

5. Infrastructure and Tourist Facility Requirement for Priority Tourism Areas

5.1. Land Use Plan

5.1.1. Assessment of Location of Tourism Zones

(1) Mt. Elgon and Kitale Tourism Area

a. Tourism Potential

Mt. Elgon National Park and Saiwa Swamp National Park are the main tourism resources. The surrounding area of Mt. Elgon has attractive scenery with mountain views and forests. However, the surrounding area of Saiwa Swamp has little space for tourism development, since it is enclosed by a fence and is developed as high productive farm land up to the fence.

b. Accessibility

Route A1 and B2 are the main access routes from the other regions. Both routes cross near Kitale town. For Mt. Elgon, the access road passes at the Northern parts of the mountain foot area. The Southern parts of Mt. Elgon have poor accessibility.

c. Environmental Conservation

Mt. Elgon National Park and the surrounding area is environmentally important in terms of wildlife dispersal and mountainous ecology. The Eastern parts of the area along Cherangani Hills have rich species of fauna and flora, but in a very sensitive balance of ecosystem. There is, therefore, a high risk that environmental deterioration will occur with land development.

d. Present Land Use and Landscape

Land use in this area is roughly divided into three zones in accordance with agro-climatic zones, such as upper highland zone, lower highland zone and upper midland zone. The upper highland zone is the area of Mt. Elgon National Park and forest reserves. A marginal area of the zone is used for dairy farming and agriculture. Since this area is expanding in accordance with population growth, competitive land use between agriculture and wildlife becomes more severe. The lower highland zone is utilised as a high productive agricultural area, which produces mainly wheat, maize, tea, sunflower, coffee and horticulture products.

e. Impacts on the Local Community

Rural villages are scattered in this area. Although tourism zone development should be carried out so as not to disturb local people, no strong impact is expected on the local communities.

(2) Rift Valley Lakes Tourism Area

a. Tourism Potential

Lake Baringo and Lake Bogoria are the main tourism resources in this area. These resources have a variety and number of wildlife and an alternative scenery. In addition to the lakes, Kerio Valley, in particular the edge of the valley, has great panoramic scenery of land escarpment.

b. Accessibility

Route B4 is the main road from Nairobi and Nakuru, and route C51 is the main road from Eldoret and Kitale. The main tourism resources, such as Lake Baringo, Lake Bogoria and Kerio Valley are located along these roads.

c. Environmental Conservation

The lakes have maintained their variable environments on a very sensitive balance of ecosystem, within a closed water basin and narrow water shed. Effluents of waste water from the tourist accommodations is accordingly critical. In particular Lake Bogoria National Reserve has a very narrow water shed without an outflow river. Hence, tourist accommodation development should be prohibited. The escarpment of Kerio Valley has a risk for soil erosion and deforestation by land development. Hence, in this area, too, uncontrolled land development should be prohibited.

d. Present Land Use and Landscape

The Rift Valley Lake Tourism Area is mainly classified into two zones in terms of land use, such as highland zone and lowland zone. The highland zone has been utilised as high productive agricultural land with well drained and fertile soils. Main products are maize, sunflower, wheat and livestock. The lowland zone is mainly utilised as range land with grass and low bush.

e. Impacts on the Local Community

Major settlements are located in the highland zone and few villages are found in the lowland zone. Tourism development in the lowland might not cause severe negative impacts on the local communities in the surrounding area.

5.1.2. Designation of the Zones

Based on the above assessment, tourism zones, tourism promotion zones, tourism development control zones and local reserve zone are proposed as outlined below.

(1) Mt. Elgon and Kitale Tourism Area

a. Tourism Zone and Tourism Promotion Zone

For the mountain resort zone, the North Eastern foot area of Mt. Elgon is proposed to be designated as the tourism zone, and a tourism promotion zone should be developed near the gate of Mt. Elgon National Park. Kitale town should be developed as a tourism promotion zone to be utilised as a tourist base of the Western Tourism Region with a supporting function to the mountain resort.

b. Tourism Development Control Zone

The Southern foot area of Mt. Elgon and Cherangani Hills are proposed as the tourism development control zone.

(2) Rift Valley Lakes Tourism Area

a. Tourism Zone and Tourism Promotion Zone

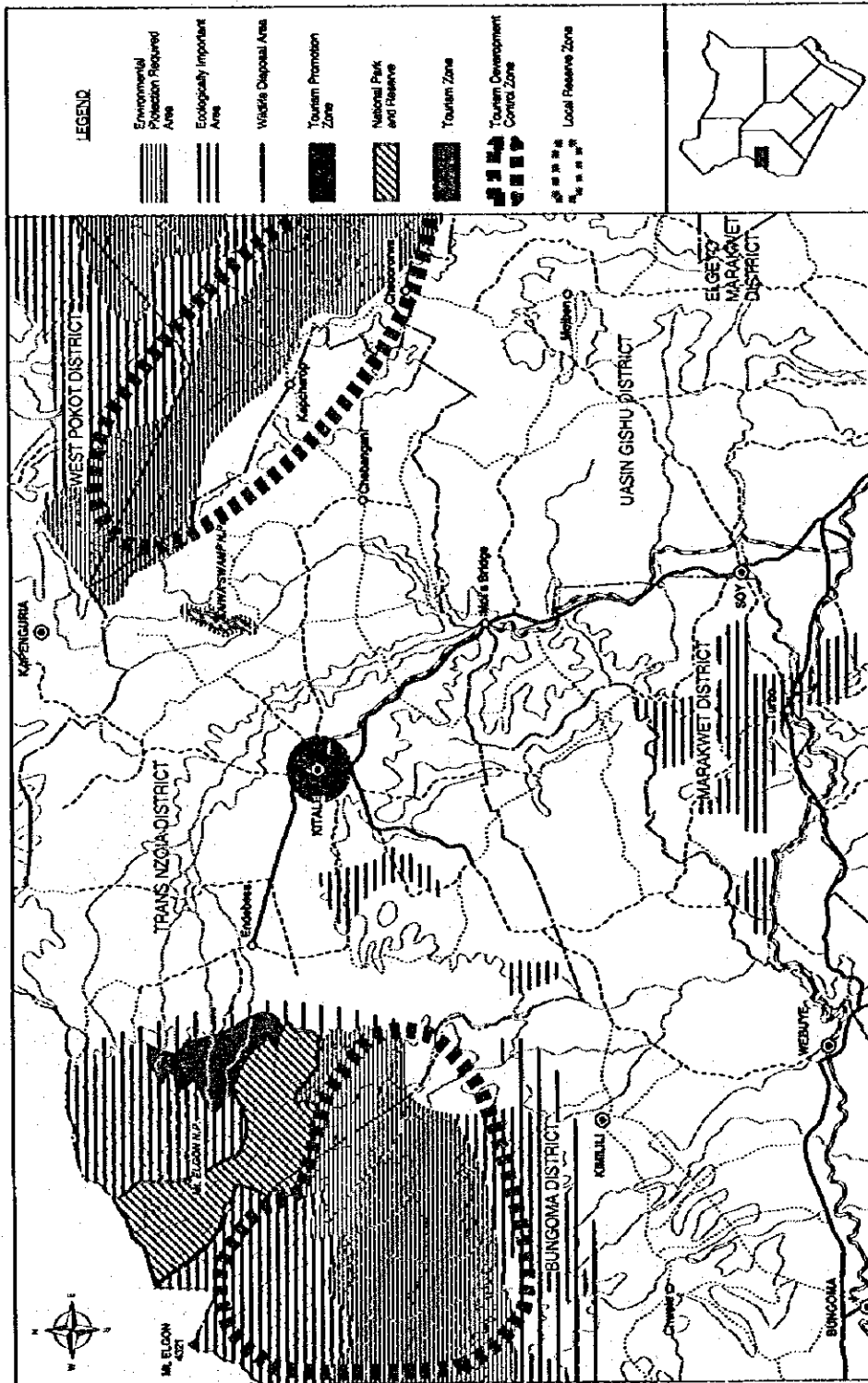
The Northern lakeside of Lake Baringo is proposed for the tourism promotion zone. Since the lake is environmentally very sensitive, tourism development must be carefully carried out with appropriate control of the negative impacts on the environment, in particular on the lake's water.

b. Tourism Development Control Zone

Lake Bogoria and the escarpment of Kerio Valley is proposed to be designated as the tourism development control zone.

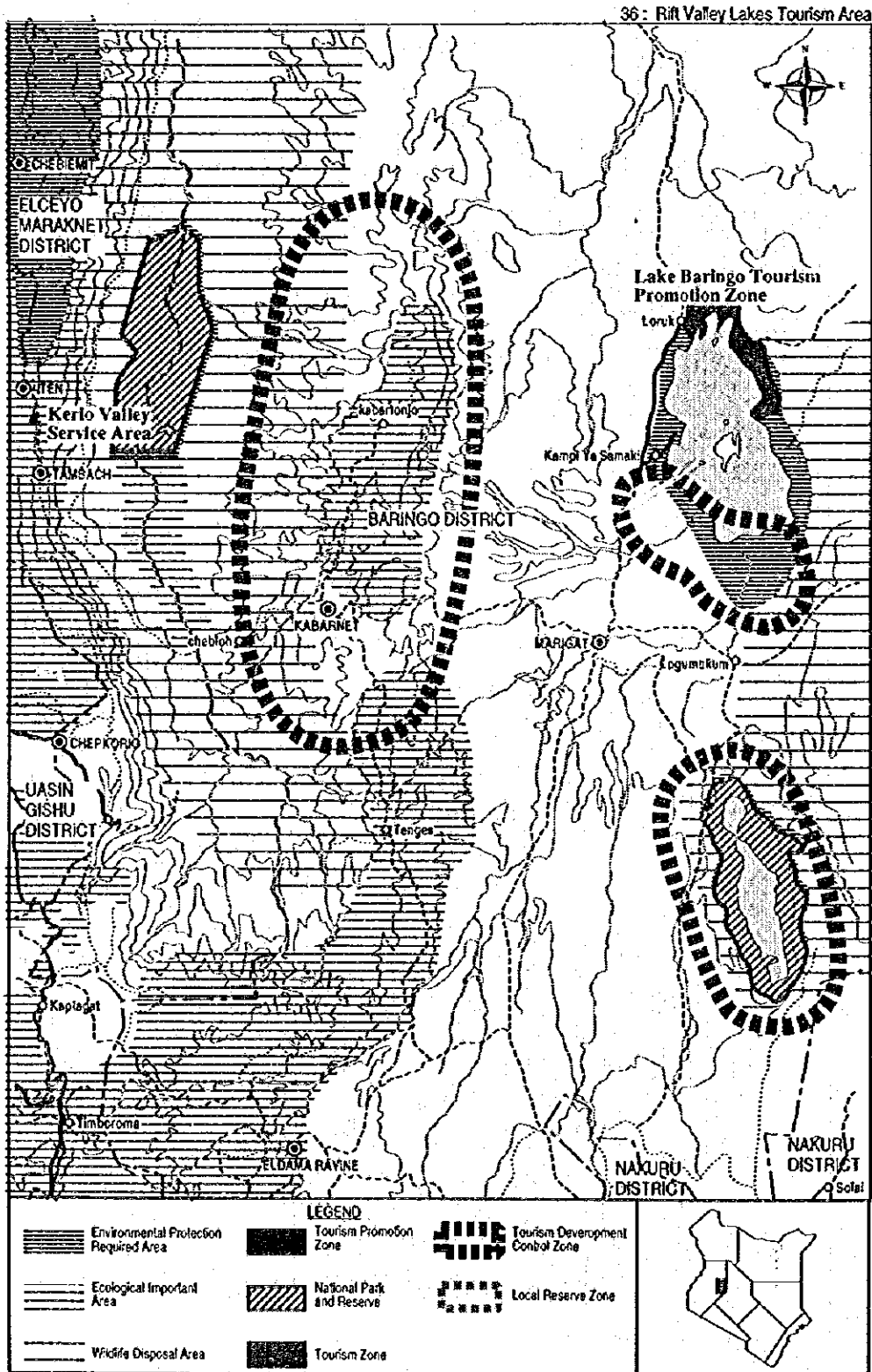
These zones are indicated in Figure 3. 4. and Figure 3. 5.

