## 3. IEE for Each Project Type

### 3.1. Road/Railway Projects (RD-I, RD-II, RD-III /RW)

The environmental items which will be affected by road and railway projects are the ones shown in the scoping in appendix to this volume.

The social environment items are:

- Resettlement
- Economic activities
- Traffic and public facilities
- Water rights and rights of common, and
- Waste.

The natural environment items are:

- Hydrological situation
- Coastal zone
- Flora and fauna, and
- Landscape.

The pollution items are:

- Air pollution
- Water pollution, and
- Noise and vibration.

#### 3.1.1. Resettlement

Resettlement may occur by land acquisition for road construction. It would cause the loss of the living foundation of the inhabitants to be resettled. Social and cultural in adaptability to the new settlement site may occur, as well as conflict between the permanent residents and resettlers over social and economic burdens in may also cause the deterioration of living standards after resettlement due to the poor compensation system and the resettlers' status of illegal occupants.

However, as regards resettlement caused by road projects, a serious impact is not forecasted, because resettlement caused by these projects are on a small scale or in low population density areas. However, the measures such as improvement of living and economic conditions at the resettlement site are required nevertheless.

As regard the railway project, a resettlement problem will not occur, because it is a rehabilitation project.

### 3.1.2. Economic Activity

A change of economic activity will occur caused by the change of land use and industrial structure, following the inflow and outflow of population and goods. This will cause effects on the regional economy caused by the change of population distribution.

As regards the impact on the economic activities, this will have a good rather than a bad impact. However, impacts on minorities are forecasted, especially by projects RD-I and RW. Therefore, training and education for the minorities is required.

### 3.1.3. Traffic and Public Facilities

Changes in demand placed on schools, hospitals and present traffic conditions, such as the increase of traffic congestion and accidents, will occur by the replacement of previous transport means by road traffic, and the emergence and increase of vehicular traffic. This may cause increases in traffic accidents, traffic jams and other traffic problems, and cause noise from vehicles and trains.

The impact on the local people, especially minorities, is forecasted, because the social environment will change by inflow of people and goods from Nairobi. Therefore, measures, such as planning a regional development program, and training and education of local people will be required.

### 3.1.4. Water Rights and Rights of Common

Obstruction of fishing rights in rivers, lakes and the sea, water rights and land use rights may occur by the increase in traffic and the obstruction of fishing grounds. The problem of water rights and rights of common may cause illegal entry and logging because of easy access to forests.

The impact to local people in terms of water rights and rights of common will not be significant, because these projects are not large scale project and the traffic volume is anticipate not to be so large.

### 3.1.5. Waste

The generation of debris and logs resulting from many activities due to the intensified economic and social activities around stations will occur on the railway project. This waste may cause the aggravation of environmental deterioration, due to inadequate disposal and illegal disposal.

The impacts caused by waste will not be significant, because these projects are not so large scale projects and the traffic volume is not so large.

### 3.1.6. Hydrological Situation

Changes of river discharge and riverbed condition due to the inflow of drainage or landfill and inflow of turbid water during construction may occur. Alteration of the lake and river regimes caused by the inflow of turbid water during the construction period and the drainage after start of operations, which would affect the ecosystem, may occur.

Therefore, careful consideration is required under the condition, that the lake and river are utilized as tourism resources.

### 3.1.7. Coastal Zone

Coastal erosion and changes of vegetation may be caused by excavation and dredging under project RD-III. The impact will cause the decrease or extinction of mangrove forests and coral reefs, which may affect the fishery and tourism industries.

An impact on the coastal zone caused by project RD-III is forecasted, because the natural environment around the coastal area is relatively good.

### 3.1.8. Flora and Fauna

The disturbance of breeding and extinction of species caused by a change of habitat conditions may occur by the generation of exhaust gas and noise from the construction of roads and the operation of cars and trains. These problems affecting fauna and flora may cause a decrease in numbers of useful creatures available for human activities, or extinction of valuable species.

There are some valuable zones of fauna and flora such as reserved forests along these projects. Therefore, the planning of protection programs for natural resources is required.

As regards project RD-III, an impact on the aquatic life by turbid water at the construction stage is forecasted. However it will not necessarily be significant, and careful attention to construction planning and management is suggested.

### 3.1.9. Landscape

A deterioration of the aesthetic harmony may occur caused by the appearance of new and different facilities and structures. These problems affecting the landscape will damage the value of the scenery by the change of the present landscape which may have cultural values

or a close relationship with the life of local people, and tourism and the local inhabitants' life may be affected.

However, the impacts on the landscape will not be significant, because the structures and facilities in these projects will be designed to be suitable for the local character of the landscape at the detail design stage.

### 3.1.10. Air Pollution

In road projects, air pollution will occur by exhaust gas from construction equipment and vehicles at the construction stage, and exhaust gas from operating vehicles at the operation stage. This will cause impacts on the health of people, plants and animals along the roads.

However, the construction scale is not so large, therefore air pollution at the construction stage is not forecasted. At the operation stage, However, air pollution will occur especially in the densely residential urban areas. Therefore, environmental protection measures against air pollution and noise problems are required.

### 3.1.11. Water pollution

Water pollution may occur by inflow of silt, sand and effluent into rivers, and the disturbance of sediments caused by the construction of piers when the route passes over streams and rivers. This will cause an effect on aquatic life.

Water pollution is forecasted to occur at the construction stage. However the construction term is temporary. Therefore its impact could be minimized, and careful construction planning and management are suggested.

For the railway project, water pollution caused by the goods handled in the storage and mooring facilities is forecasted. These impacts will, However, not be significant, because adequate operation is assumed.

### 3.1.12. Noise and Vibration

Noise and vibration will occur by the operation of construction equipment and the vehicles for construction, such as bulldozers and dump trucks, and operation of vehicles and trains at the operation stage. This will cause effects on hospitals and schools, and disturbance of sleep at night, especially in urban areas.

However, the construction scale is not so large. Therefore, a noise problem at the construction stage is not forecasted. However, at the operation stage, noise problems will occur especially in the densely residential urban areas. Therefore, environmental protection measures to reduce noise problems are required.

### 3.1.13. Necessity of EIA

Taking into account the above mentioned forecasted impacts, an Environmental Impact Assessment (EIA) is required for these projects on the items listed belong:

Social environment items:

- Resettlement (RD-I, RD-II, RD-III)
- Water rights and rights of common (RD-I, RD-II, RD-III).

Natural environment items:

- Hydrological situation (RD-II, RW)
- Coastal zone (RD-III)
- Flora and fauna (RD-I, RD-II, RD-III, RW).

Pollution items:

- Air pollution (RD-I, RD-II, RD-III)
- Noise and vibration (RD-I, RD-II, RD-III, RW).

## 3.2. Airport/ Port Projects (AP-I, AP-II /PT)

The environmental items which will be affected by airport and port projects are the items, which are identified in the scoping in the APPENDIX.

Social environment items:

- Resettlement
- Economic activities
- Traffic and public facilities
- Water rights and rights of common
- Waste, and
- Hazards (Risk).

Natural environment items:

- Coastal zone
- Flora and fauna, and
- Landscape.

Pollution items:

- Water pollution, and
- Noise and vibration.

### 3.2.1. Resettlement

Resettlement may occur by land acquisition. It would cause the loss of the living foundation of the inhabitants to be resettled. Social and cultural inadaptability to the new settlement site may occur, as well as conflict between the permanent residents and resettlers over social and economic burdens it may also cause deterioration of living standards after resettlement, due to the poor compensation system and the resettlers' status of illegal occupants.

However, a serious impact is not forecasted, because the resettlement caused by these projects are on a small scale or in a low population density area. However, measures, such as improvement of living and economic conditions at the resettlement site, are required nevertheless.

### 3.2.2. Economic Activity

Changes of economic activity will occur caused by the change of land use and industrial structure around the site, following the inflow and outflow of population and goods, the increase of employment, the restriction on fishery ship operations and the degradation or extinction of mangrove forests and coastal reefs owing to water pollution. This will cause effects on the regional economy by the change of population distribution.

An impact on the local economy and the land use around the site is forecasted. However, these projects will be have a good rather than bad impact.

### 3.2.3. Traffic and Public Facilities

Changes in demand placed on schools, hospitals and the present traffic conditions, such as the increase of traffic congestion and accidents, may occur caused by the increase in ship and aircraft operations, and the improvement of access transport facilities and an increase in traffic.

This may cause the congestion of maritime navigation, due to intensified ship operations, and traffic congestion and noise caused by the new seaside transportation.

However an impact on the traffic and public facilities is not forecasted, because the installment of safety facilities and environmental protection measures for public facilities are proposed.

### 3.2.4. Water Rights and Rights of Common

The obstruction of fishing rights in rivers, water rights and land use rights may occur by the increase in traffic and the obstruction of fishing grounds. The problems of water rights and rights of common may cause illegal entry and logging by the easy access to forests.

An impact on water rights and rights of common is forecasted. However, this construction is temporary, therefore this impact will be minimized. Planning of a local economic development program, a land use plan and the installment of safety facilities are required.

### 3.2.5. Waste

The generation of debris and logs from many activities due to the intensified economic and social activities will occur, and similarly there will also be an impact caused by the waste oil and general waste from ships, and the waste from the goods handled in the storage and mooring facilities of the PT. The waste will cause an impact on the aquatic life and birds, and an aggravation of the environmental impact, due to inadequate disposal and illegal disposal.

An impact of waste of the PT is not forecasted, because these projects are not so large in scale and adequate disposal is suggested.

### 3.2.6. Hazards (Risk)

Marine pollution due to accidents involving hazardous substances, and the destruction of port facilities by natural disasters may occur in the PT. It may cause the loss of human life and damage to inhabitants' livelihood (production activities, houses, food collection).

The possibility of hazards such as oil spill accidents is very low, but if that occurred even once it would cause a big problem. Therefore, a marine traffic safety plan is required.

### 3.2.7. Coastal Zone

Coastal erosion and changes of vegetation may be caused by excavation and dredging, by the increase and decrease in sediment supply to the surrounding area and by changes in the current and tide. These impacts will cause the decrease or extinction of mangrove forests and coral reefs due to the alteration of the coastal erosion caused by a change of littoral drift pattern and the extinction of tidal land, which may affect the fishery and tourism industries.

On the coastal zone and fauna and flora, an impact is forecasted, because the natural environment around this site is still relatively good.

### 3.2.8. Fauna and Flora

The disturbance of breeding and extinction of species due to a change of habitat conditions may be caused by the spatial occupation and alteration of topography and vegetation, by the inflow of waste and drainage resulting from ship and facility operations, and by the disturbance of sediment caused by dredging. These impacts will cause the decrease or extinction in biomass of seaweed, fish, benthos and birds because of the diminution or extinction of habitats, the deterioration of habitat conditions caused by vegetation and substrate changes, water pollution and water temperature changes.

An impact is forecasted, on fauna and flora, because the natural environment around this site is still relatively good. However, the construction is temporary, therefore these impacts will be minimised.

### 3.2.9. Landscape

A deterioration of the aesthetic harmony by the appearance of structures may be caused by the appearance of airport and port facilities and the operation of aircrafts and ships, air pollution, especially by dust, and water pollution.

Such impact on the landscape will cause damage to the value of the scenery by the change of landscapes, which may have cultural values or close relationship with the life of local people, and tourism and the local inhabitants' life may be affected.

### 3.2.10. Water Pollution

Water pollution will be caused by the dust from disposal and storage facilities, by effluents in the runoff of rainwater, oil spills and discharge of waste from ships, and by the disturbance of sediments by dredging.

Water pollution will cause the excessive loading of water with nutrients, e.g. nitrate and phosphate, resulting in eutrophication, red tide and blue tide, offensive odor, and effects on aquatic life.

An impact of water pollution is forecasted. However, construction is temporary, therefore such impact will be minimised.

### 3.2.11. Noise and Vibration

Noise and vibration will occur by the operation of construction equipment and vehicles for construction, such as bulldozers and dump trucks, and the operation of vehicles at the operation stage. This will cause effects on hospitals and schools, and disturbance of sleep at night, especially in urban areas.

The construction scale is not so large, therefore a noise problem at the construction stage is not forecasted. However, at the operation stage, a noise problem will occur especially by the airport project. Therefore the environmental protection measures on noise problems are required.

### 3.2.12. Necessity of EIA

Taking into account the above mentioned forecasted impacts, an Environmental Impact Assessment (EIA) is required for these projects on the items listed below:

Social environment items:

- Resettlement (PT)
- Water rights and rights of common (AP-II, PT)
- Hazards (Risk) (PT).

Natural environment items:

- Coastal zone (AP-II, PT)
- Flora and fauna (AP-I, AP-II, PT).

Pollution items:

- Water pollution (PT)
- Noise and vibration (AP-I, AP-II).

### 3.3. Power /Water Supply Projects (PS-I, PS-II, PS-III /WS-I, WS-II, WS-III, WS-IV)

The environmental items which will be affected by power and water supply projects are the items, which are identified in the scoping in the APPENDIX.

Social Environment Items:

- Resettlement
- Water Rights/Rights of Common.

Natural Environment Items:

- Groundwater
- Hydrological Situation
- Coastal Zone
- Fauna and Flora
- Landscape.

Pollution Items:

- Water Pollution
- Noise and Vibration
- Ground Subsidence.

