liquid, solid, gaseous or radioactive, which is discharged, emitted or deposited in the environment in such volume, composition or manner likely to cause an alteration of the environment;

"water" includes drinking water, river, stream, watercourse, reservoir, well, dam, canal, channel, lake swamp, open drain or underground water;

"wetland" means areas permanently or seasonally flooded by water where plants and animals have become adapted.

B. Definitions on Tourism as Adapted from East African Community Standards

TERM	EXPLANATION
Boarding and Lodging	Refers to a modest establishment, offering accommodation services usually located in urban areas. Meals may be provided, if required.
Caravan/Camp Site	Refers to an area set aside for camping and providing appropriate basic facilities and services.

TERM	EXPLANATION
Cottage/Villa	Refers to an establishment, characterized by a cluster of lettable units for holiday accommodation with or without self-catering facilities. These include residential premises used for holiday making by owners, friends or relatives; with or without charge.
Eco-lodge	Refers to a facility located in an ecologically rich area in terms of biodiversity, in an environment little disturbed by human activity. Particular attention is given to the sensitivity of the environment during design, construction and operation.
Farm Stay/ Home Stay	Refers to arrangement whereby guests are accommodated on a farm or ranch premises/family premises, and catered for either, within the family unit or in separate self contained accommodation.
Guest House	Refers to an establishment offering modest and limited accommodation and/or catering facilities.
Hostel	Is an establishment offering simple catering and accommodation facilities, usually in a single or multiple bed arrangement and catering for the lower end of the market.
Lodge	Is an accommodation establishment located within or near natural habitat rich in fauna and flora, in which the majority of clients are leisure seekers.
Motel	Is an accommodation establishment, located along a highway or motor way, catering mainly for motorists.
Restaurant	Is a commercial catering establishment offering an extensive range or specialized cuisine, where meals are served, usually on a flexible time arrangement, and includes such variations as café, coffee shop and similar outlets.
Retreat Lodge	Refers to an exclusive accommodation establishment located in a secluded area, offering guests peaceful and quiet environment.
Safari/Tented Camp	Refers to accommodation establishment comprising mainly of semi-permanent and/or mobile tented accommodation facilities usually located close to or within a popular areas such as beaches, rivers, lakes, national parks, game reserves or forests.
Serviced Apartments	Are commercial establishments, offering accommodation in self-contained units, with or without self-catering facilities.
Time Share	Refers to a holiday establishment where the purchaser/consumer acquires the right to use the facility for a specified period of time per year.
Town Hotel	Is an accommodation establishment located within or near an urban canter, where the majority of clients are business travellers
Vacation Hotel	Is an accommodation establishment located within or near a holiday attraction area and in which the majority of clients are holidaymakers.