Figure 3.4. Tourism Zones of Mt. Elgon and Kitale Tourism Area



Source: JICA Study Team

Figure 3.5 Tourism Zones of Rift Valley Lakes Tourism Area



Source: JICA Study Team

5.1.3. Implications for the Development of Tourism Facilities and Infrastructure

In accordance with the environmental characteristics of the proposed tourism zones and tourism promotion zones, the following special attention should be paid for developing tourism facilities and infrastructure.

(1) Mt. Elgon Tourism Zone

Since maintaining forests here is indispensable, illegal logging of trees and land alteration must be minimised. In addition to minimising the impacts on forests, accommodation development should pay enough attention to waste water treatment and garbage disposal systems. To this end, building codes and environmental standards to be applied here should be carefully determined.

(2) Lake Baringo Tourism Promotion Zone

Lake Baringo needs to maintain its water quality, since it is a closed water area. Pollution control and preventive measures should be completely provided in the zone. To this end, building standards and effluent standards should be determined carefully.

5.2. Tourism Facilities

5.2.1. Tourism Products related Facilities

(1) Tourism Products in Mt. Elgon and Kitale, and Rift Valley Lakes Tourism Areas

The tourism products for Mt. Elgon and Kitale and the Rift Valley Lakes Tourism Areas are summarised in Table 3. 9.

(2) Tourism Products related Facilities in Mt. Elgon and Kitale, and Rift Valley Lakes Tourism Areas

Based on the previous Table 3. 9, the tourism products related facilities to be developed for Mt. Elgon and Kitale and the Rift Valley Lakes Tourism Areas are summarised in Table 3. 10.

5.2.2. Accommodation Facilities

(1) Distribution of Accommodation Facilities in Mt. Elgon and Kitale and the Rift Valley Lakes Tourism Areas

In accordance with the framework presented in Table 3. 2, the required number of rooms are determined with the same method as the distribution of the accommodation facilities for the Central Tourism Region described in the previous chapter. The result is shown in Table 3. 11. Accommodation facilities other than hotels and lodges are also estimated as shown in the Table 3. 12.

Table 3.9

Formulation of Programmes and Projects in Mt. Elgon and Kitale, and Rift Valley Lakes Tourism Areas

No.	Products	Description	Location	Resources to be Utilised	Necessary Programme and Project	
					Institutional/ Promotional Programmes	Infra. & Facility Project
Western Tourism Region						
WE-MU-9	Kisumu Museum Development	Developing new museum	Rift Valley Lakes	Old architecture at colonial era, karelini culture and traditional tools and equipment		Museum Improvement, Visitor Facilities Development
WE-MU-10	Baringo District Museum Development	Developing new museum	Baringo	Baringo District Museum		Museum Improvement, Visitor Facilities Development
WE-NP-4	Improvement of Mt. Elgon Safari	Promoting mountain safari with providing tourist facilities	Mt. Elgon/ Kitale	Mt. Elgon National Park	Pricing Programme	Visitor Amenity Facilities
WE-NP-5	Improvement of Sava Swamp National Park	Providing visitor supporting facilities	Mt. Elgon/ Kitale	Sava Swamp National Park	Pricing Programme	Visitor Amenity Facilities
WE-NP-6	Improvement of Lake Bogoria National Park	Providing visitor supporting facilities	Rift Valley Lakes	Lake Bogoria National Park	Pricing Programme	Visitor Amenity Facilities
WE-NP-7	Improvement of Kamurak National Reserve	Providing visitor supporting facilities	Rift Valley Lakes	Kamurak National Reserve	Pricing Programme	Visitor Amenity Facilities
WE-NP-1	Improvement of View Point at Kasap	Creating appropriate atmosphere to tourists and providing information facilities	Kasap	Wayside Facility		Tourist Wayside Facility Area Development
WE-NP-2	Improvement of View Point at Timboroa	Creating appropriate atmosphere to tourists and providing information facilities	Timboroa	Wayside Facility		Tourist Wayside Facility Area Development
WE-VA-1	Promotion of Tourism at Kerio Valley	Promoting bird watching and butterfly watching with providing tourist supporting facilities	Rift Valley Lakes	Kerio Valley		Visitor Amenity Facilities
WE-AT-1	Introduction of Rail Safari	Promoting tourism use of railway by introducing luxurious train and special diagram	Mt. Elgon/ Kitale	Railway, rail stations, scenery, NP & NR	Tourism Train Introduction Programme	Introduction of luxurious and special design coaches, Railway Track Improvement Project
WE-BT-3	Improvement of Tourist Amenity at Kitale	Creating appropriate atmosphere to tourists and providing information facilities	Kitale	Kitale city		Beautification
WE-NP-3	Development of Mt. Elgon Resort	Developing tourist base for long-term stay	Mt. Elgon/ Kitale	Mt. Elgon National Park	Land Use Control Programme (introduction of facilities development projects)	Infrastructure Provision Projects for Tourism Promotion Zones
WE-IN-4	Development of Lake Baringo Resort	Developing tourist base for long-term stay with water sports facilities	Rift Valley Lakes	Scenery of Lake Baringo, birds, wild animals	Land Use Control Programme (introduction of facilities development projects)	Infrastructure Provision Projects for Tourism Promotion Zones

Note: "Pricing Programme" means that price differentiation among the national parks and reserves. For this end, further study will be necessary.

Source: JICA Study Team

Table 3. 10

Proposed Tourism Products related Facilities in Mt. Elgon and Kitale, and Rift Valley Lakes Tourism Areas (1)

No.	Products	Infra. & Facility Project	Major Facilities	Quantity	Unit Cost (,000 KSh)	Phasing				Remarks
						Cost (,000 KSh)	Short (- 2000)	Medium (2000- 2005)	Long (2005- 2010)	
Western Tourism Region										
WE-MU-9	Kabaret Museum Development	Museum Development	Visitor's information office, Cultural and natural information centre	1	3,750	3,750	3,750			Museum (Small)(Construction)
		Visitor Facilities Development	Car parking, Cafeteria, Souvenir shop, Toilet, Rest facilities	1	150	150	150			Visitor Facility(Small)
WE-MU-10	Baringo District Museum Development	Museum Development	Visitor's information office, Cultural and natural information centre	1	3,750	3,750	3,750			Museum (Small)(Construction)
		Visitor Facilities Development	Car parking, Cafeteria, Souvenir shop, Toilet, Rest facilities	1	150	150	150			Visitor Facility(Small)
WE-NP-4	Improvement of Mt. Elgon Salan	Visitor Amenity Facilities	Access road, Car parking, View house, Toilet, Rest facilities	2	50	100	100			Visitor Amenity Facility
WE-NP-5	Improvement of Sawa Swamp National Park	Visitor Amenity Facilities	Access road, Car parking, View house, Toilet, Rest facilities	2	50	100	100			Visitor Amenity Facility
WE-NP-6	Improvement of Lake Bogoria National Park	Visitor Amenity Facilities	Access road, Car parking, View house, Toilet, Rest facilities	5	50	250	250			Visitor Amenity Facility
WE-NP-9	Improvement of Kammerok National Reserve	Visitor Amenity Facilities	Access road, Car parking, View house, Toilet, Rest facilities	2	50	100	100			Visitor Amenity Facility
WE-WF-1	Improvement of View Point at Kakaup Development	Tourist Wayside Facility Area Development	Restaurant, Snack stand, Souvenir shop, Drug store, Toilet, Gas station, Repair shop, Car parking	1	325	325	325			Wayside Facility
WE-WF-2	Improvement of View Point at Timbora	Tourist Wayside Facility Area Development	Restaurant, Snack stand, Souvenir shop, Drug store, Toilet, Gas station, Repair shop, Car parking	1	325	325	325			Wayside Facility
WE-VA-1	Promotion of Tourism at Kenia Valley	Visitor Amenity Facilities	Access road, Car parking, View house, Toilet, Rest facilities	2	50	100	100			Visitor Amenity Facility
WE-AT-1	Introduction of Rail Safari	Introduction of luxurious and special design coaches	luxurious and special design coaches							(Chapter 3),(GEAT-1)
WE-SR-1	Promotion of Kisi Hill Trekking	Trekking course and Facilities Development Project	Foot path, Sign board, Benches	1	75	75	75			Excavation Field Conservation
WE-BT-3	Improvement of Tourist Amenity at Kitale	Beautification	Sign board, Benches, Rubbish bin	1	75	75	75			Beautification(Medium City)

Source: JICA Study Team

Table 3. 10 Proposed Tourism Products related Facilities in Mt. Elgon and Kitale, and Rift Valley Lakes Tourism Areas (2)

No.	Products	Infra. & Facility Project	Major Facilities	Quantity	Unit Cost (000 Kc)	Phasing			Remarks	
						Cost	Short	Medium		Long
							(- 2000)	(2000- 2005)		(2005- 2010)
		Historical Park		0	0	0	0	0		
		Museum		7,800	3,900	3,900	0	0		
		Natural Park		550	350	200	0	0		
		Wayside Facility		650	650	0	0	0		
		Visitor Amenity Facility		100	0	100	0	0		
		Attraction		0	0	0	0	0		
		Sports		75	0	75	0	0		
		Beautification		75	75	0	0	0		
		Food Utility		0	0	0	0	0		
		Total Cost of Promotion Zone in Western Tourism Region		9,250	4,975	4,275	0	0		