#### 3.3.1. Resettlement

Resettlement may occur caused by land acquisition for construction. It would cause loss of the living foundation of the inhabitants to be resettled. Social and cultural in adaptability to the new settlement site may occur, as well as conflict between the permanent residents and resettlers over social and economic burdens, it may also cause deterioration of living standards after resettlement, due to the poor compensation system and the resettlers' status of illegal occupants.

However, a serious impact will not be forecasted, because the resettlement caused by these projects are on a small scale or in low population density areas. However, measures, such as improvement of living and economic conditions at the resettlement site, are required nevertheless.

### 3.3.2. Water rights and Rights of Common

Obstruction of fishing rights in rivers, lakes and the sea, water rights and land use rights will occur caused by the occupancy of arable land, forests and fishing grounds by these projects. The problem of water rights and rights of common may cause illegal entry and logging because of easy access to forests.

However an impact on local people in terms of water rights and rights of common will not be significant, because these projects are not so large is scale.

### 3.3.3. Groundwater

The exhaustion of groundwater due to over drafting and pollution by leachate will occur. Therefore, adequate planning and field survey before implementation of the projects will be required.

### 3.3.4. Hydrological Situation

Changes of river discharge and riverbed condition due to inflow of drainage or landfill and inflow of turbid water during the construction period will occur. Alteration of the lake and river regimes caused by the inflow of turbid water during construction and the drainage after of operations which would affect the ecosystem, will occur.

Therefore, careful consideration is required under the condition that the lake and river are utilised as tourism resources.

### 3.3.5. Coastal Zone

Changes in the vegetation will be caused by excavation. This may cause the decrease or extinction of mangrove forests and coral reefs, which may affect the fishery and tourism industries.

An impact is forecasted, on the coastal zone and fauna and flora, because the natural environment around this site is still relatively good.

### 3.3.6. Flora and Fauna

The disturbance of breeding and extinction of species due to change of habitat conditions may occur caused by the generation of exhaust gas and noise at the construction stage. The problems affecting fauna and flora will cause a decrease in numbers of useful creatures available for human activities, or extinction of valuable species.

There are some valuable zones of fauna and flora, such as reserved forest along these projects. Therefore the planning of a protection program for natural resources is required.

As regards on PS-III, PS-IV, WS-III and WS-IV, an impacts on aquatic life by turbid water at the construction stage is forecasted. However it will be not necessarily be significant, and careful attention to construction planning and management is suggested.

### 3.3.7. Landscape

A deterioration of the aesthetic harmony may occur by the appearance of new and different facilities and structures. These problems affecting the landscape would cause damage to the value of the scenery by the change of the present landscape which may have cultural values or close relationship with the life of local people, and tourism and the local inhabitants' life may be affected.

However, the impact on the landscape will not be significant, because the structures and facilities in these projects will be designed to be suitable for the local character of the landscape at the detail design stage.

### 3.3.8. Water pollution

Water pollution may occur by inflow of silt, sand and effluent into rivers and the sea at the construction stage. This will have an effect on aquatic life. However, the construction terms is temporary. Therefore its impact could be minimized, and careful construction planning and management are suggested.

### 3.3.9. Noise and Vibration

Noise and vibration will occur by the operation of construction equipment and vehicles for construction, such as bulldozers and dump trucks. This will cause effects on hospitals and schools, and disturbance of sleep at night, especially in urban areas.

However, the construction scale is not so large, therefore a noise problem at the construction stage is not forecasted.

### 3.3.10. Ground Subsidence

As regards the WS project, the deformation of land and land subsidence due to the lowering of the groundwater table may occur by over drafting. Therefore adequate planning and a detail field survey will be required.

### 3.3.11. Necessity of EIA

Considering the above mentioned forecasted impacts, an Environmental Impact Assessment (EIA) is required for these projects on the items listed below:

Social Environment Items:

- Resettlement (PS , WS)
- Water Rights/Rights of Common (PS, WS).

Natural Environment Items:

- Groundwater (WS)
- Hydrological Situation (PS-III, WS-III)
- Coastal Zone (PS-IV, WS-IV)
- Fauna and Flora (PS, WS).

Pollution Items:

- Ground Subsidence (WS).

## 3.4. Sewerage /Solid Waste Disposal Projects (SG-I, SG-II, SG-III, SG-IV /SD-I, SD-II, SD-III)

The environmental items which will be affected by sewerage and solid waste disposal projects are the items, which are identified in the scoping in the APPENDIX.

Social Environment Items:

- Resettlement
- Traffic and Public Facilities
- Public Health Condition
- Waste.

Natural Environment Items:

- Groundwater
- Hydrological Situation
- Coastal Zone
- Fauna and Flora
- Landscape.

Pollution Items:

- Air Pollution
- Water Pollution
- Soil Contamination
- Noise and Vibration
- Offensive Odor.

### 3.4.1. Resettlement

Resettlement may occur caused by land acquisition. It would cause loss of the living foundation of the inhabitants to be resettled. Social and cultural inadaptability to the new settlement site may occur, as well as conflict between the permanent residents and resettlers over social and economic burdens it may also cause deterioration of the living standards after resettlement due to the poor compensation system and the resettlers' status of illegal occupants.

For the projects SG-I and SD-I, which are located in a city area, a serious impact is forecasted. Therefore measures, such as improvement of living and economic conditions at the resettlement site, are required.

### 3.4.2. Traffic and Public Facilities

Changes in demand placed on schools, hospitals and present traffic conditions, such as the increase of traffic congestion and accidents, will occur by the replacement of previous transport means by road traffic, and the emergence and increase of vehicular traffic. This may cause increases in traffic accidents, traffic jams and other traffic problems, and effect noise caused by vehicles.

An impact caused by SG-I and SD-I, which are located in a city area, is forecasted. Therefore, installation of safety facilities and environmental protection measures for public facilities are required.

### 3.4.3. Public Health Condition

A deterioration of public health and sanitary conditions due to generation of garbage and the increase of vermin may occur. Therefore, adequate planning and a management system for waste will be required.

### 3.4.4. Waste

The generation of debris and logs from many activities due to the intensified economic and social activities will occur. This waste will cause the aggravation of environmental deterioration due to inadequate disposal and illegal disposal.

The impact caused by waste will not be significant, because adequate environmental protection measures will be implemented.

### 3.4.5. Groundwater

Overdraft lowers the groundwater table and the groundwater quality may deteriorate involving the exhaustion of springs and wells, which affect the people's livelihood. Moreover, lowering of the groundwater table may cause groundwater pollution by sea water intrusion.

For environmental consideration, the present condition of groundwater resources and the available pumping capacity should be examined.

Rainwater and leachate leakage from the dumping sites flow into a river, lake and the sea in the vicinity area, resulting in water pollution. Groundwater might also be contaminated by the leachate containing organic substances when it leaks out from the site and infiltrates into the soil. Polluted rivers and lakes would negatively affect the water resources for living, and activities including fishery, aesthetics and recreation, and obstruct growth of aquatic life.

### 3.4.6. Hydrological Situation

A change of river discharge and riverbed condition due to the inflow of drainage or landfill and inflow of turbid water during the construction period may occur. Alteration of the lake and river regimes caused by the inflow of turbid water during construction and the drainage after start of operations, which would affect the ecosystem, will occur.

Therefore, careful consideration is required under the condition that the lake and river are utilised as tourism resources.

### 3.4.7. Coastal Zone

Coastal erosion and changes of vegetation may be caused by excavation. Such impact will cause the decrease or extinction of mangrove forests and coral reefs, which may affect the fishery and tourism industries.

An impact is forecasted, on the coastal zone and fauna and flora, because the natural environment around this site is still relatively good.

### 3.4.8. Flora and Fauna

The disturbance of breeding and extinction of species due to change of habitat conditions may occur by the generation of exhaust gas and noise at the construction stage. These problems affecting fauna and flora will cause the decrease in numbers of useful creatures available for human activities, or extinction of valuable species.

There are some valuable zones of fauna and flora, such as reserved forest along these projects. Therefore, planning of a protection program for the natural resources is required.

As regards SG-IV and SD-III, an impacts on aquatic life by turbid water at the construction stage is forecasted. However it will not necessarily be significant, and careful attention to construction planning and management is suggested.

### 3.4.9. Landscape

A deterioration of the aesthetic harmony may occur caused by the appearance of new and different facilities and structures. These problems affecting the landscape would cause damage to the value of the scenery by the change of the present landscape, which may have cultural values or close relationship with the life of local people, and tourism and the local inhabitants' life may be affected.

The impacts to landscape will not be significant, because the structures and facilities in these projects will be designed to be suitable for local character of the landscape at the detail design stage.

### 3.4.10. Air Pollution

Air pollution will occur caused by exhaust gas from construction equipment and vehicles at the construction stage, and exhaust gas from running vehicles at the operation stage. This will have an impact on the health of people, plants and animals along the roads. Air pollution will occur, when the waste is dumped and rolled or by smoke from occasional fires.

At the operational stage air pollution will occur especially in the densely residential urban areas. Therefore, environmental protection measures against air pollution and noise problems are required.

### 3.4.11. Water Pollution

Water pollution from solid waste will be caused by the dust from disposal and storage facilities and by effluents in the runoff of rainwater.

Water pollution will cause excessive loading of the water with nutrients, e.g. nitrate and phosphate, resulting in eutrophication, red tide and blue tide, offensive odor, and effects on the aquatic life.

Water pollution is forecasted to occur at the construction stage. However, the construction term is temporary. Therefore, its impact could be minimised by careful construction planning and management.

### 3.4.12. Soil Contamination

Soil contamination may be caused by overflow leachate water from the sewerage system and the disposal area. Therefore, adequate management will be required.

### 3.4.13. Noise and Vibration

Noise and vibration will occur caused by the operation of construction equipment and vehicles for construction, such as bulldozers and dump trucks, and the operation of vehicles at the operation stage. This will have effects on hospitals and schools, and disturbance of sleep at night, especially in urban areas.

However, the construction scale is not so large. Therefore a noise problem at the construction stage is not forecasted. However, at the operational stage a noise problem will occur especially in the densely residential urban areas. Therefore, environmental protection measures against noise problems are required.

### 3.4.14. Offensive Odour

Putrefied odors may be created from garbage, if it is not adequately covered by soil at the final disposal site. Leachate from dumping sites and waste drainage from collection vehicles would generate an odor. Exhaust from heavy construction equipment, which uses heavy oil, would cause odor.

If a sewage system is an open channel type, offensive odors will emanate. In the case of a piped sewage system, offensive odors may be generated when leaking, pump failure, or if debris clogging occurs. At

sludge treatment plants and sewage treatment plants, some processing methods also cause offensive odor.

### 3.4.15. Necessity of EIA

Considering the above mentioned forecasted impacts, an Environmental Impact Assessment (EIA) is required for these projects on the items listed below:

Social Environment Items:

- Resettlement (SG, SD)
- Public Health Condition (SD)
- Waste (SD).

Natural Environment Items:

- Groundwater (SD)
- Hydrological Situation (SG-III, SD-II)
- Coastal Zone (SG-IV, SD-III)
- Fauna and Flora (SG, SD).

Pollution Items:

- Air Pollution (SG, SD)
- Water Pollution (SG, SD)
- Soil Contamination (SD)
- Noise and Vibration (SG-I, SD-I)
- Offensive Odor (SG, SD).

# APPENDICES

# Appendices
## A-1 Project Profiles

# (Project Profile) Short-Term Development (Tourism Facilities)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CE - IN - 1 - TF - 1 | Rehabilitation and Improvement of Nairobi Museum | | Museum Hill, Nairobi |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| MOTW, MOCSS<br>National Museums of Kenya (NMK), KWS | MOTW,<br>MOCSS | Total | 77,637,500 | ☑ req'd ☐ not req'd |
| Operation Body: | Section: | Foreign | | Financial Assistance: |
| NMK, KWS | | Kenya | | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Nairobi Museum is aimed at three distinctions.

- Research
- Exhibition
- Education

The old Nairobi Museum exhibits gallery will be upgraded and four new galleries will be built which exhibit four fields;

- Ethnography
- Kenyan History
- Human Education
- Paleotology and Archaeology

The project is included in the NMK programme, and proposed as the phase I (-2,000) project.

**Major Development Components:**

Breakdown of Estimated Budget (US$ '000)

| | |
|---|---|
| 1 New Exhibition Building | |
| - Construction | 15,000 |
| - Exhibition and Installation | 3,750 |
| - Material Survey | 300 |
| - Collection | 225 |
| - Fixture and Equipment | 5,000 |
| Total | |
| 2 Rehabilitation | |
| - Rehabilitation | 1,500 |
| - Exhibition and Installation | 2,500 |
| - Material Survey | 30 |
| - Collection | 225 |
| - Fixture and Equipment | 500 |
| | 4,755 |
| Grand Total | 31,055 |

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Foreign experts are essential for the special skills for Museum construction and detail equipment and exhibition planning.

| Development Schedule: Term | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Items: Serial Year | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | — | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | — | — | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | — | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | — | — | | | | | | | | | | |

(Project Profile) Short-Term Development (Tourism Facilities)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CE - IN - 1 - TF - 2 | Nyeri District Museum | | Nyeri |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| MOTW<br>National Museum of Kenya (NMK), KWS | MOTW | Total | 3,750,000 | ☑ req'd ☐ not req'd |
| Operation Body: NMK, KWS | Section: | Foreign | | Financial Assistance: |
| | | Kenya | | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Nyeri District Museum is aimed at exhibition of the local natural and cultural materials with emphasize on Mt. Kenya geology, Kikuyu culture and highlight of the District, Fauna and Flora.