Source: JICA Study Team

Table 3. 11 Increase Number of Rooms (Hotel/Lodge) and Estimated Cost

			-2000		2000-2005		200-2010		Total	
			Increase	Estimated	Increase	Estimated	Increase	Estimated	Increase	Estimated
			No of Rms %	Cost(mil £)	No of Rms %	Cost(mil £)	No of Rms %	Cost(mil £)	No of Rms %	Cost(mil £)
Mt. Elgon	Kitale	high	92 32	26.0	110 32	31.0	113 32	31.7	315 32	88.7
		med	110 38	16.5	130 38	19.9	132 38	19.7	374 38	56.2
		low	90 31	5.4	107 31	6.4	106 30	6.3	303 31	18.2
		total	292	47.9	350	57.3	351	57.7	992	163.1
	Mt. Elgon	high	32 32	8.9	41 32	11.5	64 32	18.1	137 32	38.5
		med	38 38	5.7	49 38	7.4	75 38	11.3	162 38	24.3
		low	31 31	1.8	40 31	2.4	60 30	3.6	131 30	7.9
		total	101	16.4	130	21.3	199	33.0	430	70.7
	Total	high	124 32	34.8	151 32	42.5	177 32	49.8	452 32	127.2
		med	148 38	22.2	182 38	27.3	207 38	31.0	537 38	80.5
		low	120 31	7.2	147 31	8.8	166 30	10.0	434 31	26.0
		total	392	64.2	480	78.6	550	90.8	1423	233.7
Rift Valley Lake Baringo	high	81 32	22.8	63 32	17.7	81 32	22.6	225 32	63.2	
	med	97 38	14.5	76 38	11.4	94 38	14.1	267 38	40.0	
	low	79 31	4.7	61 31	3.7	76 30	4.5	216 31	12.9	
	total	257	42.0	200	32.8	251	41.2	708	116.1	

Source: JICA Study Team

(2) Cost Estimates

Based on the previous Table 3.11, total cost for accommodation facilities in Mt. Elgon and Kitale Tourism Area and Rift Valley Lakes Tourism Area are calculated as shown in the end of the column in Table 3.11. Total cost by 2010 is estimated at approximately 233.8 million KE and 116.3 million KE for Mt. Elgon and Kitale Tourism Area and Rift Valley Lakes Tourism Area, respectively.

Table 3. 12 Increase Number of Units (Homestay/Tent and Others)

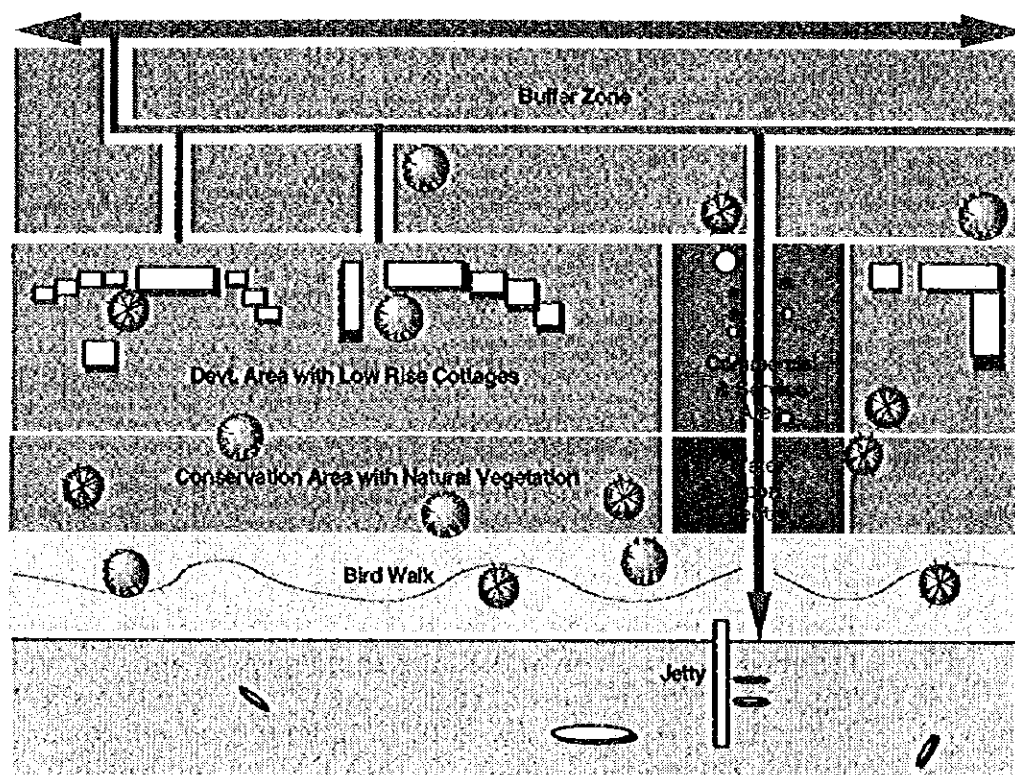
		-2000	2000-2005	2005-2010	Total
Tourism Area	Tourism Sub-Area	Increase No. of Units	Increase No. of Units	Increase No. of Units	Increase No. of Units
Mt. Elgon	Kitale	105	10	80	195
	Mt. Elgon	0	40	40	80
	Total	105	50	120	275
Rift Valley Lakes	Lake Baringo	0	0	0	0
Total		105	50	120	275

Source : JICA Study Team

(3) Development Image of Tourism Promotion Zone

In Mt. Elgon, Kitale and the Rift Valley Lakes, several tourism promotion zones are proposed. These zones are expected to perform as a tourism core or basement of accommodation facilities. A detailed site plan for these zones should be made in a further stage of tourism development. However, a preliminary image of the sites is elaborated on to present typical development images of lake resort type of the tourism promotion zone. This image is shown in Figure 3. 6.

Figure 3.6 Image of Lake Resort Type Tourism Promotion Zone



Source: JICA Study Team

5.2.3. Tourist Service Facilities in Mt. Elgon and Kitale, and the Rift Valley Lakes Tourism Areas

Approximately 0.5 million K£ are required for developing the tourist service facilities in Mt. Elgon and Kitale Tourism Area. Approximately 0.8 million K£ are required for the Rift Valley Lakes Tourism Area.

Table 3. 13 Proposed Tourist Service Facilities in Mt. Elgon and Kitale Tourism Area

	Number of Projects (places)	Location	Cost (Thousand K£)
Visitor Facilities Development Project	1	Kitale Museum	150
Visitor Amenity Facilities Project	2	Mt. Elgon NP Saiwa Swamp NP	200
Tourist Centre Project	0		0
Tourist Wayside Facility Area Development Project	0		0
City Beautification Project	1	Kitale	150
Total			500

Note: All costs have been already included in Table 3. 10
 Visitor facilities Development Projects for new museum are excluded.

Source: JICA Study Team

Table 3. 14 Proposed Tourist Service Facilities in Rift Valley Lakes Tourism Area

	Number of Projects (places)	Location	Cost (Thousand K£)
Visitor Facilities Development Project	0		0
Visitor Amenity Facilities Project	2	Lake Bogoria NP Kerio Valley NR	350
Tourist Centre Project	0		0
Tourist Wayside Facility Area Development Project	1	Kesup	325
City Beautification Project	0		0
Total			675

Note: All costs have been already included in Table 3. 10.
Visitor facilities Development Projects for new museum are excluded.

Source: JICA Study Team

5.3. Transport

5.3.1. Roads

In the Western Tourism Region, agricultural activities are rapidly expanding and the accumulation of population is high. Accordingly, the arterial road network is developed sufficiently. However, the deterioration of road surfaces at many sections are remarkable, because of insufficient maintenance.

The development of access roads from the arterial roads to the national parks and reserves is insufficient.

Taking the existing road conditions and the above spatial tourism structure based on the planning directions in the Western Tourism Region into account, the targets of the road network development are as identified below.

(1) Improving the Trunk Roads

As is the same for other tourism regions, the trunk roads comprise an important circulating and basic access routes for tourist trips in the Western Tourism Region. This indicates that the improvement of such trunk roads as A104 and B1 becomes a fundamental condition even for tourism development.

(2) Strengthening Circular Roads

Strengthening the traffic functions of the route Marigat-Lake Bogoria-Solai-Nakuru and the formation of circular tour routes is essential.

(3) Improving Access Routes to Tourism Resources

The access roads to national parks and reserves consist of mainly class D and E roads. Improvement and maintenance of those roads are expected to contribute to tourism development and promotion. Especially, improving the access roads of E337 connecting from C44 to Mount Elgon National Park becomes important in this tourism region.

(4) Consideration for the Environmental Conservation

In case of road improvement, much attention has to be paid not to disturb the current environmental condition, especially in the vicinity area of Mount Elgon and Lake Bogoria.

(5) Development of the Wayside Facilities Area

As core and sub core tourism resources are located alongside the major tour routes in this tourism region, such near places as Timboroa (A104) Kericho (B1) and Kabarnet (C51) are to be developed. The road network plan takes the above targets and the adjustments from "A Road Network Development Master Plan" into consideration. However, the additional road development projects, needed purely from the viewpoint of tourism development, are the following routes :

- Improvement (upgrading from earth to gravel road) of route D370
- Reconstruction (paved road between Margarit and Lake Bogoria N.R); construction (paved road between Lake Bogoria N.R and Solai) on Margarit - Lake Bogoria N.R - Solai route, and
- Construction and improvement of access routes to national parks and reserves.

5.3.2. Airports

Kisumu Airport is served by scheduled flights from and to Nairobi. Moreover, Kisumu is the central city in the Western Tourism Region, which is expected to increase its incoming tourist numbers.

Accordingly, taking the increase of air passenger demand into account, rehabilitation of the runway pavement at the Kisumu Airport is necessary. In future, extension of the runway, in order to accommodate planes up to medium jet services, will become necessary.

5.3.3. Project Cost Estimations

(1) Estimated Unit Costs

a. Roads

Estimated unit costs (1994 price base) for road works are referred to in the previous chapter.

b. Airports

Estimated unit cost (1994 price base) for runway pavement improvement are based on the "National Development Plan (1994-1996)" and are assumed as follows :

- Runway pavement improvement 189 KE/m².

(2) Project Costs

Table 3. 15 shows the project costs based on the above estimated unit costs and the expenditure schedule from the viewpoint of tourism development in the Western Tourism Region.

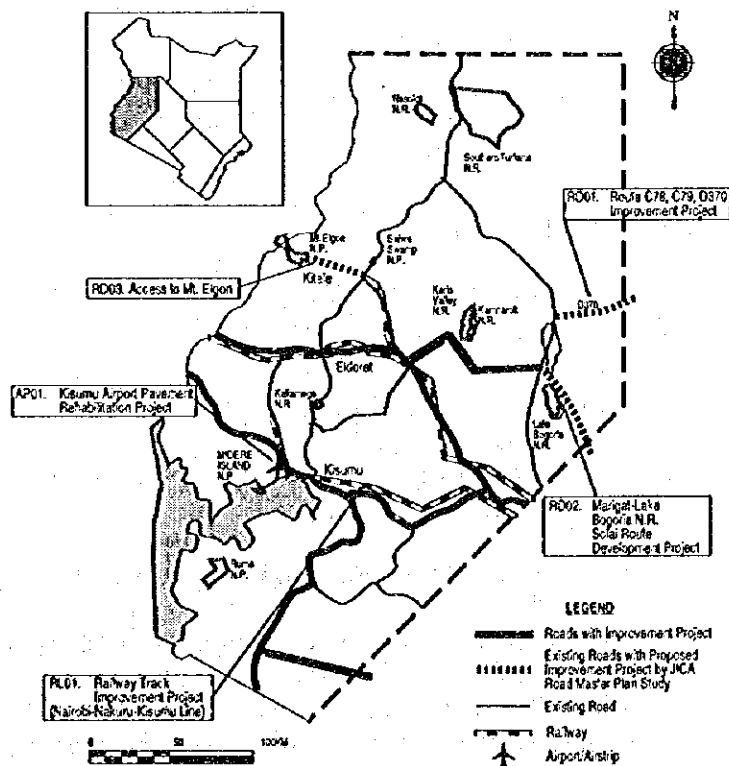
Table 3. 15 Project Costs and Expenditure Schedule

Project Name	Quality (Km)	Cost Million K£	Expenditure Schedule (K£)		
			-2000	-2005	-2010
RD 01 Route C78, C79, D370	60	6.0		6.0	
RD 02 Marigat-Lake Baringo NR-Solai	10	6.5		6.5	
RD 03 E447 Access to Mt. Elgon Touris Promotion	15	2.0		0.2	
Sub Total		20.3		14.5	0
AP 01 Kisumu Airport Pavement Rehabilitation	67.5 km2	10.8	10.8		
Sub Total		10.8	10.8	0	0
Total		31.1	10.8	14.5	0

Source : JICA Study Team

Figure 3. 7, shows the location of projects in the Western Tourism Region.

Figure 3. 7 Location of Projects in Western Tourism Region



Source : JICA Study Team

5.4. Water Supply

5.4.1. Present Condition

Characteristics of the Western Tourism Region are summarised in Table 3. 16. The existing water supply system within the target zones is provided only in Kitale Town. In the other zones, individual water supply systems are adopted. The present water source is the Kitobos river for Kitale town. The Mt. Elgon tourist spot is located at about 20 km Eastward from Kitale and Lake Baringo is located near by Marigat, where urban water supply is planned by the NWMP.

Table 3. 16 Characteristics of the Western Tourism Region

Tourism Area	Tourism Sub-area	Existing Hotel/Lodge	2010 Hotel/Lodge	Type of Zone	Development Pattern	Existing Facilities	Urban Water Supply Scheme	
Mt. Elgon/Kitale	Kitale	Kitale Town	8	350	Urban	C	LA	P
		Others	0	650	Rural	S	-	-
		Total	8	1000				
	Mt. Elgon	Mt. Elgon	20	200	Rural	C	-	-
		Others	0	250	Rural	S	-	-
	Total	20	450					
Rift Valley Lakes	Lake Baringo	Lake Baringo	0	650	Rural	C	-	-
		Others	143	200	Rural	S	-	-
	Total	143	850					

Note: * Location of hotel/lodge is not identified
 C Tourism development pattern is the concentrated type
 S Tourism development pattern is the scattered type
 LA Managed by local authority
 NWCP Managed by the National Water Conservation and Pipeline Corporation
 - Public facilities are not existing
 Community Managed by community
 P Under construction/planning

Source: JICA Study Team

5.4.2. Forecast Water Demand

Water demand for the tourism zone and tourism accommodations is forecasted as shown in Table 3. 18

5.4.3. Development Strategy for Water Supply

The following strategy is adopted in accordance with the water supply plan as described in Volume 1.

(1) In case of absorption into the urban water supply scheme

The Kitale Town tourism zone belongs to this type (see Table 3. 18).

- Water demand for the tourism area cannot be fully absorbed by the existing/planned urban water supply scheme.

The Mt. Elgon and Lake Baringo tourism zones should use the Kitale and Marigat urban water supply schemes as water sources for the zones, because the pipeline of the schemes is located near the zones and the potential of groundwater is low in this area. Additional water supply facilities for both zones are, however, required and the additional cost for these facilities is estimated for tourism development (see Table 3. 18).

5.4.4. Urban Water Supply Scheme Related with Tourism Development

The planned urban water schemes and their costs related to each tourism zone are summarised in Table 3. 18. The layout plans are shown in Figure 3. 8 and Figure 3. 9, respectively .

5.4.5. Proposed Project for Tourism Zone

The identified project costs and their disbursement schedule for the region are shown in Table 3. 17.

Table 3. 17 Project Cost and Disbursement Schedule

Project Name	Quantity (1,000 m ³ /d)	Cost (K€ Million)	Urgent	Disbursement Schedule (K€ Million)		
				2000	2005	2010
Community Water Supply Project						
1.Mt. Elgon	0.39	1.550	0	1.120	0.000	0.430
2.Lake Baringo	0.98	2.935	0	1.130	0.903	0.903
Total		4.485	0	2.250	0.903	1.333

Source : JICA Study Team

Table 3. 18 Inventory of Proposed Projects (Water Supply)

Type of Area	Mt. Elgon and Kitale Tourism Area						Rift Valley Lakes Tourism Area						
	Kitale			Mt. Elgon			Lake Baringo			Total			
	Present	2000	2010	Present	2000	2010	Present	2000	2010	Present	2000	2010	Total
Existing Water Supply System	Rural												
- Capacity (1,000 m ³ /d)	Individual												
- Management Authority	Rural												
Urban Water Supply Scheme	Individual												
In the NWMP	Kitale Town (Habitable Area : 34 km ²)												
- Served Area (km ²)	2.00	6.00	8.00	11.00	11.00								
- Served Population (1,000)	56.40	142.30	195.80	249.20	249.20								
- Water Demand (1,000 m ³ /d)	9.391	23.346	32.166	40.986	40.986								
- Population Density (pers./km ²)	28,200	23,717	24,475	22,655	22,655								
- Overall per-Capita (l/c/d)	166.51	164.06	164.28	164.47	164.47								
Tourism Development Plan	Kitale Town (Habitable Area : 34 km ²)												
- Number of Room	8	100	250	350	350								
- Water Demand (1,000 m ³ /d)	0.004	0.050	0.125	0.175	0.175								
- for Tourism Accommodation	0.004	0.050	0.125	0.175	0.175								
- for Resident in tourism area*1													
Proportion (%) ^{*2}	0.04	0.21	0.39	0.43	0.43								
Proposed Project	Kitale Town (Habitable Area : 34 km ²)												
- Type of Water Supply System	Community(Public)												
- Type of Water Source	From Kitale Urban Water Supply												
- Incremental Capacity (1,000 m ³ /d)	3.781	13.955	8.820	8.820	35.376								
Project Cost (K\$ Million) ^{*3}	14.025	23.125	28.600	65.750	65.750								
Remarks	Community(Public)												
	Groundwater(Boreholes)												
	0.000	0.374	0.298	0.308	0.388								
	1.178	0.869	0.889	2.936	2.936								

Source: JICA Study Team

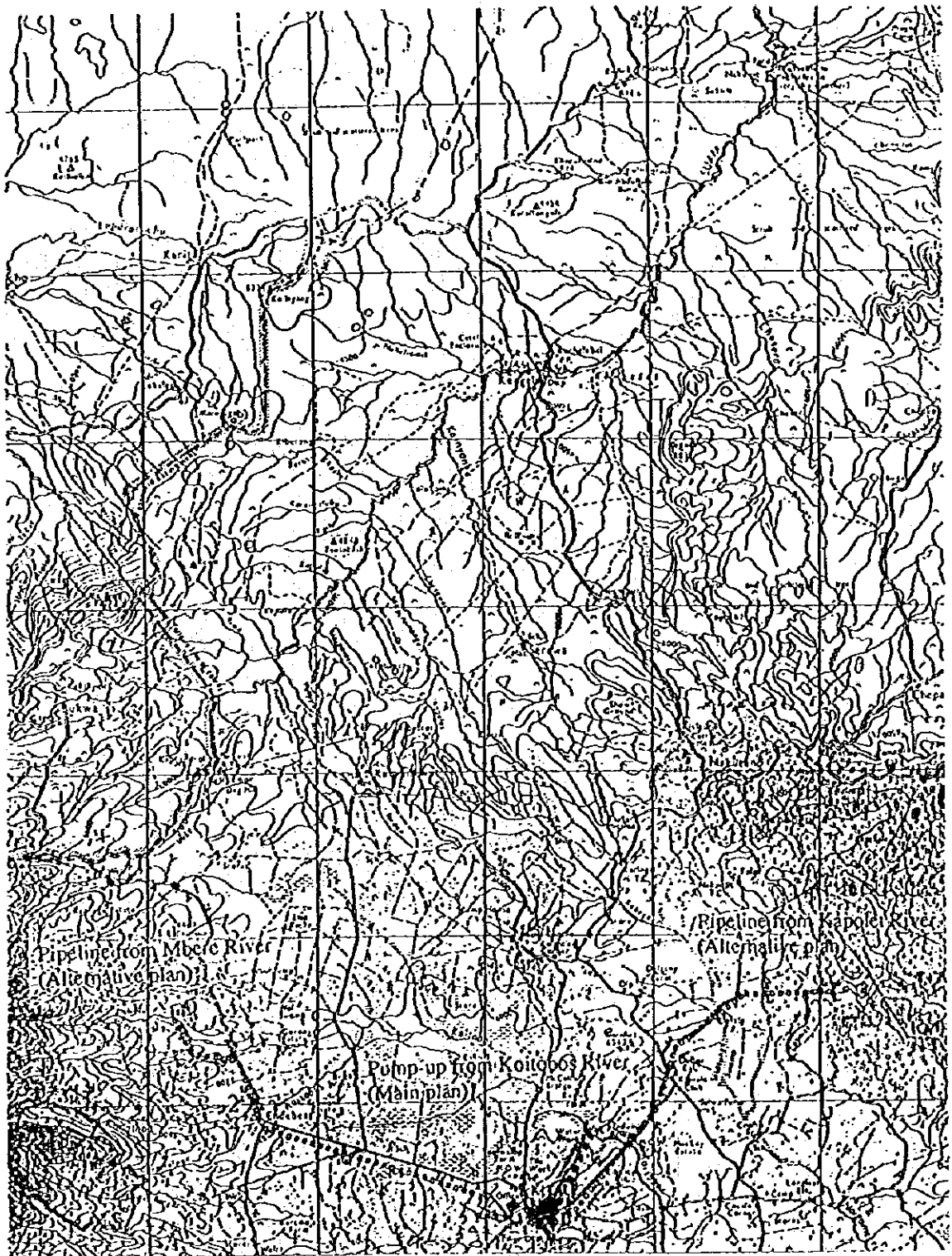
*1 : Residential demand is calculated by [0.05-km²/100 rooms X No.of room X Population density x 150 l/c/d].