The plan of the Museum is included in the NMK programme phase II (2000 - 2005), but earlier construction is recommendable because of its high attractiveness for tourists, which supports the region's tourism promotion.

**Major Development Components:**

Breakdown of Space

| | |
|---|---|
| - Display & Exhibits | 750 m² |
| - Storage | 250 m² |
| - Research | 375 m² |
| - Administration & Support | 875 m² |
| - Mechanics | 250 m² |
| Total | 2,500 m² |

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Foreign experts are essential for the special skills for aquarium construction and detail equipment and exhibition planning.

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | | — | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | | — | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | | | — | | | | | | | | | | |
| 4. Procurement & Implementation | | | | | — | | | | | | | | | | |

# (Project Profile) Short-Term Development (Tourism Facilities)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| K - IN - 1 - TF - 1 | Tourist Services Facilities Development | Building Construction | 10 selected sites |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Ministry of Tourism<br>Local County Councils | MOTW | Total | 2,318,750 | ☐ req'd ☑ not req'd |
| Operation Body: | Section: | Foreign | | Financial Assistance: |
| Ministry of Tourism<br>Local County Councils | | Kenya | | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

The centres are aimed at direct tourist service at the tourist sites, popular national parks/reserves which are controled by MOTW and local county councils.

Major function of the centre is as follows;

- Information service
- Catering service
- Shopping
- Other service, first aid, toilet etc.

The centres will be located as follows;

- Nakuru
- Masai Mara
- Bogoria
- Mt. Elgon
- Aberdare
- Mt. Kenya
- Tzavo West
- Tzavo East
- Shimba Hill
- Malindi

**Major Development Components:**

| | |
|---|---|
| Reception/Information | 30 m² |
| Mini-Museum | 60 m² |
| Cafeteria | 75 m² |
| Shop | 15 m² |
| Toilet | 20 m² |
| First Aid Room | 10 m² |
| Official Use | 80 m² |
| Total | 290 m² |

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

none

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | | | — | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | | — | — | | | | | | | | | | |
| 3. Bidding/Negotiation | | | | | — | | | | | | | | | | |
| 4. Procurement & Implementation | | | | | — | — | | | | | | | | | |

# (Project Profile) Short-Term Development (Tourism Facilities)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| K - IN - 1 - TF - 2 | Tourist Wayside Facilities Area Development | | 13 selected sites |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|---|
| MOTW | MOTW | | Total | 4,200,625 | ☐ req'd ☑ not req'd |
| Operation Body: MOTW | Section: | | Foreign | | Financial Assistance: |
| | | | Kenya | 4,200,625 | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Service area is aimed at overland tourist service on major highway to provide service of the following kinds;

- Catering
- Public service/utility
- Mechanical service and where required/possible
- Accommodation

Service areas will be located as follows;

- Matathia
- Lake Elementeila
- Narok
- Kericho
- Timboroa
- Kesup
- Karatina
- Meru
- Salama
- Mtitho Ardei
- Voi
- Malindi
- Garsen

**Major Development Components:**

| | |
|---|---|
| Restaurant | 75 m² |
| Snack Stand | 75 m² |
| Sourvenior Shop | 30 m² |
| Drag Store | 30 m² |
| Toilet | 40 m² |
| Gas Station | 120 m² |
| Repair Shop | 120 m² |
| Parking | 300 m² |
| Total | 790 m² |

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

None

| Development Schedule: Items / Term: Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | | | — | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | | — | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | | | — | | | | | | | | | | |
| 4. Procurement & Implementation | | | | | — | | | | | | | | | | |

# (Project Profile) Short-Term Development (Human Resoures Development)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CE - IN - 1 - HR - 1 | Physical expansion of facilities of KUC Nairobi | Training Facilities | Nairobi |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Kenya Utalii College | MOTW | Total | 15,750 | ☐ req'd ☑ not req'd |
| Operation Body: | Section: | Foreign | 11,000 | Financial Assistance: |
| Kenya Utalii College | | Kenya | 4,750 | ☑ req'd ☐ not req'd |

Brief of Project: (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Today, the KUC has a capacity for 540 student trainees per annum and offers various courses in hotel management, front office operations, food and beverages production, travel operations and tour guide training, house-keeping and laundry, and other services. The training costs of Kenyan students at the college are principally funded by the 2 % training levy administered by the Catering Levy Trustees (CLT).

The college has been unable to cope with the excessive demand for training from school graduates and employees within the tourism sector without formal and/or relevant training in the sector on the one hand, and the very high demand from the tourism establishments for trained personal, on the other hand. For instance, in 1992, 9,143 people applying for trainee courses competed for the 219 vacancies that were available at the college. In addition, the college has been facing the following serious problems, which are jeopardizing both, the standards and operations of the college;

- Facilities including the hostels are far from being adequate as the actual student population today is exceeding the planned capacity by about 37 %;
- A great number of the training equipment is out-dated and has deteriorated;
- Classroom space is inadequate and lacks modern teaching aids;
- The model application hotel formerly classified as a five star hotel has been downgraded to a four star hotel and is badly in need of refurbishment;
- Loss of professional staff to the sector (brain drain);
- Staff offices are inadequate and overcrowded.

The college intend to expand the training programme both number of students and training courses. The expansion of training programmes will need the expansion of physical facilities.

Major Development Components:

The college sees the expansion of the following facilities as neccssary to support the expansion of the training programmes as proposed.

- Additional alassrooms;
- Staff Offices;
- Hotel Facilities;
- Expansion and Improvement of Utali Hotel;
- Staff Housing;
- Sports Facilities;

Environmental Impact:

See P/D, S/D

Specific Issues Remaining:

In November 1991, the government decided that 85 % of the total levy collected should be channeled to the college. But this decision has not been implemented yet. To maintain the self sustained operation and management, including the fund from CLT should be implemented. Collection of tuition from the student should also be considered.

KUC should be exempt from being governed by the rules of the State Corporation Act in order to allow KUC more flexibility in selecting lectures. It will improve the quality of teaching staff.

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | — | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | — | | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | — | — | | | | | | | | | | | |

S - V

# (Project Profile) Short-Term Development (Human Resource Development)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| K - IN - 1 - HR - 1 | Improvement and Establishment of Catering courses in Technical Training Institutes (TTI) | Training Facilities | Nairobi, Mombasa, Meru and Kitale (4 locations) |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Ministry of Research, Technical Training and Technology | Ministry of Research, Technical Training and Technology | Total | 12,500 | ☐ req'd ☑ not req'd |
| Operation Body: | Section: | Foreign | 8,750 | Financial Assistance: |
| Technical Training Institutes of Nairobi, Mombasa, Nkabune and Kitale | | Vietnam | 3,750 | ☑ req'd ☐ not req'd |

Brief of Project: (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

There are twenty two (22) technical training institutes in Kenya under the Ministry of Research, Technical Training and Technology. The total number of students learned in the institutes was 9,571 in 1984 and 5,906 in 1990, including those, who had short-term courses. The number of students shows a declining trend in resent years.

Some of these institutes already have plans to offer cooking and food and beverage services and sales training, that will actually be training courses for tourism related establishments. The master plan study recommended to introduce appropriate catering courses in four technical training institutes up to year 2000. Training restaurant will be attached to the training institutes to supplement recurrent cost to provide catering courses. Following four technical training institutes will establish catering courses.

1) Nairobi Technical Training Institute has plan for establishment of food and beverage course. Approximately 3.2 hector of land facing to the major road is available for the new establishment.

2) Mombasa Technical Training Institute is accessible from hotels in most parts of the coast. Outside lecturers can easily found from hotels that provide services for international tourists.

3) Though Nkabune Technical Training Institute in Meru, currently provide catering courses with an attached restaurant, the existing facilities need expansion and improvement in order to provide better training. The institute was originally founded as the Women's Social Institute in 1964 to provide education and skill for women in rural area.

4) As Kitale is designated as one of the important tourism centres in the Western Tourism Region, a training institute will help to upgrade the service level in the region.

Major Development Components:

Unit: '000US$

| Major Development Components \ Project Location | Nairobi TTI (Nairobi) | Mombasa TTI (Mombasa) | Nkabune TTI (Meru) | Kitale TTI (Trans Nzoia) |
|---|---|---|---|---|
| Site preparation, access road & parking | 50 | 50 | 500 | 100 |
| Training Facilities (class rooms, kitchens, storage) | 380 | 380 | 250 | 250 |
| Equipments | 520 | 520 | 270 | 270 |
| Training Restaurants (incld. equipments) | 350 | 350 | 350 | 350 |
| Supporting Utilities (water, sewer, power) | 10 | 10 | 20 | 20 |
| Total | 1,310 | 1,310 | 1,390 | 990 |

Environmental Impact:

See P/D, S/D

Specific Issues Remaining:

An appropriate organization should be established to set up the standards for training, skill testing, and certification for the graduates trained in KUC, technical training institutes and private training institutes. Licensing for food production should aim to maintain high standard of hygiene. The ministry of Health should assume the main responsibility for setting up the standard.

The catering Training Levy should be distributed not only to KUC but also to other training institutions that provide tourism related training courses.

| Development Schedule: Items \ Term / Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | | | | | | | | | | | | |

(Project Profile) Short-Term Development (Human Resource Development)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CE - IN - 1 - HR - 2 | Expansion of KWS Training Program | Training Facilities | Naivasha or Voi |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Kenya Wildlife Services (KWS) | MOTW | Total | 15,750 | ☐ req'd ☑ not req'd |
| Operation Body: KWS | Section: | Foreign | 11,000 | Financial Assistance: |
| | | Vietnam | 4,750 | ☐ req'd ☑ not req'd |

Brief of Project: (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Environmental Education by KWS

(1) Requirement for Environmental Education and Training

For the coexistence of tourism and wildlife, environmental education should be spread to a wider range of people who engage in wildlife tourism, such as safari drivers, guides, wardens in private ranches and naturalists.
Private ranches require specialists, who can monitor and manage wildlife on their properties. Local governments and the private tourism sector also needs assistance from KWS to participate in wildlife tourism. Even the tour guide course at Utali College would be better conducted with the co-operation of KWS.

Because of its accumulated knowledge of and experiences in wildlife management, KWS is the most suitable organization to provide environmental education.

(2) Expansion of KWS Training Program

KWS currently provides training programs for their staff in Naivasha. Although the travel, trade and local governments realize the importance of environmental conservation and management education, and KWS is the only potential organization that could provide such education, these programs are not available for outsiders.

KWS should open their training courses for the private sector and local governments by expanding existing facilities to accommodate the new courses. Considering KWS's existing resources, Naivasha or Voi would be the appropriate locations for the new courses.

Major Development Components:

The expansion of the following facilities are necessary to support the expansion of the training programmes:

- Additional classrooms;
- Staff Offices;
- Hostel Facilities;
- Expansion and Improvement of Training Facilities;
- Staff Housing;
- Sports Facilities;

Environmental Impact:

See P/D, S/D

Specific Issues Remaining:

KWS should be entitled to set up the standard for training and skill testing and certification for environmental management education. Licensing of safari drivers and guides has a special importance in KWS's licensing. The Ministry of Education should assist and supervise KWS for the provision of certificates.

| Development Schedule: Term | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Serial Year / Items | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | | — | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | | — | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | | | — | | | | | | | | | | |
| 4. Procurement & Implementation | | | | | — | — | — | — | — | — | | | | | |

# (Project Profile) Short-Term Development (Transport)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CE - IN - 4 - RD - 1 | Mt. Kenya Access Road Development Project | Road | Mt. Kenya |

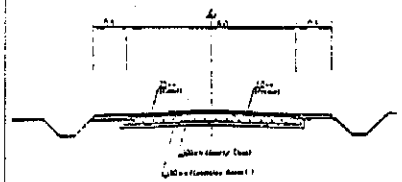
| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| MOPWH | MOPWH | Total | 1,250 | ☐ req'd ☑ not req'd |
| Operation Body: MOPWH | Section: | Foreign | | Financial Assistance: |
| | | Kenya | | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Access road development from Naro Moro town to Mt. Kenya Tourism Promotion Zone in required in order to facilitate the development of Tourism Promotion Zone.

**Major Development Components:**

Road Length : 15.0 km
No. of Lanes : 2
Typical Cross Section :



**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | | — | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | — | — | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | | — | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | — | — | | | | | | | | | | |

# (Project Profile) Short-Term Development (Water Supply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CE - IN - 1 WS - 1 | Karen Town Community Water Supply Project | Water Supply | Karen Town |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| LA (Nairobi City Council) | MOLRRWD | Total | 2,603 | ☐ req'd ☑ not req'd |
| Operation Body: LA (Nairobi City Council) | Section: | Foreign | 1,558 | Financial Assistance: |
| | | Kenya | 1,045 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Expansion of Nairobi Urban Water Supply Scheme for water source and new establishment of distribution system.