*2 : Proportion of water demand in the tourism area to one in the urban area.

*3 : Cost consists of construction, contingency, detail design & supervision and land.

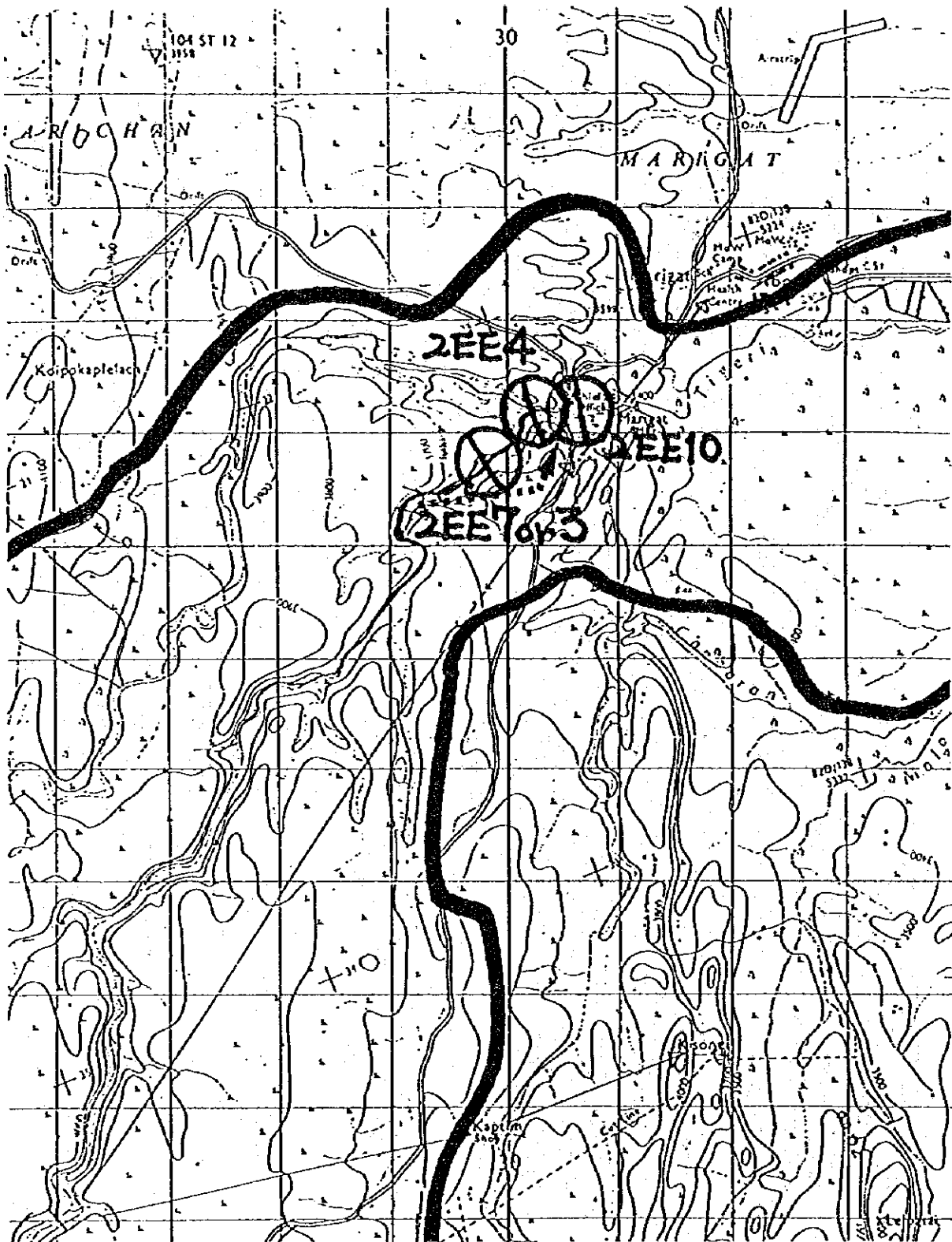
*4 : Not included the construction cost of dams

Figure 3.8 Water Supply Plan for the Tourism Promotion Zone in Kitale



Source : JICA Study Team

Figure 3.9 Water Supply Plan for the Tourism Promotion Zone in Marigat



Source : JICA Study Team

5.5. Sewerage and Solid Waste

5.5.1. Present Condition

The existing conditions of the sewerage system in the Western tourism area are summarised in Table 3.20. There is no sewerage system with treatment facilities in the region.

The existing conditions of the solid waste disposal system is as insufficient as the one of the sewerage system. They are shown in Table 3. 21.

5.5.2. Forecast Sewage and Solid Waste Yield

Sewage yield for the tourism zones and tourism accommodations is forecasted as shown in Table 3 20. The solid waste yield is estimated in Table 3. 21.

5.5.3. Development Strategy for Sewerage and Solid Waste Disposal

The sewerage development strategy for each tourism zone will follow the same strategy as for water supply to ensure environmental conservation in the tourism area.

The solid waste disposal system in the region is classified into the schemes according to the characteristics of each zone.

(1) Urban solid waste disposal scheme

Solid waste in the Kitale zone will be absorbed into the existing and planned urban schemes, since the share of solid waste yield in the zone to the whole area covered by the scheme is less than 10 %.

(2) Community solid waste disposal scheme

The lake Baringo zone will plan a new community solid waste disposal scheme, including for the residential area in the outskirts of the zone, since the development scale is large (more than 500 rooms).

(3) Individual solid waste disposal scheme

Each hotel in the Mt. Elgon zone will provide individual on-site solid waste disposal facilities as the zone has no existing solid waste facilities and, moreover, development scale of the tourism zone is small (less than 500 rooms).

5.5.4. Urban Sewerage and Solid Waste Disposal Scheme Related with Tourism Development

The planned urban sewerage and solid waste disposal schemes related with each tourism zone are summarised in Table 3.20 and Table 3. 21. The project costs of urban schemes are excluded from the tourism development cost, since the urban schemes will be implemented with public funds.

5.5.5. Proposed Project for Tourism Zone

The proposed projects for each tourism zone are summarised in Table 3.20 and Table 3. 21. The project cost and its disbursement schedule for the region are shown in Table 3. 19.

As for the sewerage treatment method, the stabilization and aerated lagoon process is proposed for the urban and community sewerage systems. For individual systems, a septic tank able to treat both, night soil and gray water is proposed.

Solid waste in urban and community systems shall be disposed by means of sanitary landfilling. Individual systems consist of garbage storage yard, on-site incinerator, pits and on-site composting facilities.

Table 3. 19 Project Cost and Disbursement Schedule

(Sewerage system)						
Project Name	Quantity (1,000 m ³ /d)	Cost (K€ Million)	Urgent	Disbursement Schedule (K€ Million)		
				2000	2005	2010
Community Sewerage Project						
1.Mt. Elgon	0.35	0.610	0.070	0.270	0.270	0.000
2.Lake Baringo	0.78	1.500	0	0.587	0.923	0.000
Total		2.110	0.070	0.848	1.193	0.000
(Solid Waste Disposal system)						
Project Name	Quantity (m ³ /d)	Cost (K€ Million)	Urgent	Disbursement Schedule (K€ Million)		
				2000	2005	2010
Individual Solid Waste Disposal Project						
1.Mt. Elgon	0.43	0.025	0	0.015	0.005	0.005
Community Solid Waste Disposal Project						
2.Lake Baringo	5.47	0.393	0	0.153	0.120	0.120
Total		0.418	0	0.168	0.125	0.125

Source: JICA Study Team

Table 3.20 Inventory of Proposed Projects (Sewerage System)

Type of Area	Mt. Elgon and Kitale Tourism Area						Rift Valley Lakes Tourism Area							
	Kitale			Mt. Elgon			Lake Baringo			Total				
	Present	2005	2010	Present	2005	2010	Present	2005	2010	Present	2005	2010	Total	
Existing Sewerage System														
- Capacity (1,000 m ³ /d)														
- Management Authority														
Urban Sewerage Scheme														
in the NWMF														
- Sewered Area (km ²)	2.00	6.00	8.00	11.00	11.00									
- Sewered Population (1,000)	56.40	142.30	195.80	249.20	249.20									
- Sewage Yield (1,000 m ³ /d)	7.513	18,677	25,733	32,789	32,789									
- Population Density (pers./km ²)	28,200	23,717	24,475	22,655	22,655									
Tourism Development Plan														
- Number of Room	8	100	250	350	350									
- Sewage Yield (1,000 m ³ /d)	0.004	0.050	0.125	0.175	0.175									
for Tourism Accommodation	0.003	0.040	0.100	0.140	0.140									
for Resident in tourism area*1	Included in the urban area													
Proportion (%) ^{*2}	0.05	0.27	0.49	0.53	0.53									
Proposed Project														
- Type of Sewerage System	Urban Sewerage Scheme (Public)													
- Type of Receiving Waters	River													
- Incremental Capacity (1,000 m ³ /d)	7.513	11,164	7,056	7,056	32,789									
Project Cost (Kt. Million) ^{*3}	15,638	26,163	15,033	17,879	74,713									
Remarks														
*1 : Residential Yield is calculated by (0.05 km ² /100 rooms X No. of room X Population density x 150 l/c/d x 0.8).														
*2 : Proportion of sewage yield in the tourism area to one in the urban area.														
*3 : Cost consists of construction, contingency, detail design & supervision and land.														

Source: JICA Study Team

Table 3. 21 Inventory of Proposed Project (Solid Waste Disposal)

	Mt. Elgon and Kitale Tourism Area						Rift Valley Lakes Tourism Area					
	Kitale			Mt. Elgon			Lake Baringo			Lake Baringo		
	Present	2005	2010	Total	Present	2005	2010	Total	Present	2005	2010	Total
Type of Area	Urban				Rural				Rural			
Existing Solid Waste System	Public				Individual				Individual			
- Management Authority	LA				not existing				not existing			
Urban Solid Waste Collection & Disposal Scheme (Public)	Kitale (Habitable Area : 34 km ²)						Marigat Town (Habitable Area : 255 km ²)					
- Served Area (km ²)	2.00	6.00	8.00	11.00					0.22	0.43	0.54	0.64
- Served Population (1,000)	56.40	142.30	195.80	249.20					3.00	5.70	7.15	8.60
- Solid Waste Yield (ton/d)*1	16.92	56.92	88.11	124.00								
- Population Density (pers./km ²)	28,200	23,717	24,475	22,655					13,636	13,256	13,241	13,438
Tourism Development Plan												
- Number of Room	8	100	250	350	20	120	150	200	0	250	450	650
- Solid Waste Yield (ton/d)	0.004	0.050	0.125	0.175	0.027	0.162	0.203	0.270	0.000	1.000	1.948	3.061
- for Tourism Accommodation	0.011	0.135	0.338	0.473	0.027	0.162	0.203	0.270	0.000	0.338	0.608	0.878
- for Resident in tourism area*2	Included in the Urban area						Not included					
Proportion (%)*3	0.02	0.09	0.14	0.14								
Proposed Project	Urban Solid Waste Scheme (Public)						Community (Public)					
- Type of Collection System	Separation, 2 times/week						Separation, 2 times/week					
- Type of Disposal Method	Recycling + Sanitary Landfill						Recycling + Sanitary Landfill					
- Incremental Capacity (m ³ /d)*4	0.000	71.429	55.696	65.161	192.286	0.000	0.241	0.072	0.121	0.434	1.786	1.987
- Required Area (ha)*4	0.000	4.345	3.388	3.964	11.697	0.000	0.015	0.004	0.007	0.026	0.109	0.121
Project Cost (Kt. Million)	5.088						0.129					
Remarks	5.088						0.121					

*1 : Industrial and hazardous wastes are not included.
 *2 : Residential Yield is calculated by [0.05 km²/100 rooms X No. of room X Population density x Unit yield (0.3, 0.4, 0.45, 0.5 kg/c/d)].
 *3 : Proportion of solid waste yield in the tourism area to one in the urban area.

*4 : It was estimated by the following assumptions :

Roller density of garbage is 560 kg/m³

Depth of landfill is 6.0 m

Project life time is 10 years.

Source : JICA Study Team

5.6. Power and Communication

5.6.1. Electricity

(1) Demand for Electricity by Tourism Development and Existing Plans

a. Demand Projections

In the Western Tourism Region, the distribution lines are well extended to the local towns along the main road. The demand forecast by tourism is 14.8 MVA in 2010 as shown in the Table 3. 22

Table 3. 22 Demand Forecast by Tourism

Year	Existing	2000	2005	2010
No. of Room	764	2200	4170	6150
Tourism Demand (MVA)	-	4.0	9.4	14.8
Total Regional Demand (MVA)	80	155	230	300
Share of Tourism Demand (%)	-	5.3%	6.3%	6.7%

Note: Figure of No. of rooms adopted rooms of Hotel / Lodge / Permanent Camp of Room requirement on Table 3. 2.

Source: JICA Study Team and National Power Development Plan

b. Review and Assessment of Existing Plans

Existing Plans up to 2010 by KPLC are:

- Sondu / Miriu hydroelectric power plant (60 MW)
- 132 kV transmission line from Lessos to Kisumu, and
- 220 kV transmission line from Olkaria to Lessos.

The existing power supply in the Western Region comes from Uganda (30 MW), the Turkwel Gorge hydroelectric Plant (106 MW) and the Central Region by transmission lines.

The transfer of power supply by transmission lines is essential in the Western Tourism Region.

(2) Basic Policy for Electricity Supply

a. Mt. Elgon and Kitale Tourism Area

There are 132/33 kV substations at Webuye and Eldoret. The 33 kV distribution lines come from both of the above substations to Kitale. The power supply to new tourism cores may be done by extension of 33 kV distribution line by KPLC. In this case, it is necessary to consider to hide the power line to conserve the landscape.

b. Rift Valley Lakes Tourism Area

132/33 kV Lessos substation supplies electricity to Kabarnet and Marigat with 33 kV distribution lines. Power lines reach Kampi Ya Samak in the West of Lake Baringo and the North of Lake Bogoria.

In the early stage, that is before the construction of distribution lines, the power supply to the Lake Resort will be done by own diesel generators of each of the accommodation facilities. After construction of the extension from the existing distribution lines by KPLC, the diesel generator may become stand-by generators. During route selection, it is necessary to consider to hide the power line to conserve the landscape.

(3) Proposed Project

a. Mt. Elgon and Kitale Tourism Area

Figure 3.10 Mt. Elgon - Kitale shows the route of the proposed distribution lines. The estimated cost for distribution lines are:

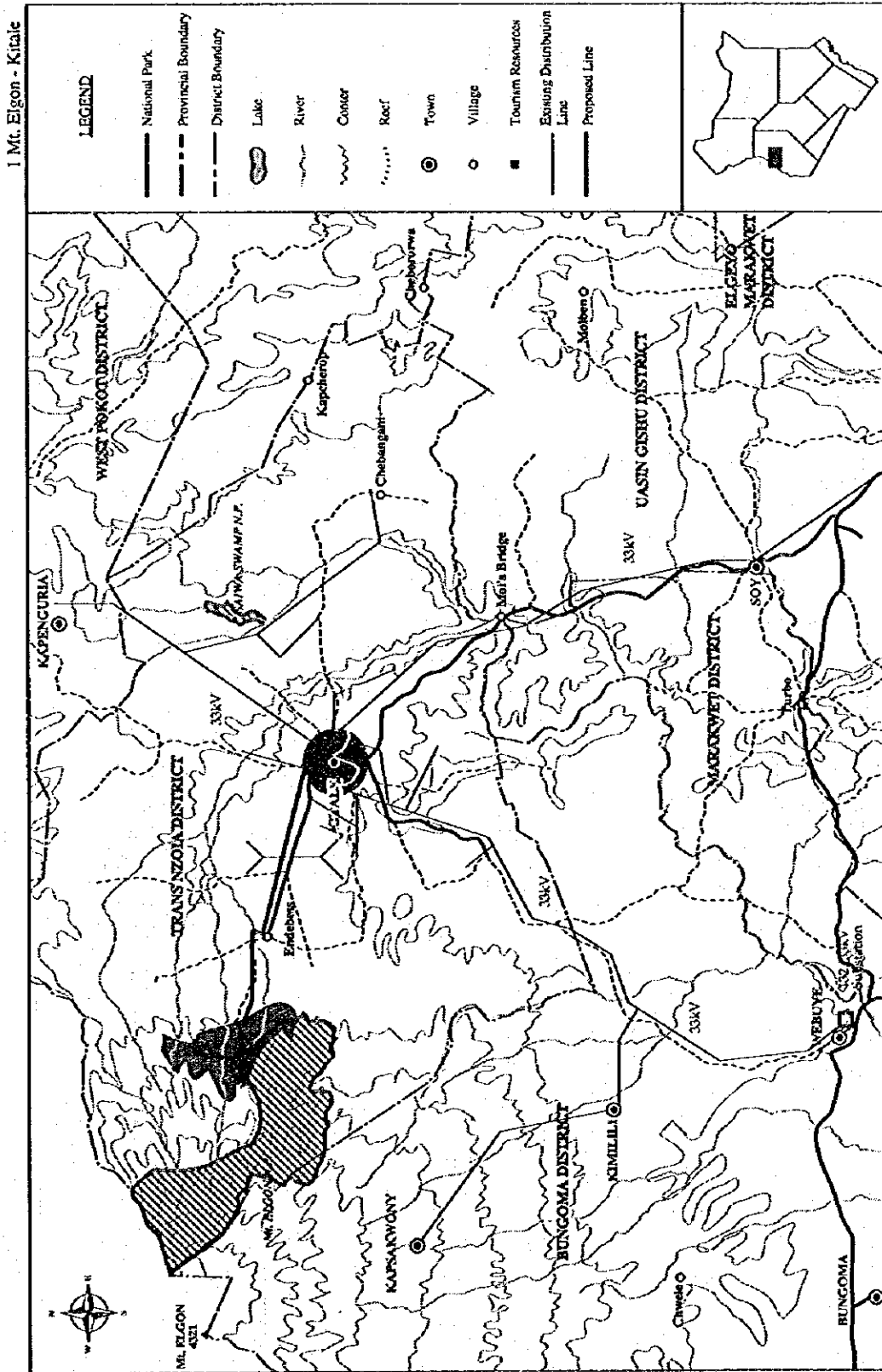
- Construction cost	600,000 KE/km
- Extension length	90 km
- Total cost	2,7 Million KE

b. Rift Valley Lakes Tourism Area

Figure 3.11 Eldoret - Rumuruti shows the route of the proposed new distribution line. The estimated cost for distribution lines are :

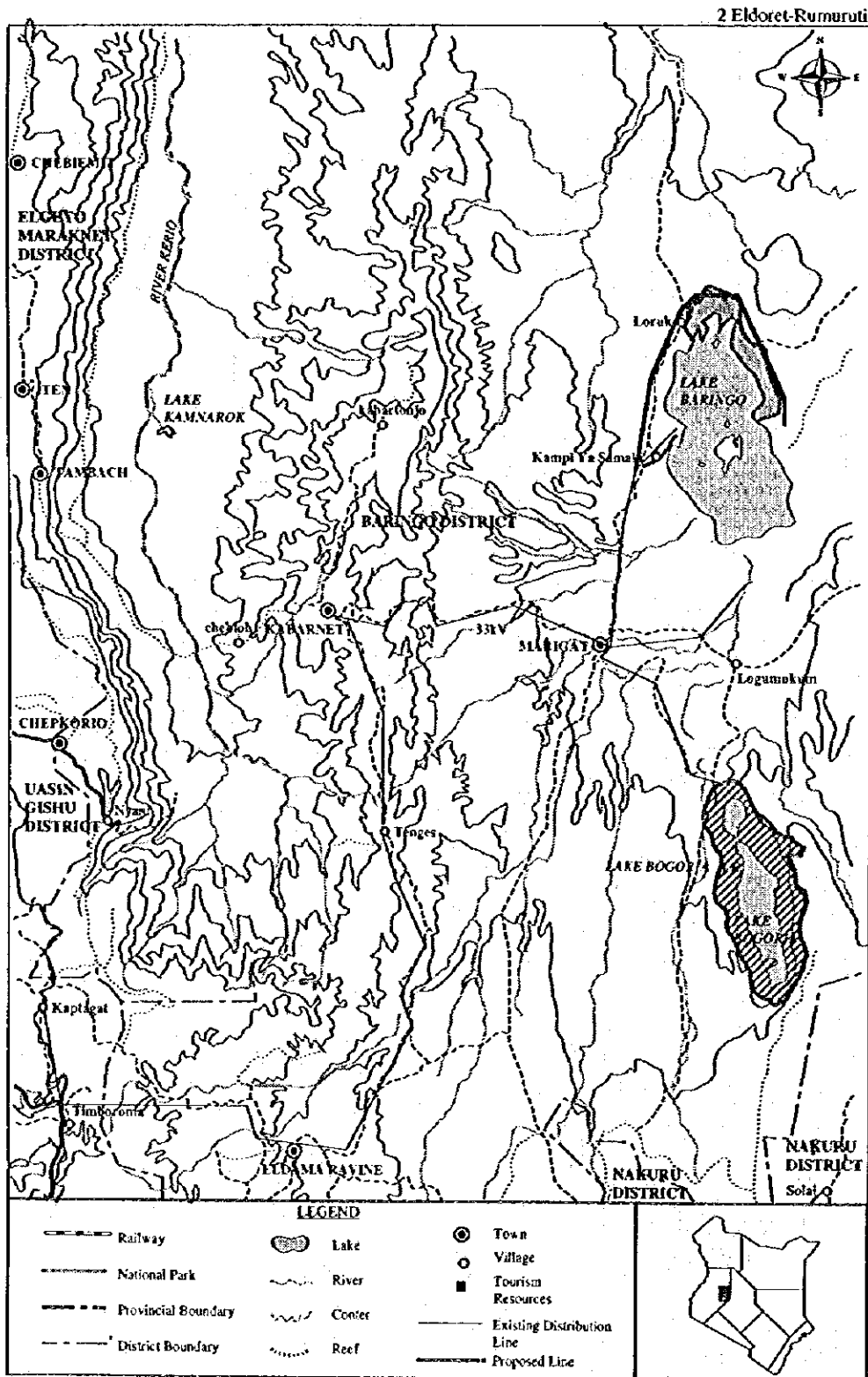
- Construction cost	600,000 KE/km
- Extension length	60 km
- Total cost	1,8 Million KE

Figure 3.10 Power Supply Plan for Mt. Elgon - Kitale



Source: JICA Study Team

Figure 3.11 Power Supply Plan for Eldoret-Rumuruti



Source: JICA Study Team

5.6.2. Communication

(1) Demand for Communication by Tourism and Existing Plans

a. Demand Projection

In the Western Tourism Region, trunk lines for communication reach to Eldoret, Kabarnet, Kitale, Bungama, Kakamega and Lodwar. Table 3. 23 shows the demand on communication by tourism.