The project are summarized as follows;

1. Existing Condition
   - Capacity : 240,000 (Nairobi Urban)
   - Water Source : Chaania River, Sasumua Dam, Ruiru Dam, Kikuyu Spring

2. Plan of Project
   - Served Population : 4,680
   - Water Demand ($m^3/d$) : 1,052
   - Water Source : Nairobi Urban Water Supply Scheme

**Major Development Components:**

Source Works
- Incremental Capacity ($m^3/d$) :

Aqueduct Works
- Pipeline H (m) :
  L (m) : 6,000

Treatment /Reservoir Works
- Incremental Capacity ($m^3/d$) : 1,052

Distribution Works
- Covered Area ($km^2$) : 0.35

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Nairobi urban water supply system is used for water source of Karen town system and so Karen Town community project shall be coordinated the progress of Nairobi urban scheme.

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | ——— | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | ——— | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | ——— | | | | | | | | | | |

# (Project Profile) Short-Term Development (Water Supply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CE - IN - 1 - WS - 2 | South Limuru Community Water Supply Project | Water Supply | South Limuru |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| NWCPC | MOLRRWD | Total | 2,565 | ☐ req'd ☑ not req'd |
| Operation Body: NWCPC | Section: | Foreign | 1,535 | Financial Assistance: |
| | | Kenya | 1,030 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Development of new water supply system and construction of transmission from Ruiru Dam.

The project are summarized as follows;

1. Existing Condition
   - Capacity (m³/d) : Individual
   - Water Source : Borehole
2. Plan of Project
   - Served Population : 810
   - Water Demand (m³/d) : 722
   - Water Source : Pipeline from Ruiru Dam

**Major Development Components:**

Source Works
- Incremental Capacity (m³/d) :

Aqueduct Works
- Pipeline H (m)
  L (m) : 2,000

Treatment/Reservoir Works
- Incremental Capacity (m³/d) : 722

Distribution Works
- Covered Area (km²) : 0.60

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

The project shall be coordinated the progress of aqueduct works for Nairobi urban scheme.

| Development Schedule: Items / Term / Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | ——— | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | ——— | ——— | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | — | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | ——— | | | | | | | | | | |

# (Project Profile) Short-Term Development (Power Supply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CE - IN - 4 - PS - 1 | 11kV Distribution Line (Naro Moru) | Distribution Line | Naro Moru |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Kenya Power and Lighting Company Ltd. (KPLC) | Ministry of Energy | Total | 357,500 | ☐ req'd ☑ not req'd |
| Operation Body: KPLC | Section: | Foreign | 126,250 | Financial Assistance: |
| | | Kenya | 232,375 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Existing electricity is supplied from Nanyuki to Naro Moru by 33 kV distribution line, and stepping down to 11 kV at Naro Moru.

A new 11 kV distribution lien will be extended to the developing area.

**Major Development Components:**

Distribution Line
- Total Line Length : 13 km

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

It is necessary to consider the land scene to hide power line.

| Development Schedule: Items \ Term / Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | — | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | — | — | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | — | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | — | — | | | | | | | | | | |

# (Project Profile) Short-Term Development (Tourism Facilities)

| Code No. | Name of Project: | Mode: | Locatio: |
|---|---|---|---|
| WE - IN - 4 - TR - 1 | Baringo District Museum | | Lake Baringo |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| MOTW | MOTW | Total | 3,750,000 | ☑ req'd ☐ not req'd |
| Operation Body: National Museums of Kenya (NMK), KWS | Section: | Foreign | | Financial Assistance: |
| NMK, KWS | | Kenya | | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Baringo District Museum is aimed at exhibition of the local natural and cultural materials with emphasize on Rift Valley geology, Karenjin culture and highlight of the District, Framingo.

The plan of the Museum is included in the NMK program phase II (2000 - 2005), but earlier construction is recommendable because of its high atractiveness for tourists, which supports the region's tourism promotion.

**Major Development Components:**

Breakdown of Space

| | |
|---|---|
| - Display & Exhibits | 750 m² |
| - Storage | 250 m² |
| - Research | 375 m² |
| - Administration & Support | 875 m² |
| - Mechanics | 250 m² |
| Total | 2,500 m² |

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Foreign experts are essential for the special skills for aquarium construction and detail equipment and exhibition planning.

| Development Schedule: Term | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Serial Year / Items | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | | — | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | | — | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | | — | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | | — | | | | | | | | | | |

# (Project Profile) Short-Term Development (Transport)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| WE - IN - 3 - RD - 1 | Mt. Elgon Access Road Development Project | Road | Mt. Elgon |

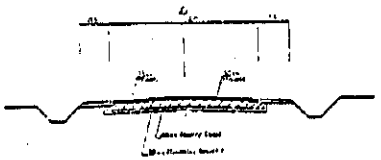
| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| MOPWH | MOPWH | Total | 2,000 | ☐ req'd ☑ not req'd |
| Operation Body: MOPWH | Section: | Foreign | | Financial Assistance: |
| | | Kenya | | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Access road development from Endebess town to entrance of Mt. Elgon N.P. via Mt. Elgon Tourism Promotion Zone is required in order to facilitate the development of the Tourism Promotion Zone.

**Major Development Components:**

Road Length : 15.0 km
No. of Lanes : 2
Typical Cross Section :



**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

It is necessary to consider the land scene to hide power line.

| Development Schedule: Items / Term: Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | — | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | — | — | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | — | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | — | — | | | | | | | | | | |

# (Project Profile) Short-Term Development (Water Supply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| WE - IN - 3 - WS - 1 | Mt. Elgon Community Water Supply Project | Water Supply | Mt. Elgon |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| NWCPC | MOLRRWD | Total | 1,550 | ☐ req'd ☑ not req'd |
| Operation Body: NWCPC | Section: | Foreign | 928 | Financial Assistance: |
| | | Kenya | 622 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Development of new water supply system and construction of transmission from Kitale.

The project are summarized as follows;

1. Existing Condition
   - Capacity (m³/d) : Individual
   - Water Source : Borehole

2. Plan of Project
   - Served Population : 1,990
   - Water Demand (m³/d) : 388
   - Water Source : Kitale Urban Water Supply

**Major Development Components:**

Source Works
- Incremental Capacity (m³/d) :

Aqueduct Works
- Pipeline H (m) :
  L (m) : 20,000

Treatment/Reservoir Works
- Incremental Capacity (m³/d) : 388

Distribution Works
- Covered Area (km²) : 0.09

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

The Project shall be coordinated the progress of Kitale urban scheme.

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | ——— | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | ——— | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | ——— | | | | | | | | | | |

# (Project Profile) Short-Term Development (Solid Waste Disposal)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| WE - IN - 4 - SD - 1 | Lake Baringo Community Solid Waste Disposal Project | Solid Waste Disposal | Lake Baringo |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Local Government | MOLG | Total | 393 | ☐ req'd ☑ not req'd |
| Operation Body: Local Government | Section: | Foreign | 188 | Financial Assistance: |
| | | Kenya | 205 | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Establishment of new disposal system including Separate Collection and Sanitary Landfill.

The project are summarized as follows;

- Served Population : 4,370
- Solid Water Yield (ton/d) : 3.061
- Collection System : Separation, 2 times/week
- Disposal Method : Recycling + Sanitary Landfill
- Project Life Time : 10 years

**Major Development Components:**

Land Acquisition
- Required Area (ha) : 0.333

Landfilling
- Increment Capacity ($m^3$/d) : 5.466
- Collection Area ($km^2$) : 0.325

Machinery : LS

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Items / Term / Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | — | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | — | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | — | | | | | — | | | | | | — |

# (Project Profile) Short-Term Development (Power Supply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| WE - IN - 3 - PS - 1 | 33 kV Distribution Line (Kitale - Mt. Elgon) | Distribution Line | Mt. Elgon - Kitale |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Kenya Power and Lighting Company Ltd. (KPLC) | Ministry of Energy | Total | 2,700,000 | ☐ req'd ☑ not req'd |
| Operation Body: KPLC | Section: | Foreign | 9,451,000 | Financial Assistance: |
| | | Kenya | 1,755,000 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Existing electricity is supplied from Webuye to Kitale by 33 kV distribution line.

A new 33 kV distribution line will be extended to the core developing area.

**Major Development Components:**

Distribution Line
- Total Line Length : 90 km
  from Kitale to core area : 65 km
  from core to spot : 25 km

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

It is necessary to consider the land scene to hide power line.

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | — | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | — | — | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | — | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | — | — | | | | | | | | | | |

# (Project Profile) Short-Term Development (Power Supply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| WE-IN-4-PS-1 | 33 kV Distribution Line (Lake Baringo) | Distribution Line | Lake Baringo |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Kenya Power and Lighting Company Ltd. (KPLC) | Ministry of Energy | Total | 1,800,000 | ☐ req'd ☑ not req'd |
| Operation Body: KPLC | Section: | Foreign | 630,000 | Financial Assistance: |
| | | Kenya | 1,170,000 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Existing electricity is supplied from Marigat to Kanpi Ya Samaki.

A new 33 kV distribution line will be extended to the core of developing area.

**Major Development Components:**

Distribution Line
- Total Line Length : 60 km

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

It is necessary to consider the land scene to hide power line.

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | ——— | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | ——— | ——— | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | ——— | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | ——— | | | | | | | | | | |

# (Project Profile) Short-Term Development (Tourism Facilities)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 7 - TR - 1 | Kenya National Aquarium and Centre for Aquatic Studies & Conservation | | |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|---|
| MOTW | MHNH | | Total | 35,200,000 | ☑ req'd ☐ not req'd |
| Operation Body: National Museums of Kenya (NMK), KWS | Section: | | Foreign | | Financial Assistance: |
| NMK, KWS | | | Kenya | | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Kenya National Aquarium and Centre for Aquatic Studies & Conservation (the Aquarium) is aimed at three major distitinctions.

- Research
- Exhibition
- Education

The Aquarium will be located in Fort Jesus Museum area of Mombasa, with the sate area of 4,900 m² together with the Museum.

International standard aquarium, first in Kenya, will be a big attraction for tourists also.

Annual budget for the Aquarium is estimated US$ 952,472.

**Major Development Components:**

Breakdown of Space

| | |
|---|---|
| - Public Facility | 1,550 m² |
| - Display & Exhibits | 1,050 m² |
| - Research | 650 m² |
| - Education | 450 m² |
| - Administration & Support | 2,400 m² |
| Total | 6,100 m² |

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Under UNDP assistance, the proposal was prepared in 1991.

Foreign experts are essential for the special skills for aquarium construction and detail equipment and exhibition planning.

| Development Schedule: Term | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Items: Serial Year | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | ——— | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | ——— | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | ——— | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | ——— | | | | | | | | | | |

# (Project Profile) Short-Term Development (Tourism Facilities)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO-IN-7-TR-2 | Swahili Seafood Distribution Project | Distribution Facilities | Malindi, Watamu, Kilifi, Shimo La Tewa, Tiwi in Coast Region |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Fishery Department, MOTW | MOTW | Total | 5,000 | ☐ req'd ☑ not req'd |
| Operation Body: Fishermen's cooperative or communities | Section: | Foreign | 4,000 | Financial Assistance: |
| | | Kenya | 1,000 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Kenya coast has a potential for developing the local specialities by using marine fish and crustaceans. Although large volume of foreign tourist staying in the coast area, availability of seafood as a local speciality in the restaurants and hotels are limited. Number of restaurants and variety of dishes are not sufficient level to enjoy for the tourists.
To develop seafood as a speciality, the following issues should be overcome:
- Improvement of fishing facilities to meet the market demand.
- Establish marketing channel to fulfill the demand and supply balance.
- Promote seafood as a local specialities.

1) Improvement of fishing facilities
The following improvement should be realized:
- Fishing boat should be sufficiently facilitated to catch sufficient quantities and kinds of fishes.
- Fishing boat should have some means of cooling facilities to keep the fish fresh.
- Financial assistance should be provided for improvement.
- Technical assistance should be provided.

2) Establishment of marketing channel
The following measures should be taken:
- Introduction of some means of cooling facilities to keep the fish fresh during distribution.
- Establish information and marketing centre to distribute market information to the fishermen and consumers.

3) Promotion of seafood
To promote seafood for tourists, the following measures should be taken:
- Campaign and promotion activities (hirabayashi).
- Provide seafood preparation training classes or courses in the training institutes.

For improvement
(1) Improvement of fishing facilities
- Induce fihsermen to provide cooler box on their fishing boats.
- Induce fishermen to facilitate appropriate tools on their boats.
- Fisheries department in MOTW should arrange provision of technical and financial assistance for the improvement of facilities.
- Organize fishermen to support the implementation of project.

(2) Establish marketing channel to fulfill the demand and supply balance
- Provision of ice supply terminals to supply cooling ice to fishing boats.
- Provide market information centers.
- Fisheries department in MOTW should arrange provision of technical and financial assistance for the provision of facilities.
- Organize fishermen to support the implementation of project.

**Major Development Components:**

In this master plan fresh fish supply project is proposed the project including following facilities.

1) Construction of the Ice Supply Terminals.