Table 3. 23 Demand Forecast by Tourism

Year	Existing	2000	2005	2010
No. of Room	764	2200	4170	6150
Increasing No. of Telephone lines by Tourism	-	72	170	270

Note: Figure of No. of rooms adopted rooms of Hotel / Lodge / Permanent Camp of Room requirement in Table 3. 2.

Source : JICA Study Team

b. Review and Assessment of Existing Plans

Mt. Elgon and Kitale Tourism Area

KPTC has an automatic exchange station in Kitale. Existing telephone lines by radio come from Kitale to Endebess. In Endebess, there is a manual exchange station.

Rift Valley Lakes Tourism Area

The trunk line of communication reach to Kabarnet. The existing telephone line is connected to the manual exchange station at Marigat.

(2) Basic Policy for Communication Supply

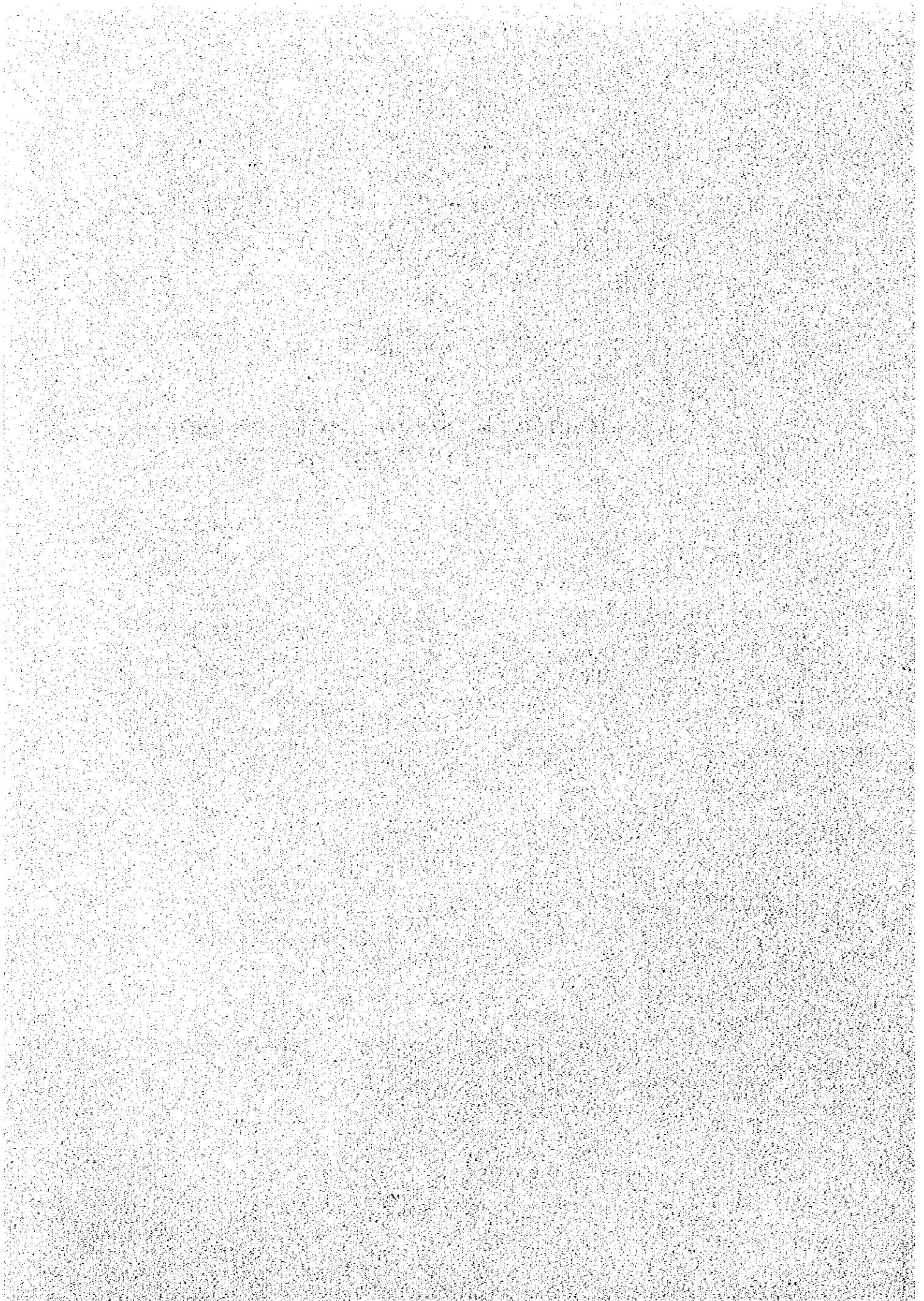
a. Mt. Elgon and Kitale Tourism Area

The telephone line will be extended from Kitale to the tourism facility area by radio of KPTC. On the other hand, in Kitale town, telephone lines will be extended by overhead cable lines by KPTC.

b. Rift Valley Lakes Tourism Area

The extension of telephone lines will be connected by radio from Marigat to Lake Baringo resort in the early stage. After the year of 2000, demand will increase more than existing exchange capacity. In this case, a telephone line should be connected by radio from Kabarnet to the new lake resort area.

**CHAPTER 4 COASTAL TOURISM REGION
DEVELOPMENT PLAN**



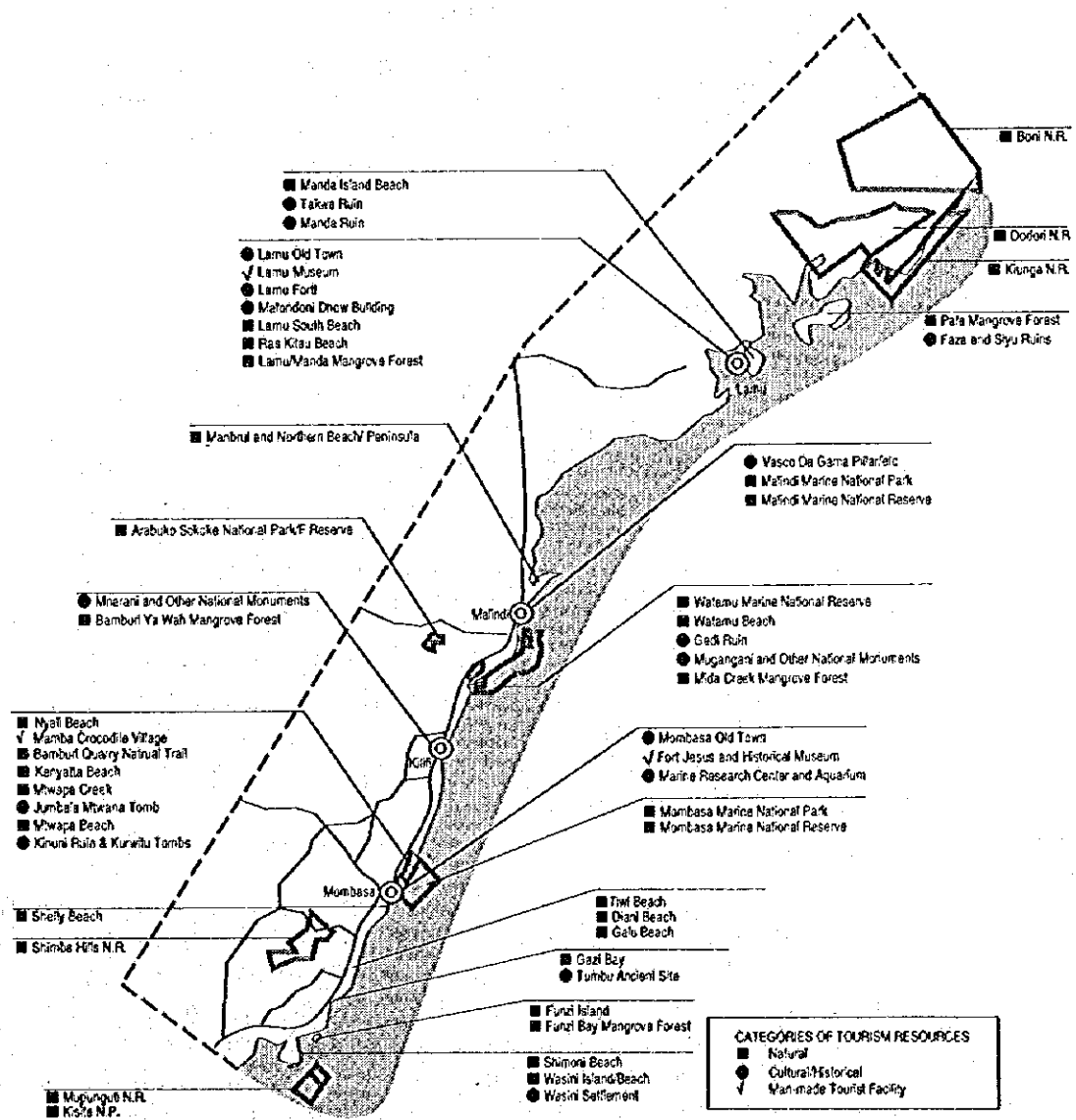
Chapter 4 Coastal Tourism Region Development Plan

1. Analysis of Existing Conditions

1.1. Tourism Resources

The Coastal Tourism Region includes a major part of the Coast Province along the Indian Ocean Coast. The region has been established as one of the long-haul beach destinations from Europe. Figure 4.1 shows the principal tourism resources in the region.