The proposed location of Ice Supply Terminals are Malindi, Watamu, Kilifi, Shimo La Tewa and Tiwi. (5 locations)

2) Build Market Information Centre beside the Ice Supply Terminal. (5 locations)

3) Attach Cooler box on the fishing boats which receive ice from the terminals. (Approx. 1,000 boats)

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Other than physical facilities mentioned above. Following Institutional maters should be provided.
1) Organize fishermans to use the Ice Supply Terminal and Market Information Centre.
2) Provide Stuffs assigned in the Market Information Centre (MIC) and establish inter organization relating to the operation of the MIC.
3) Provide the technical and financial support for the organized fishermen.
4) Promotion of seafood to tourists following measures should be taken
   - Campaign and promotion activities
   - Provide seafood preparation training classes or courses in the training institutes

| Development Schedule: Term | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Items: Serial Year | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | — | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | — | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | — | | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | — | | | | | | | | | | | | |

(Project Profile) Short-Term Development (Transport)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO-IN-11-AP-1 | Lamu Airstrip Pavement Rahabilitation | Airway | Manda Island |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| KAA | MOTC | Total | 2,500 | ☐ req'd ☑ not req'd |
| Operation Body: | Section: | Foreign | | Financial Assistance: |
| | | Kenya | | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Presently, the small propeller-driven airplanes for scheduled and chartered flights are put into service at Lamu Airstrip.

Taking into account of the increase of incoming tourists by air in accordance with promotion of the tourism development at Lamu and Manda Islands, the improvement of Lamu Airstrip is required.

**Major Development Components:**

Runway Ravement Rehabilitation (800 m x 20 m)

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | | | | | | | | | | | | |

(Project Profile) Short-Term Development (Transport)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 1 - RD - 1 | Moi International Airport Access (C110) Improvement | Road | Airport Access |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|---|
| MOPWH | MOPWH | | Total | 1,825 | ☐ req'd ☑ not req'd |
| Operation Body: | Section: | | Kenya | | Financial Assistance: |
| MOPWH | | | | | ☐ req'd ☑ not req'd |

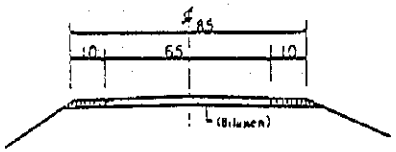
Brief of Project: (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

The rehabilitation works of Moi International Airport as the Kenyan' gateway are in progress.

The existing conditions of access road to the airport are narrow and the maintenance is insufficient. To more utilize the improvement, the access roads are required to be developed.

Major Development Components:

Road Length : 4 P km
No. of Lanes : 2
Typical Cross Section :




Environmental Impact:

See P/D, S/D

Specific Issues Remaining:

| Development Schedule: Items / Term / Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | — | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | — | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | | — | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | | — | | | | | | | | | | |

(Project Profile) Short-Term Development (Transport)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - RD - 2 | South Diani Access Road Development Project | Road | Diani Beach |

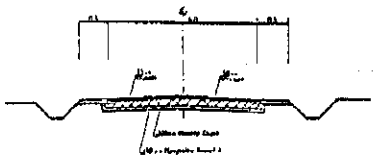
| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| MOPWH | MOPWH | Total | 500 | ☐ req'd ☑ not req'd |
| Operation Body: | Section: | Foreign | | Financial Assistance: |
| MOPWH | | Kenya | | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Access road extension from Diani Beach to Galu Beach (South Diani) is required in order to facilitate the development of the South Diani Tourism Promotion Zone.

**Major Development Components:**

Road Length : 10.0 km
No. of Lanes : 2
Typical Cross Section :



**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Term | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Items: Serial Year | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | — | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | — | | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | — | — | | | | | | | | | | | |

(Project Profile) Short-Term Development (Transport)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 8 - RD - 1 | Watamu Access Road Development Project | Road | Watamu |

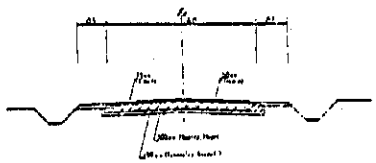
| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| MOPW | MOPW | Total | 500 | ☐ req'd ☑ not req'd |
| Operation Body: | Section: | Foreign | | Financial Assistance: |
| MOPW | | Kenya | | ☐ req'd ☑ not req'd |

Brief of Project: (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Access road improvement from Route B8 (Gedi) to Watamu Marine N.P/N.R is required in order to facilitate the development of Watamu Tourism Promotion zone.

Major Development Components:

Road Length : 12.0 km
No. of Lanes : 2
Typical Cross Section :



Environmental Impact:

See P/D, S/D

Specific Issues Remaining:

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | — | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | — | | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | — | — | | | | | | | | | | | |

# (Project Profile) Short-Term Development (Water Supply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 1 - WS - 1 | South Diani Community Water Supply Project | Water Supply | South Diani |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| NWCPC | MOLRRWD | Total | 12,153 | ☐ req'd ☑ not req'd |
| Operation Body: NWCPC | Section: | Foreign | 7,280 | Financial Assistance: |
| | | Kenya | 4,873 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Development of new water resource and water supply system up to 2010.

The project are summarized as follows;

1. Existing Condition
   - Capacity (m³/d) : 1,000
   - Water Source : Borehole

2. Plan of Project
   - Served Population : 21,330
   - Water Demand (m³/d) : 3,800
   - Water Source : Groundwater (Boreholes) at Mwaweche

**Major Development Components:**

Source Works
- Incremental Capacity (m³/d) : 3,800

Aqueduct Works
- Pipeline H (m) :
  L (m) : 9,000

Treatment/Reservoir Works
- Incremental Capacity (m³/d) : 3,800

Distribution Works
- Covered Area (km²) : 1,600

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Urgent project is necessary to meet the present demand.

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | ——— | | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | ——— | | | | | | | | | | | | | |
| 4. Procurement & Implementation | ——— | ——— | ——— | | | | | | | | | | | | |

# (Project Profile) Short-Term Development (Water Suuply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO-IN-2-WS-3 | Gazi Bay Community Water Supply Project | Water Supply | Gazi Bay |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| NWCPC | MOLRRWD | Total | 1,923 | ☐ req'd ☑ not req'd |
| Operation Body: | Section: | Foreign | 1,153 | Financial Assistance: |
| Community | | Kenya | 770 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Development of new water resource and water supply system up to 2000.

The project are summarized as follows;

1. Existing Condition
   - Capacity (m³/d) :
   - Water Source : Borehole

2. Plan of Project
   - Served Population : 2,330
   - Water Demand (m³/d) : 525
   - Water Source : Groundwater (Boreholes) at Mwaweche

**Major Development Components:**

Source Works
- Incremental Capacity (m³/d) : 525

Aqueduct Works
- Pipeline H (m) :
  L (m) : 13,000

Treatment/Reservoir Works
- Incremental Capacity (m³/d) : 525

Distribution Works
- Covered Area (km²) : 0.175

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Urgent project is necessary to meet the present demand.

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | — | | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | — | — | | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | — | — | — | | | | | | | | | | |

# (Project Profile) Short-Term Development (Water Supply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO-IN-8-WS-1 | Watamu Enlargement Water Supply Project | Water Supply | Watamu |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| NWCPC | MOLRRWD | Total | 4,813 | ☐ req'd ☑ not req'd |
| Operation Body: NWCPC | Section: | Foreign | 2,885 | Financial Assistance: |
| | | Kenya | 1,928 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Expansion of Watamu Urban Supply Scheme.

The project are summarized as follows;

1. Existing Condition
   - Capacity (m³/d) : 1,630 (Watamu Urban)
   - Water Source : Borehole

2. Plan of Project
   - Served Population : 9,200 (Watamu Urban)
   - Water Demand (m³/d) : 1,390 (Watamu Urban)
   - Water Source : Sabaki Pipeline from Malindi

**Major Development Components:**

Source Works
- Incremental Capacity (m³/d) : 700

Aqueduct Works
- Pipeline H (m) :
  L (m) : 20,000

Treatment/Reservoir Works
- Incremental Capacity (m³/d) : 700

Distribution Works
- Covered Area (km²) : 0.700

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | —— | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | —— | | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | ——— | ——— | | | | | | | | | | | |

# (Project Profile) Short-Term Development (Water Supply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO- IN - 11 - WS - 1 | West Lamu Community Water Supply Project | Water Supply | West Lamu |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| NWCPC | MORLLWD | Total | 985 | ☐ req'd ☑ not req'd |
| Operation Body: | Section: | Foreign | 593 | Financial Assistance: |
| Community | | Kenya | 393 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Development of new water supply system up to 2000 and construction of transmission from Lamu Town.

The project are summarized as follows;

1. Existing Condition
   - Capacity ($m^3/d$) :
   - Water Source : Borehole

2. Plan of Project
   - Served Population : 1,340
   - Water Demand ($m^3/d$) : 301
   - Water Source : Lamu Urban Water Supply

**Major Development Components:**

Source Works
- Incremental Capacity ($m^3/d$) : 301

Aqueduct Works
- Pipeline H (m) :
  L (m) : 10,000

Treatment/Reservoir Works
- Incremental Capacity ($m^3/d$) : 301

Distribution Works
- Covered Area ($km^2$) : 0.100

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | ——— | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | ——— | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | ——— | | | | | | | | | | |

(Project Profile) Short-Term Development (Sewerage)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 1 - SG - 1 | South Diani Community Sewerage Project | Sewerage | South Diani |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Local Government | MOLG | Total | 7,360 | ☐ req'd ☑ not req'd |
| Operation Body: Local Government | Section: | Foreign | 3,553 | Financial Assistance: |
| | | Kenya | 3,808 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Establishment of new sewerage system according to development of water supply.

The project are summarized as follows;

1. Existing Condition
   - Capacity (m³/d) : not existing

2. Plan of Project
   - Served Population : 21,200
   - Water Demand (m³/d) : 3,840
   - Type of Receiving Waters : Ocean

**Major Development Components:**

Treatment Plant Works
- Incremental Capacity (m³/d) : 3,840

Sewer Works
- Trunk Sewer (m) : 8,000
- Sewered Area (ha) : 160

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Urgent project is necessary to meet the present demand.

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | ——— | ——— | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | ——— | | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | ——— | ——— | ——— | | | | | | | | | | |

# (Project Profile) Short-Term Development (Sewerage )

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 2 - SG - 3 | Gazi Bay Community Sewerage Project | Sewerage | Gazi Bay |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|---|
| Local Government | MOLG | | Total | 805 | ☐ req'd ☑ not req'd |
| Operation Body: Local Government | Section: | | Foreign | 388 | Financial Assistance: |
| | | | Kenya | 417 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Establishment of new sewerage system according to development of water supply.

The project are summarized as follows;

1. Existing Condition
   - Capacity ($m^3/d$) : not existing

2. Plan of Project
   - Served Population : 2,337
   - Sewage Yield ($m^3/d$) : 420
   - Type of Receiving Waters : Ocean

**Major Development Components:**

Treatment Plant Works
- Incremental Capacity ($m^3/d$) : 420

Sewer Works
- Trunk Sewer (m) : 875
- Sewered Area (ha) : 18

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Urgent project is necessary to meet the present demand.

| Development Schedule: Items / Term / Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | — | | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | — | | | | | | | | | | | | | | |
| 4. Procurement & Implementation | | — | | | | | | | | | | | | | |

# (Project Profile) Short-Term Development (Sewerage)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 8 - SG - 1 | Watamu Enlargement Sewerage Project | Sewerage | Watamu |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Local Government | MOLG | Total | 1,060 | ☐ req'd ☑ not req'd |
| Operation Body: Local Government | Section: | Foreign | 455 | Financial Assistance: |
| | | Kenya | 605 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Enlargement of Watamu Urban Sewerage Scheme.

The project are summarized as follows;

1. Existing Condition
   - Capacity (m³/d): not existing
2. Plan of Project
   - Served Population: 9,200 (Watamu)
   - Sewage Yield (m³/d): 1,110 (Watamu)
   - Type of Receiving Waters: Ocean

**Major Development Components:**

Treatment Plant Works
- Incremental Capacity (m³/d) : 800

Sewer Works
- Trunk Sewer (m) : -
- Sewered Area (ha) : -

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Urgent project of Watamu Urban Sewerage Scheme is necessary to meet the present demand.

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | ——— | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | ——— | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | | | | | | | | | | | |

# (Project Profile) Short-Term Development (Solid Waste Disposal)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 3 - SD - 1 | Shimoni Community Solid Waste Disposal Project | Solid Waste Disposal | Simoni |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Local Government | MOLG | Total | 458 | ☐ req'd ☑ not req'd |
| Operation Body: Local Government | Section: | Foreign | 218 | Financial Assistance: |
| | | Kenya | 240 | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Establishment of new disposal system including Separate Separate Collection and Sanitary Landfill.

The project are summarized as follows;

- Served Population : 4,890
- Solid Water Yield (ton/d) : 3.591
- Collection System : Separation, 2 times/week
- Disposal Method : Recycling + Sanitary Landfill
- Project Life Time : 10 years

**Major Development Components:**

Land Acquisition
- Required Area (ha) : 0.390

Landfilling
- Increment Capacity ($m^3/d$) : 6.413
- Collection Area ($km^2$) : 0.425

Machinery : LS

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Items \ Term / Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | ——— | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | ——— | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | ——— | | | | | | | | | | |

# (Project Profile) Short-Term Development (Solid Waste Disposal)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 1 - SD - 1 | South Diani Community Solid Waste Disposal Project | Solid Waste Disposal | South Diani |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Local Government | MOLG | Total | 840 | ☐ req'd ☑ not req'd |
| Operation Body: Local Government | Section: | Foreign | 398 | Financial Assistance: |
| | | Kenya | 442 | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Establishment of new disposal system including Separate Separate Collection and Sanitary Landfill.

The project are summarized as follows;

- Served Population : 21,200
- Solid Water Yield (ton/d) : 6.61
- Collection System : Separation, 2 times/week
- Disposal Method : Recycling + Sanitary Landfill
- Project Life Time : 10 years

**Major Development Components:**

Land Acquisition
- Required Area (ha) : 0.718

Landfilling
- Increment Capacity ($m^3/d$) : 11.803
- Collection Area ($km^2$) : 1.600

Machinery : LS

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | ——— | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | ——— | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | ——— | | | | | | | | | | |

# (Project Profile) Short-Term Development (Solid Waste Disposal)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 9 - SD - 1 | North Mambrui Community Solid Waste Disposal Project | Solid Waste Disposal | North Mambrui |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Local Government | MOLG | Total | 243 | ☐ req'd ☑ not req'd |
| Operation Body: Local Government | Section: | Foreign | 115 | Financial Assistance: |
| | | Kenya | 128 | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Establishment of new disposal system including Separate Separate Collection and Sanitary Landfill.

The project are summarized as follows;

- Served Population : 2,430
- Solid Water Yield (ton/d) : 1.888
- Collection System : Separation, 2 times/week
- Disposal Method : Recycling + Sanitary Landfill
- Project Life Time : 10 years

**Major Development Components:**

Land Acquisition
- Required Area (ha) : 0.205

Landfilling
- Increment Capacity ($m^3$/d) : 3.371
- Collection Area ($km^2$) : 0.250

Machinery : LS

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Items \ Term / Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | ——— | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | ——— | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | ——— | | | | | | | | | | |

# (Project Profile) Short-Term Development (Solid Waste Disposal)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 8 - SD - 1 | Watamu Enlargement Solid Waste Disposal Project | Solid Waste Disposal | Watamu |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Local Government | MOLG | Total | 345 | ☐ req'd ☑ not req'd |
| Operation Body: Local Government | Section: | Foreign | 163 | Financial Assistance: |
| | | Kenya | 182 | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Enlargement of Watamu Urban Scheme.

The project are summarized as follows;

- Served Population : 9,200 (Watamu)
- Solid Water Yield (ton/d) : 4.60 (Watamu)
- Collection System : Separation, 2 times/week
- Disposal Method : Recycling + Sanitary Landfill
- Project Life Time : 10 years

**Major Development Components:**

Land Acquisition
- Required Area (ha) : 0.293

Landfilling
- Increment Capacity ($m^3/d$) : 4.821
- Collection Area ($km^2$) : -

Machinery : LS

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

Tourism development shall coordinate with Watamu Urban Scheme.

| Development Schedule: Items \ Term / Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | — | | | — | | | | | | | | | | | |
| 3. Bidding/Negotiation | — | | | — | | | | | | | | | | | |
| 4. Procurement & Implementation | | — | | | — | | | | | | | | | | |

# (Project Profile) Short-Term Development (Solid Waste Disposal)

| Code-No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 8 - SD - 2 | North Watamu Enlargement Solid Waste Disposal Project | Solid Waste Disposal | North Watamu |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | US$ ('000$) | Technical Assistance: |
|---|---|---|---|---|
| Local Government | MOLG | Total | 243 | ☐ req'd ☑ not req'd |
| Operation Body: Local Government | Section: | Foreign | 115 | Financial Assistance: |
| | | Kenya | 128 | ☐ req'd ☑ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Establishment of new disposal system including Separate Separate Collection and Sanitary Landfill.

The project are summarized as follows;

- Served Population : 9,200 (Watamu)
- Solid Water Yield (ton/d) : 6.490 (Watamu)
- Collection System : Separation, 2 times/week
- Disposal Method : Recycling + Sanitary Landfill
- Project Life Time : 10 years

**Major Development Components:**

Land Acquisition
- Required Area (ha) : 0.205

Landfilling
- Increment Capacity ($m^3/d$) : 3.375
- Collection Area ($km^2$) : 0.700

Machinery : LS

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Items \ Term / Serial Year | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | — | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | — | | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | — | | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | — | — | | | | | | | | | | |

# (Project Profile) Short-Term Development (Power Supply)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| CO - IN - 7 - PS - 1 | 132 kV Transmission Line (Kilifi-Marindi) | Transmission Line | Kilifi-Malindi |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|---|
| Kenya Power and Lighting Company Ltd. (KPLC) | Ministry of Energy | | Total | 19,190,000 | ☑ req'd ☐ not req'd |
| Operation Body: KPLC | Section: | | Foreign | 8,560,800 | Financial Assistance: |
| | | | Kenya | 10,629,200 | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Electricity has very important role for developing industries. For getting reliable supply from the Kipeve Power Station, it is essential to construct a new transmission line from Kipevu Thermal Power Station to Msambweni.

A new 132 kV substation should be located at Malindi, which will be center of load. The capacity of transformer will be 20 MVA.

**Major Development Components:**

132 kV Transmission Line
- No. of circuit : 1 cct
- Conductor : ASCR 200 mm²
- Length : 50 km

132 kV Substation
- Feeder : 1 feeder
- Transformer (20 MVA) : 1 No.

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

It is necessary to consider the land scene to hide power line.

| Development Schedule: Term | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Items: Serial Year | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | ——— | | | | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | ——— | ——— | | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | ——— | ——— | | | | | | | | | | | |
| 4. Procurement & Implementation | | | | ——— | ——— | | | | | | | | | | |

# (Project Profile) Short-Term Development (Transport)

| Code No. | Name of Project: | Mode: | Location: |
|---|---|---|---|
| K - IN - 1 - RL - 1 | Car Improvement | Railway | |

| Development Body: | Ministry in-charge: | Project Cost: (1 US$ = 50 KSh.) (1 K£ = 20 KSh.) | K£ ('000 £) | Technical Assistance: |
|---|---|---|---|---|
| Kenya Railways | MOTC | Total | 890 | ☐ req'd ☑ not req'd |
| Operation Body: Kenya Railways | Section: | Foreign | | Financial Assistance: |
| | | Kenya | | ☑ req'd ☐ not req'd |

**Brief of Project:** (Exst. condition, Dev. Framework, Beneficiaries, Rational etc.)

Introduction of "Train Safaris" is proposed as one of practical uses of the railways in this Study.

Composition of luxury train (5-first class coaches and 4-buffet cars) for "Train Safaris" is required.

It assumes that the 2-luxury trains are composed.

**Major Development Components:**

Car Improvement
- 10 first class coaches
- 8 buffet cars

**Environmental Impact:**

See P/D, S/D

**Specific Issues Remaining:**

| Development Schedule: Term / Serial Year / Items | Short Term | | | | | Medium Term | | | | | Long Term | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| 1. Feasibility Study | | | — | — | | | | | | | | | | | |
| 2. Detailed Design/Bid Document | | | | — | | | | | | | | | | | |
| 3. Bidding/Negotiation | | | | | — | | | | | | | | | | |
| 4. Procurement & Implementation | | | | | — | | | | | | | | | | |

# Appendices
## A-2 Results of the IEE

Project Description,

Site Description and Scoping

for

Initial Environmental Examination

on

# ROAD PROJECT

| No. CE-IN-1-RD-1 | N.P. & N.R. Access Road Improvement |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Access roads from the arterial roads to N.P./N.R. are insufficient. |
| Objectives | | Development of Access Roads |
| Location | | All access roads to N.P. /N.R. in Central /Western /Coastal Tourism Regions |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH), KWS |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Construction /Rehabilitation, Ordinary Road |
| | Demand | |
| | Target Year | In year of 2010 |
| | Scale | Extension: 1,409.0 km, Width: 6.0 m, No. of Lanes: 2 |
| | Structure | Gravel Roads /Paved Roads /Earth Roads |
| | Facilities | |
| | Others | |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | High population density area: Mombasa/Nairobi/Kisumu, Low population density area |
| | Land Use | Various Types |
| | Economy /Transport | Various Types |
| Natural Environment | | |
| | Topography/Geography | Various types (Afro-alpine/Humid/Arid, Mountain/Plateau/Plains, Volcanics/Metamorphics/Sediments) |
| | Coast and Marine Zone | |
| | Flora & Fauna | Various types (Afro-alpine/Forest/Grassland/Bushland, Mammals/Birds/Aquatics) |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CE-IN-1-RD-2 | Laikipia Road Improvement |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources in Central Tourism Region is indispensable. |
| Objectives | | Formation of circular tour routes |
| Location | | Northern area of Central Tourism Region |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Rehabilitation of Route C78, C78, D370, Ordinary Road |
| | Demand | |
| | Target Year | In year of 2005 |
| | Scale | Extension: 208.7 km, Width: 7.0 m, No. of Lanes: 2 |
| | Structure | Gravel Roads |
| | Facilities | |
| | Others | |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Unimproved grazing land, Swamps & Mashes, Private ranch, Rural Area, Mountainous Area |
| | Economy /Transport | Agriculture, Low density of roads |
| Natural Environment | | |
| | Topography/Geography | Semi-arid/ Arid, Low Foreland Plateau, Quaternary Volcanics |
| | Coast and Marine Zone | |
| | Flora & Fauna | Wooded grassland/Bushed grassland, Big Ungulates/ Big Carnivores |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12 Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CE-IN-4-RD-1 | Mt. Kenya Access Road Development |
|---|---|

## Project Description

| | |
|---|---|
| Background | Road development in order to utilize many tourism resources around Mt. Kenya is indispensable. |
| Objectives | Improving access road to Tourism Promotion Zone |
| Location | From Naro Moru town to Mt. Kenya Tourism Promotion Zone |
| Executing Agency | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | |
| Project Component | |
| Type of Project | Rehabilitation, Ordinary Road |
| Demand | |
| Target Year | In year of 2000 |
| Scale | Extension: 15.0 km, Width: 7.0 m, No. of Lanes: 2 |
| Structure | |
| Facilities | |
| Others | Rural Area, Mountainous Area |

## Site Description

| | |
|---|---|
| Social Environment | |
| Inhabitants | Low population density area |
| Land Use | Unimproved grazing land |
| Economy /Transport | Agriculture/Tourism, Low density of roads |
| Natural Environment | |
| Topography/Geography | Humid/Sub-humid, Tertiary/Recent Volcanics, Steep slopes |
| Coast and Marine Zone | |
| Flora & Fauna | Wooded grassland/Bushed grassland/Bushland, Big Ungulates/ Big Carnivores |
| Pollution | |
| Complaints | None |
| Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. WE-IN-4-RD-1 | Lake Baringo Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around Lake Baringo is indispensable. |
| Objectives | | Formation of circular tour routes |
| Location | | Near Lake Baringo N.R. |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Construction, Ordinary Road |
| | Demand | |
| | Target Year | In year of 2005 |
| | Scale | Extension: 40.0 km (Marigat- Lake Baringo-Solai), Width: 7.0 m, No. of Lanes: 2 |
| | Structure | Paved Roads |
| | Facilities | |
| | Others | Rural Area, Mountainous Area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Unimproved grazing land, Lakes |
| | Economy /Transport | Agriculture/Tourism, Low density of roads |
| Natural Environment | | |
| | Topography/Geography | Humid/Sub-humid, Rift Valley, Lake Baringo, Tertiary/Recent Volcanics, Steep slopes |
| | Coast and Marine Zone | |
| | Flora & Fauna | Wooded grassland/Bushed grassland/Bushland, Big Ungulates/ Big Carnivores |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | O | | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | Δ | | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | Δ | | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. WE-IN-3-RD-1 | Mt. Elgon Access Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around Mt. Elgon is indispensable. |
| Objectives | | Improving access road to Tourism Promotion Zone |
| Location | | From Endebess town to Mt. Elgon N. P. |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Rehabilitation, Ordinary Road |
| | Demand | |
| | Target Year | In year of 2000 |
| | Scale | Extension: 15.0 km, Width: 7.0 m, No. of Lanes: 2 |
| | Structure | |
| | Facilities | |
| | Others | Rural Area, Mountainous Area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Unimproved grazing land |
| | Economy /Transport | Agriculture/Tourism, Low density of roads |
| Natural Environment | | |
| | Topography/Geography | Humid/Sub-humid, Tertiary/Recent Volcanics, Steep slopes |
| | Coast and Marine Zone | |
| | Flora & Fauna | Wooded grassland/Bushed grassland/Bushland, Big Ungulates/ Big Carnivores |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Activities which may cause impacts \ Environmental Items | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-1-RD-2 | South Diani Access Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around South Diani is indispensable. |
| Objectives | | Construction of access road to Tourism Promotion Zone |
| Location | | From Diani beach to Galu beach |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Construction, Ordinary Roads |
| | Demand | |
| | Target Year | In year of 2000 |
| | Scale | Extension: 10.0 km, Width: 7.0 m, No. of Lanes: 2 |
| | Structure | |
| | Facilities | |
| | Others | Rural area, Plain area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Coconuts/Cashewnuts Cropland |
| | Economy /Transport | Tourism/Fishery/Agriculture, Roads/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments, Steep slopes |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-1-RD-1 | Moi Int'l Airport Access Road Improvement |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | The rehabilitation works of Moi International Airport as the Kenyan gateway are in progress. |
| Objectives | | Improvement of international airport access road (C110) |
| Location | | Port Reitg and Kipevu areas in Mombasa City |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | |
| | Demand | |
| | Target Year | In year of 2000 |
| | Scale | Extension: 4.9 km, Width: 10.0 m, No. of Lanes: 2 |
| | Structure | Paved Roads |
| | Facilities | |
| | Others | |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | High population density area |
| | Land Use | Commercial/Residential Areas, Coconuts/Cashewnuts Cropland |
| | Economy /Transport | Industry (Large scale factory)/Trade/Tourism/Fishery/Agriculture, Roads/Railway/Airport/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments, Steep slopes |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-1-RD-3 | Shelly Access Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around Shelly is indispensable. |
| Objectives | | Improvement of access road to Tourism Promotion Zone |
| Location | | From Route A14 to Shelly beach |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Rehabilitation, Ordinary Roads |
| | Demand | |
| | Target Year | In year of 2010 |
| | Scale | Extension: 5.0 km, Width: 7.0 m, No. of Lanes: 2 |
| | Structure | |
| | Facilities | |
| | Others | Rural area, Plain area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Coconuts/Cashewnuts Cropland |
| | Economy /Transport | Tourism/Fishery/Agriculture, Roads/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments, Steep slopes |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Activities which may cause impacts \ Environmental Items | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark: The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-2-RD-1 | Funzi Access Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around Funzi is indispensable. |
| Objectives | | Improvement of access road to Tourism Promotion Zone |
| Location | | From Route A14 to Funzi beach |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Rehabilitation, Ordinary Roads |
| | Demand | |
| | Target Year | In year of 2005 |
| | Scale | Extension: 10.0 km, Width: 6.0 m, No. of Lanes: 2 |
| | Structure | |
| | Facilities | |
| | Others | Rural area, Plain area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Coconuts/Cashewnuts Cropland |
| | Economy /Transport | Tourism/Fishery/Agriculture, Roads/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments, Steep slopes |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark: The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-2-RD-2 | Gazi Access Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around Gazi is indispensable. |
| Objectives | | Construction of access road to Tourism Promotion Zone |
| Location | | From Route A14 to Gazi Bay |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Construction, Ordinary Roads |
| | Demand | |
| | Target Year | In year of 2005 |
| | Scale | Extension: 1.0 km, Width: 6.0 m, No. of Lanes: 2 |
| | Structure | |
| | Facilities | |
| | Others | Rural area, Plain area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Coconuts/Cashewnuts Cropland |
| | Economy /Transport | Tourism/Fishery/Agriculture, Roads/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments, Steep slopes |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-3-RD-1 | Shimoni Access Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around Shimoni is indispensable. |
| Objectives | | Improvement of access road to Tourism Promotion Zone |
| Location | | From Route A14 to Shimoni |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Rehabilitation, Ordinary Roads |
| | Demand | |
| | Target Year | In year of 2005 |
| | Scale | Extension: 12.5 km, Width: 6.0 m, No. of Lanes: 2 |
| | Structure | |
| | Facilities | |
| | Others | Rural area, Plain area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Coconuts/Cashewnuts Cropland |
| | Economy /Transport | Tourism/Fishery/Agriculture, Roads/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments, Steep slopes |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-7-RD-1 | Kilifi Access Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around Kilifi is indispensable. |
| Objectives | | Improvement of access road to Tourism Promotion Zone |
| Location | | Kilifi town |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Rehabilitation, Ordinary Roads |
| | Demand | |
| | Target Year | In year of 2005 |
| | Scale | Extension: 8.0 km, Width: 7.0 m, No. of Lanes: 2 |
| | Structure | |
| | Facilities | |
| | Others | Rural area, Plain area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Coconuts/Cashewnuts Cropland |
| | Economy /Transport | Tourism/Fishery/Agriculture, Roads/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments, Steep slopes |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-8-RD-1 | Watamu Access Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around Watamu is indispensable. |
| Objectives | | Improvement of access road to Tourism Promotion Zone |
| Location | | From Route B8 (Gedi) to Watamu Marine N.P./N.R. |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Rehabilitation, Ordinary Roads |
| | Demand | |
| | Target Year | In year of 2000 |
| | Scale | Extension: 12.0 km, Width: 7.0 m, No. of Lanes: 2 |
| | Structure | |
| | Facilities | |
| | Others | Rural area, Plain area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Coconuts/Cashewnuts Cropland |
| | Economy /Transport | Tourism/Fishery/Agriculture, Roads/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments, Steep slopes |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which might have a significant impact depending on the scale of project and site conditions.
No mark: The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-8-RD-2 | North Watamu Access Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around North Watamu is indispensable. |
| Objectives | | Construction of access road to Tourism Promotion Zone |
| Location | | From Route B8 to Tourism Promotion Zone |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Construction, Ordinary Roads |
| | Demand | |
| | Target Year | In year of 2005 |
| | Scale | Extension: 6.0 km, Width: 7.0 m, No. of Lanes: 2 |
| | Structure | |
| | Facilities | |
| | Others | Rural area, Plain area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Coconuts/Cashewnuts Cropland |
| | Economy /Transport | Tourism/Fishery/Agriculture, Roads/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments, Steep slopes |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Activities which may cause impacts \ Environmental Items | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-9-RD-1 | North Malindi Access Road Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Road development in order to utilize many tourism resources around North Malindi is indispensable. |
| Objectives | | Construction of access road to Tourism Promotion Zone |
| Location | | From Malindi city to Tourism Promotion Zone |
| Executing Agency | | Ministry of Public Works & Housing (MOPEH) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Construction, Ordinary Roads |
| | Demand | |
| | Target Year | In year of 2010 |
| | Scale | Extension: 7.0 km, Width: 7.0 m, No. of Lanes: 2 |
| | Structure | |
| | Facilities | |
| | Others | Rural area, Plain area |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Coconuts/Cashewnuts Cropland |
| | Economy /Transport | Tourism/Fishery/Agriculture, Roads/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments, Steep slopes |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | Δ | | | | | | | | | | | | Δ | | | O | | | O | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | Δ | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

Project Description,

Site Description and Scoping

for

Initial Environmental Examination

on

# RAILWAY PROJECT

| No. CE-IN-1-RW-1 | National Railway Improvement |
|---|---|

## Project Description

| | |
|---|---|
| Background | Kenya Railways are not utilized fully for tourism. The practical uses of the railways are necessary. |
| Objectives | Introduction of "Train Safaris" |
| Location | Mombasa-Nairobi-Eldoret-Kitale line, Nairobi-Nanyuki line |
| Executing Agency | Kenya Railway Cooperation (KR) |
| Beneficiaries | |
| Project Component | |
| Type of Project | Improvement, Diesel, Single Track |
| Demand | |
| Target Year | In year of 2010 |
| Scale | Improvement: 1195km |
| Structure | |
| Facilities | Passenger Car |
| Others | |

## Site Description

| | |
|---|---|
| Social Environment | |
| Inhabitants | High population density area: Mombasa/Nairobi/Kisumu, Low population density area |
| Land Use | Various Types |
| Economy /Transport | Various Types |
| Natural Environment | |
| Topography/Geography | Various types (Afro-alpine/Humid/Arid, Mountain/Plateau/Plains, Volcanics/Metamorphics/Sediments) |
| Coast and Marine Zone | |
| Flora & Fauna | Various types (Afro-alpine/Forest/Grassland/Bushland, Mammals/Birds/Aquatics) |
| Pollution | |
| Complaints | None |
| Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | | Δ | | | | | | Δ | | | | | O | | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | Δ | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | | | | | | | | Δ | | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | Δ | | Δ | | | Δ | Δ | | Δ | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | | | | | | | | | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

# Project Description,
# Site Description and Scoping
# for
# Initial Environmental Examination
# on

# AIRPORT PROJECT

| No. CO-IN-9-AP-1 | Malindi Airport Improvement |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | The increase of air passenger demand according to promote the tourism development |
| Objectives | | For the increase of incoming tourists by air |
| Location | | Existing Malindi Airport, South of Malindi City |
| Executing Agency | | Kenya Airport Authority (KAA) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Improvement, Domestic, Pavement of Runway |
| | Demand | Aircraft Type: Medium propeller-driven airplanes (Max 50 people) |
| | Target Year | In year of 2005 |
| | Scale | Length of Runway: 1500 m |
| | Structure | |
| | Facilities | |
| | Others | |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Maize Cropland Areas, Unimproved grazing land |
| | Economy /Transport | Tourism/Agriculture/Fishery, Low density of roads/Airport/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments |
| | Coast and Marine Zone | Coral reefs/Mangroves |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Activities which may cause impacts \ Environmental Items | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | Δ | | | | | | Δ | | | | | | Δ | | | | | | O | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-11-AP-1 | Lamu Airport Improvement |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Proposed in "National Development Plan, 1994-97, in "Lamu Town Conservation Plan" |
| Objectives | | Air passenger demand, For the increase of incoming tourists by air |
| Location | | Existing Lamu Airstrip at Manda Island |
| Executing Agency | | Kenya Airport Authority (KAA) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Improvement, Domestic, Pavement of Runway |
| | Demand | Aircraft Type: Small airplanes |
| | Target Year | In year of 2000 |
| | Scale | Length of Runway: 800 m |
| | Structure | |
| | Facilities | |
| | Others | |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Bush & Woodland, Old Arabic town Historical Island Interesting historical islands |
| | Economy /Transport | Tourism/Agriculture/Fishery, Low density of roads/Airport/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments |
| | Coast and Marine Zone | Coral reefs/Mangroves |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | | Δ | | | | | | Δ | | | | | | O | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | Δ | | | | | | Δ | | | | | | Δ | | | | | | O | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. WE-IN-1-AP-1 | Kisumu Airport Improvement |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | For the increase of incoming tourists at Kisumu, Proposed in "National Development Plan, 1994-97" |
| Objectives | | For the increase of incoming tourists by air |
| Location | | Existing Kisumu Airport, North of Kisumu City |
| Executing Agency | | Kenya Airport Authority (KAA) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Improvement, Domestic, Pavement of Runway |
| | Demand | Aircraft Type: Medium propeller-driven airplanes (Max 50 people) |
| | Target Year | In year of 2000 |
| | Scale | Length of Runway: 1500 m |
| | Structure | |
| | Facilities | |
| | Others | |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | High population density area, Kisumu City Urban area near Lake Victoria |
| | Land Use | Commercial/Residential/Industrial Areas, Maize/Sugarcane Cropland |
| | Economy /Transport | Industry/Tourism/Agriculture/Fishery, Roads/Railway/Airport/Ports |
| Natural Environment | | |
| | Topography/Geography | Humid/Sub-humid, Lakeside of Lake Victoria, Tertiary/Recent Volcanics |
| | Coast and Marine Zone | |
| | Flora & Fauna | Wooded grassland/Bushed grassland/Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Activities which may cause impacts \ Environmental Items | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | | Δ | | | | | | Δ | | | | | | | O | | Δ | | Δ | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | Δ | | | | | | | | | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | Δ | | | | | | Δ | | | | | | Δ | | | | | | O | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | | Δ | | | | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark: The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

Project Description,

Site Description and Scoping

for

Initial Environmental Examination

on

# PORT PROJECT

| No. CO-IN-1-PT-1 | Mombasa Marina Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | For the coastal resorts for long staying style |
| Objectives | | For the marine tourism development |
| Location | | Mombasa old port area |
| Executing Agency | | Kenya Port Authority (KPA) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Construction, Marina |
| | Demand | Accommodation of 100 Boats |
| | Target Year | in year of 2000 |
| | Scale | 300 m2, Water Depth -4.0m |
| | Structure | Jetty |
| | Facilities | Club House, Boat Yard, Repair Shop, Car Parking, Refueling, Water Supply Facilities |
| | Others | |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | High population density at the back area Historical urban area |
| | Land Use | Commercial/Residential Areas, Coconuts/Cashewnuts Cropland, Mombasa Marine N.P., historical town |
| | Economy /Transport | Industry (Large scale factory)/Trade/Tourism/Fishery/Agriculture, Roads/Railway/Airport/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments |
| | Coast and Marine Zone | Coral reefs Mangroves |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Activities which may cause impacts \ Environmental Items | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | O | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | Δ | | | | | | O | | | | | | Δ | | | | | | Δ | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark: The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-7-PT-1 | Kilifi Marina Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | For the coastal resorts for long staying style |
| Objectives | | For the marine tourism development |
| Location | | Kilifi Creek |
| Executing Agency | | Kenya Port Authority (KPA) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Construction, Marina |
| | Demand | |
| | Target Year | In year of 2000 |
| | Scale | Accommodation of 100 Boats |
| | Structure | Jetty |
| | Facilities | Club House, Boat Yard, Repair Shop, Car Parking, Refueling, Water Supply Facilities |
| | Others | Inside of creek |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Maize Cropland Areas, Unimproved grazing land, some marina facilities |
| | Economy /Transport | Tourism/Agriculture Fishery, Low density of roads/Airport/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments |
| | Coast and Marine Zone | Coral reefs/Mangroves |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | O | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | Δ | | | | | | O | | | | | | Δ | | | | | | Δ | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-3-PT-1 | Shimoni Marina Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | For the coastal resorts for long staying style |
| Objectives | | For the marine tourism development |
| Location | | Shimoni Village |
| Executing Agency | | Kenya Port Authority (KPA) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Construction, Marina |
| | Demand | |
| | Target Year | In year of 2005 |
| | Scale | Accommodation of 100 Boats |
| | Structure | Jetty |
| | Facilities | Club House, Boat Yard, Repair Shop, Car Parking, Refueling, Water Supply Facilities |
| | Others | |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Coconuts/Cashewnuts Cropland, A little hotels/ Lodges |
| | Economy /Transport | Tourism/Agriculture/Fishery, Low density of roads/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments |
| | Coast and Marine Zone | Coral reefs/Mangroves |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | O | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | Δ | | | | | | O | | | | | | Δ | | | | | | Δ | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-9-PT-1 | Malindi Marina Development |
|---|---|

## Project Description

| | |
|---|---|
| Background | For the coastal resorts for long staying style |
| Objectives | For the marine tourism development |
| Location | Adjacencies of the existing Malindi Port |
| Executing Agency | Kenya Port Authority (KPA) |
| Beneficiaries | |
| Project Component | |
| Type of Project | Construction, Marina |
| Demand | |
| Target Year | In year of 2005 |
| Scale | Accommodation of 100 Boats |
| Structure | Jetty |
| Facilities | Club House, Boat Yard, Repair Shop, Car Parking, Refueling, Water Supply Facilities |
| Others | |

## Site Description

| | |
|---|---|
| Social Environment | |
| Inhabitants | Low population density area |
| Land Use | Maize Cropland Areas/Unimproved grazing land, Many hotels/ Lodges |
| Economy /Transport | Tourism/Agriculture/Fishery, Low density of roads/Airport/Ports |
| Natural Environment | |
| Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments |
| Coast and Marine Zone | Coral reefs/Mangroves |
| Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | |
| Complaints | None |
| Measures taken | None |

## Scoping

| Activities which may cause impacts \ Environmental Items | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | O | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | Δ | | | | | | O | | | | | | Δ | | | | | | Δ | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-11-PT-1 | Lamu Marina Development |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | For the coastal resorts for long staying style, Proposed in "Lamu Town Conservation Plan" |
| Objectives | | For the marine tourism development |
| Location | | Near Lamu Harbor |
| Executing Agency | | Kenya Port Authority (KPA) |
| Beneficiaries | | |
| Project Component | | |
| | Type of Project | Construction, Marina |
| | Demand | |
| | Target Year | In year of 2010 |
| | Scale | Accommodation of 100 Boats |
| | Structure | Jetty |
| | Facilities | Club House, Boat Yard, Repair Shop, Car Parking, Refueling, Water Supply Facilities |
| | Others | |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Bush & Woodland, Old Arabic town Historical island, Old Arabic town, Many hotels/ Lodges |
| | Economy /Transport | Tourism/Agriculture/Fishery, Low density of roads/Airport/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments |
| | Coast and Marine Zone | Coral reefs/Mangroves |
| | Flora & Fauna | Wooded grassland, Bushed grassland, Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Activities which may cause impacts \ Environmental Items | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | Δ | | | | | | Δ | | | | | | O | O | | Δ | | O | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | Δ | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | Δ | Δ | | | O | | | | | | | | Δ | Δ | | Δ | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | Δ | | | | | | O | | | | | | Δ | | | | | | Δ | | |
| Operation of Facilities | | Δ | | | | | | Δ | | | | | | Δ | Δ | | | | Δ | | Δ | | |
| Accumulation of People and Goods | | Δ | Δ | | | | | Δ | | | | | | | Δ | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark: The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

Project Description,

Site Description and Scoping

for

Initial Environmental Examination

on

# POWER SUPPLY PROJECT

| No. CE-IN-4-PS-1 | Naro Moru Distribution Line |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Power Supply development in order to utilize many tourism resources is indispensable. |
| Objectives | | To supply power to new hotels |
| Location | | Northeast from Kampi and Lake Baringo |
| Executing Agency | | MOE, KPLC |
| Beneficiaries | | Hotel, inhabitants along power line |
| Project Component | | |
| | Type of Project | Construction / Rehabilitation |
| | Demand | |
| | Target Year | In year of 2010 |
| | Scale | Type of Voltage: 33 kV, Line Extension: 13 km: Naro Moru - core |
| | Structure | Distribution Line |
| | Facilities | |
| | Others | New extension of distribution line is only for new developing area. Tree cutting under the power line. |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | High population density area: Nyeri, Low population density area |
| | Land Use | Maize/Wheat Cropland, Dense Natural Forest |
| | Economy /Transport | Agriculture/Tourism, Low density of roads/Railway, Almost towns around Naro Moru have electricity. |
| Natural Environment | | |
| | Topography/Geography | Semi-arid/ Arid, Low Foreland Plateau, Quaternary Volcanics |
| | Coast and Marine Zone | |
| | Flora & Fauna | Wooded grassland/Bushed grassland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | | | | | | | | | | | | | | O | | | | | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | | | | | O | | | | | | | | | Δ | | | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | | | | | | | | | | | | | | Δ | | | | | | | | |
| Accumulation of People and Goods | | | | | | | | | | | | | | | | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. WE-IN-3-PS-1 | Kitale-Mt. Elgon Distribution Line |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Power supply development in order to utilize many tourism resources is indispensable. |
| Objectives | | To supply power to new hotels |
| Location | | Northwest from Kitale about 65 km |
| Executing Agency | | MOE, KPLC |
| Beneficiaries | | Hotel, inhabitants along power line |
| Project Component | | |
| | Type of Project | Construction |
| | Demand | |
| | Target Year | In year of 2010 |
| | Scale | Line Extension: 80 km |
| | Structure | Distribution Line, Type of Voltage: 33 kV |
| | Facilities | |
| | Others | Tree cutting is necessary under the power line. |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Maize/Wheat Cropland, Dense Natural Forest |
| | Economy /Transport | Agriculture, Low density of roads/Railway/Airport |
| Natural Environment | | |
| | Topography/Geography | Afro-alpine/Humid Sub-humid, Mountain, Quaternary Volcanics |
| | Coast and Marine Zone | |
| | Flora & Fauna | Afro-alpine/Forest/Cultivated land, Primates/Small Mammals/Birds |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | | | | | | | | | | | | | | O | | | | | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | | | | | O | | | | | | | | | Δ | | | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | | | | | | | | | | | | | | Δ | | | | | | | | |
| Accumulation of People and Goods | | | | | | | | | | | | | | | | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
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No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. WE-IN-4-PS-1 | Lake Baringo Distribution Line |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Power Supply development in order to utilize many tourism resources is indispensable. |
| Objectives | | To supply power to new hotels |
| Location | | Northwest from Kampi and Lake Baringo |
| Executing Agency | | MOE, KPLC |
| Beneficiaries | | Hotel, inhabitants along power line |
| Project Component | | |
| | Type of Project | Construction |
| | Demand | |
| | Target Year | In year of 2010 |
| | Scale | Line Extension: 60 km: Kampi Ya Samak-Northeast of Baringo, Type of Voltage: 33 kV |
| | Structure | Distribution Line |
| | Facilities | |
| | Others | Tree cutting is necessary under the power line. |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Unimproved grazing land, Lakes |
| | Economy /Transport | Agriculture/Tourism, Low density of roads |
| Natural Environment | | |
| | Topography/Geography | Humid-Sub-humid, Rift Valley, Lake Baringo, Tertiary/Recent Volcanics, Steep slopes |
| | Coast and Marine Zone | |
| | Flora & Fauna | Wooded grassland, Bushed grassland, Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | | | | | | | | | | | | O | | O | | | | | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | | | | | O | | | | | | | Δ | | Δ | | | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | | | | | | | | | | | | Δ | | Δ | | | | | | | | |
| Accumulation of People and Goods | | | | | | | | | | | | | | | | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
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No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

| No. CO-IN-1-PS-1 | Mombasa Transmission Line |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Power supply development in order to utilize many tourism resources is indispensable. |
| Objectives | | To supply power to new hotels |
| Location | | From Mombasa to Msambweni along the beach inside of main road |
| Executing Agency | | MOE, KPLC |
| Beneficiaries | | To get reliable electricity for hotels and inhabitants along power line |
| Project Component | | |
| | Type of Project | Construction |
| | Demand | |
| | Target Year | In year of 2010 |
| | Scale | Type of Voltage: 132 kV, Line Extension: 50 km: Kipevu P/S at Mombasa- Msambweni S/S |
| | Structure | Transmission Line |
| | Facilities | New substation at Msambweni (20 MVA), (100 m X 60 m) |
| | Others | Tree cutting is necessary under the power line. |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | High population density area |
| | Land Use | Commercial/Residential Areas, Coconuts/Cashewnuts Cropland, Mombasa Marine N.P., historical town |
| | Economy /Transport | Industry (Large scale factory)/Trade/Tourism/Fishery/Agriculture, Roads/Railway/Airport/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards (Risk) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | | | | | | | | | | | | | O | O | | | | | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | | | | | O | | | | | | | | Δ | Δ | | | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | | | | | | | | | | | | | Δ | Δ | | | | | | | | |
| Accumulation of People and Goods | | | | | | | | | | | | | | | | | | | | | | | |

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| No. CO-IN-11-PS-1 | Lamu Transmission Line |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Power supply development in order to utilize many tourism resources is indispensable. |
| Objectives | | To supply reliable power to new hotels |
| Location | | From Garsen to Lamu Island and Manda Island |
| Executing Agency | | MOE, KPLC |
| Beneficiaries | | To get reliable electricity for hotels and inhabitants along power line |
| Project Component | | |
| | Type of Project | Construction |
| | Demand | |
| | Target Year | In year of 2010 |
| | Scale | Type of Voltage: 132 kV, Line Extension: 88 km(by submarine cable crossing creek): Garsen S/S to Lamu |
| | Structure | Construction |
| | Facilities | New substation at Lamu (Hindi). (20 MVA)., (100 m X 60 m) |
| | Others | The depth of digging is about 1.4 m. It is necessary to dig coral reef in the creek between African continent |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Bush & Woodland, Old Arabic town Historical island Interesting historical Islands |
| | Economy /Transport | Tourism/Agriculture/Fishery, Low density of roads/Airport/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | | | | | | | | | | | | | O | O | | | | | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | | | | | O | | | | | | | | Δ | Δ | | | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | | | | | | | | | | | | | Δ | Δ | | | | | | | | |
| Accumulation of People and Goods | | | | | | | | | | | | | | | | | | | | | | | |

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| No. CO-IN-7-PS-1 | Kilifi- Malindi Transmission Line |
|---|---|

## Project Description

| | | |
|---|---|---|
| Background | | Power supply development in order to utilize many tourism resources is indispensable. |
| Objectives | | To meet increasing demand by tourism |
| Location | | Existing Kilifi substation |
| Executing Agency | | MOE, KPLC |
| Beneficiaries | | To get reliable electricity for hotels, other industries and inhabitants along power line |
| Project Component | | |
| | Type of Project | Improvement |
| | Demand | |
| | Target Year | In year of 2010 |
| | Scale | Type of Voltage: 132/33 KV Transformer |
| | Structure | |
| | Facilities | New transformer at Kilifi S/S (20 MVA), (100 m X 60 m) |
| | Others | |

## Site Description

| | | |
|---|---|---|
| Social Environment | | |
| | Inhabitants | Low population density area |
| | Land Use | Maize Cropland Areas/Unimproved grazing land, Many hotels/ Lodges |
| | Economy /Transport | Tourism/Agriculture/Fishery, Low density of roads/Airport/Ports |
| Natural Environment | | |
| | Topography/Geography | Semi-humid, Sedimentary Plains, Quaternary Sediments |
| | Coast and Marine Zone | Coral reefs |
| | Flora & Fauna | Bushland, Primates/Small Mammals/Birds/Aquatics |
| Pollution | | |
| | Complaints | None |
| | Measures taken | None |

## Scoping

| Environmental Items / Activities which may cause impacts | 1. Resettlement | 2. Economic Activity | 3. Traffic and Public Facilities | 4. Split of Communities | 5. Cultural Property | 6. Water Rights/Rights of Common | 7. Public Health Condition | 8. Waste | 9. Hazards ( Risk ) | 10. Topography and Geology | 11. Soil Erosion | 12. Groundwater | 13. Hydrological Situation | 14. Coastal Zone | 15. Fauna and Flora | 16. Meteorology | 17. Landscape | 18. Air Pollution | 19. Water Pollution | 20. Soil Contamination | 21. Noise & Vibration | 22. Land Subsidence | 23. Offensive Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Before Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Reclamation and Spatial Occupancy | O | | | | | | | | | | | | | O | O | | | | | | | | |
| Operation of Construction Equipment | | | | | | | | | | | | | | | Δ | | | | | | | | |
| After Operation | | | | | | | | | | | | | | | | | | | | | | | |
| Spatial Occupancy | | | | | | O | | | | | | | | Δ | Δ | | | | | | | | |
| Operation of Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Trains /Airplanes /Ships | | | | | | | | | | | | | | | | | | | | | | | |
| Operation of Facilities | | | | | | | | | | | | | | Δ | Δ | | | | | | | | |
| Accumulation of People and Goods | | | | | | | | | | | | | | | | | | | | | | | |

Note: O: The environmental items to which special attention has to be paid. They might cause serious impacts that may affect the project formulation depending on the magnitude of the impacts and the possibility of the measures.
Δ: The environmental items which may give a significant impact depending on the scale of project and site conditions.
No mark : The environmental items which require no impact assessment since the anticipated impacts are not significant in general.

Project Description,

Site Description and Scoping

for

Initial Environmental Examination

on

# WATER SUPPLY PROJECT