Figure 4.1 Tourism Resources in the Coastal Tourism Region



Source: JICA Study Team

The Region has the typical tropical landscape and climate with white sandy beaches and offshore coral reefs. Some of the mangrove forests along its shoreline are a potential tourism resource for ecotourism.

As the region is one of the few birth places of the Swahili culture, it also abounds in cultural tourism resources, such as old towns in Lamu and Mombasa as well as many historical ruins.

1.2. Visitor Arrivals

The study team estimates that the number of visitor arrivals to the region in 1993 has been 404,000 people, based on the questionnaire survey at the international airports. The same survey shows that the average length of stay in the region was 14.0 nights, reflecting its position as the base for resort tourism.

National parks and reserves in the region have annually received a total of 100,000 to 200,000 visitors over the past several years. Cultural facilities in the region have had 250,000 visitors, or approximately 30% of the total number of visitors to the facilities in Kenya.

1.3. Environment

1.3.1. Non-organic Environment

This tourism region consists of the Coastal Plain-Belt and the Low-Belt, which are comparatively flat with an altitude of less than 500 m above sea level. There are many coastal islands and two big rivers, the Tana and Sabaki Rivers, which flow into the Indian Ocean. The geography is Mesozoic/Tertiary sediments in the Southern part and Quaternary sediments in the Northern part. The soil has generally moderate to low fertility, but there are soils with high fertility in some areas of the Northern part.

The annual mean temperature is rather hot ranging from 24 to 28 °C. The rainfall is relatively high with the annual mean ranging from 600 to 1,400 mm. There is no real dry season in the coastal belt, but there are two rainy seasons in April and from November to December in the inland.

1.3.2. Vegetation and Wildlife

The main vegetation is wooded grassland, coastal bushland, woodland and lowland forest, most of which remains in patch condition. Along the coastal shore, mangroves, seagrass beds and coral reefs form the typical coastal marine ecosystem. Especially the mangroves around Lamu and Pate Islands and coral reefs and seagrass beds around Shimoni and Kiunga are well preserved. Agricultural land expands only in the Southern part and occupies less than half of the region's area.

Terrestrial animals in the region are characterised by forest animals, such as threatened and endemic small antelopes and primates, and forest birds, some of which are threatened and endemic species. There are also small elephant dispersal areas and a few populations of sable antelope.

Marine animals inhabit only this region. Important species for conservation concerns are dugong and sea turtles and there are breeding colonies of sea birds on coastal islands. Fishes, especially coral fishes, and invertebrates have high diversity with more than 450 species and 320 species known, respectively.

1.3.3. Natural Ecosystem

There are two ecological zones in the region, that is zone II and IV. Except for a small area in the Southern part, the agricultural potential is medium. The region includes the coastal marine ecosystem, which is a sensitive and diversified ecosystem derived from three elements, namely land, rivers and ocean. Details of the ecological zones have already been described in Chapter 2. The characteristics of the natural ecosystem are summarised as follows :

- Coastal wetland consisting of mangroves, coral reefs, seagrass beds and sand beaches, especially to the North of Lamu Island and to the South of Funzi Island
- Coastal lowland forest, especially in Arabuko Sokoke and Shimba Hills, with high biodiversity, and
- Remnant dispersal of elephant and important populations of sable antelope.

1.4. Infrastructure

1.4.1. Road Transportation

The majority of tourist transport in Kenya depends presently on the road transport mode. The area around Mombasa, where tourism purposes concentrate remarkably, is highly frequented by tourists. In the region, the deterioration of paved roads is remarkable. Access from the trunk roads to the tourism destination entrances is inadequate. The development of rural roads has tended to be neglected, because higher priority was attached to trunk road development.

1.4.2. Railway Transportation

The existing condition of railway in the region is the same as the one in the Central Region.

1.4.3. Air Transportation

Mombasa has already an international airport and this airport is presently being improved. Mombasa Airport has been mainly used as the gateway for coastal resort tours by European chartered flights. The air services for access to tourism destinations, such as Kilifi, Malindi or Lamu are limited, because of small aircraft services and small air port facilities.

1.4.4. Water Transportation

The water transport activities in the region concentrate in Mombasa on the Indian Ocean seaboard. The volume of export and import freight handled at the Mombasa port shows recently an overall increase. However, the number of handled passengers is small.

1.4.5. Water Supply

The water supply situation in the region, especially Mombasa City and its surroundings, has become increasingly critical, due to a lack of water supply and the increase of population and economic activities. The existing condition in other areas is also unsatisfactory, the situation is especially bad on Lamu Island. The water quality is not good because of salt content.

1.4.6. Waste Disposal

The condition of the sanitary system in Kenya is still very unsatisfactory. A sewerage system is provided in only limited urban areas, while in other urban areas, waste water is directly discharged into the road, or is stored in pits installed at each house and dumped into a manhole. Waste disposal treatment is gradually becoming a serious problem.

1.4.7. Power Supply

The power supply system is established in Mombasa City and its surroundings and in the areas along the Mombasa - Kilifi transmission line. These areas are, therefore, supplied relatively well. However, the other areas are not well supplied.

The region is too far away from main hydro and geothermal generation points to receive enough capacity through the power transmission line. The old distribution lines cause voltage drop and frequent power cuts. These are reasons of overload and power cut in the region.

2. Environmental Considerations

In this section, environmental considerations are made taking into account present problems and measures for environmental conservation and management.

2.1. Environmental Problems

2.1.1. General Problems

In the region, the agricultural potential is comparatively low and the human population is much smaller than in the Central and Western Tourism Regions. Although expansion of agricultural land is a threat to small forest areas, siltation and water pollution in the ocean are the biggest problem in the natural ecosystem. These problems originate not only in the coastal area but also in the upper land. Decrease of marine resources is another problem caused by insufficient fisheries management. Major general problems are:

- Siltation at the mouths of Tana and Sabaki Rivers from uncontrolled agriculture and soil erosion in the catchments
- Water resource decrease, soil deterioration and unexpected flood at Tana Delta caused by dam construction in the catchments
- Beach erosion and destruction of coral reefs
- Water pollution of the ocean from industrial and domestic sewage, including that from tourism facilities, and oil spills from tankers, especially around Mombasa
- Water exhaustion due to high water consumption for industrial and domestic purposes including tourism
- Decrease of marine resources, including fishes, corals, marine mammals and sea turtles from illegal or over-fishing and collecting, for example mixed fishing, trawling and dynamite fishing (Kisite MNP)
- Degradation of wildlife habitat from expansion of human settlements and agricultural land
- Land use conflict with large-scale development accompanied by land privatisation, especially high pressure for Tana Delta development
- Genetic deterioration and extinction of some wild animals by habitat isolation, for example sable antelope (Shimba Hills), Ader's duiker (Arabuko Sokoke Forest), and Sokoke scops-owl (Arabuko Sokoke Forest)
- Illegal logging of tree including mangrove trees, for example in Shimba FR, Arabuko Sokoke FR and Watamu MNR

- Re-plantation of exotic soft wood trees in the protected area such as Shimba Hills NR
- Subsistence poaching, for example in Arabuko Sokoke NP and Shimba Hills NR
- Illegal settlement from inland to coastal islands, for example on Manda Island
- Change in the sea level, about 10 to 30 cm increase in 2030, by expected global climate change (by I.P.C.C. report); it is forecasted that coral reefs will diminish and the coastal shore line will retreat, and
- Crop damage by elephant, buffalo, hippopotamus, baboon, monkeys and human injury by elephant, crocodile, for example around Arabuko Sokoke Forest and Shimba Hills.

2.1.2. Tourism Problems

The region is a main destination for tourism as a beach resort in Kenya and it receives the largest number of visitors among all the tourism regions. Therefore, tourism impacts on the coastal marine ecosystem are expected to be substantial from:

- Construction of tourism facilities, such as hotels, lodges and roads in and around NPs and NRs including MNPs and MNRs
- Litter and sewage along the coastal shore and in Shimba Hills NR
- Destruction of coral reefs by operation of tourist's boats and tourist's activities, especially snorkelling, for example in Mombasa MNP and Malindi MNP
- Illegal collection of marine creatures such as shells and coral stones, for example in Mombasa MNP and Malindi MNP
- Disturbance of breeding of sea turtles and destruction on the nesting sites, and
- Off-road and over-speed driving in Shimba Hills NR.

2.2. Environmental Conservation and Management

2.2.1. Conservation Areas

There are a total of 13 protected areas in the region, that is 5 National Parks (including 4 Marine National Parks) and 8 National Reserves (including 5 Marine National Reserves). Forest Reserves are mainly concentrated in Arabuko Sokoke and Shimba Hills. Two internationally designated areas are included, that is the Kiunga Marine Biosphere Reserve and the Malindi-Watamu Biosphere Reserve.

2.2.2. Present Measures

There are various agreements and project plans for environmental conservation and management. Although many projects have not yet started, some of the projects implemented at present are well in progress, especially that for Shimba Hills NR management and the Community Wildlife Programme.

Present measures and their progress for wildlife conservation and management with initiative by KWS are as outlined below.

(1) Five Year Management Plans for Protected Areas (after 1990) :

- Shimba Hills NR.

(2) Memorandums of Understanding for the Joint Management of Selected Forests between KWS and Forest Department :

- For example in Arabuko Sokoke FR and Shimba FR.

(3) Preparation of Forest Conservation Plan by KIFCON (ODA), KWS and Forest Department:

- Arabuko Sokoke Forest; but no implementation, because of the withdrawal by KIFCON.

(4) Specific of Donors from National Reserve Management : Shimba Hills

- Fencing programme
- Fire management for sable antelope conservation and tsetse fly control
- Vegetation survey
- Elephant conservation programme.

(5) Specific Coastal Marine Conservation and Management:

- Basic research on sea turtles and dugong along the coastal shore
- Monitoring of water quality in MNPs and MNRs, which are located near to hotels
- Collection of the marine conservation fees (as a kind of entrance fee) from tourists staying at hotels in the Mombasa MNP

(6) Community Wildlife Programme :

- Assistance of fishing gear or boat repair to fishermen's and boat operators' groups through donation, loan and subsidy

- Afforestation of mangrove trees by local communities in co-operation with the Forest Department and the Department of Fisheries
- Financial support for the construction or improvement of public facilities, such as schools and clinics
- Process of eco-tourism with a combination of social, cultural and natural environment in a planning community conservation area (Wasini Island) or a private park (Kwale) with the establishment of lodges and companies
- Problem animal control by fencing to shooting

2.3. Environmental Considerations for Conservation and Management

2.3.1. General Considerations

The region is characterised by coastal wetland, forest and human activities with fisheries and agriculture. Thus, environmental problems are summarised as siltation, pollution, decrease of marine resources, deforestation and wildlife conflict.

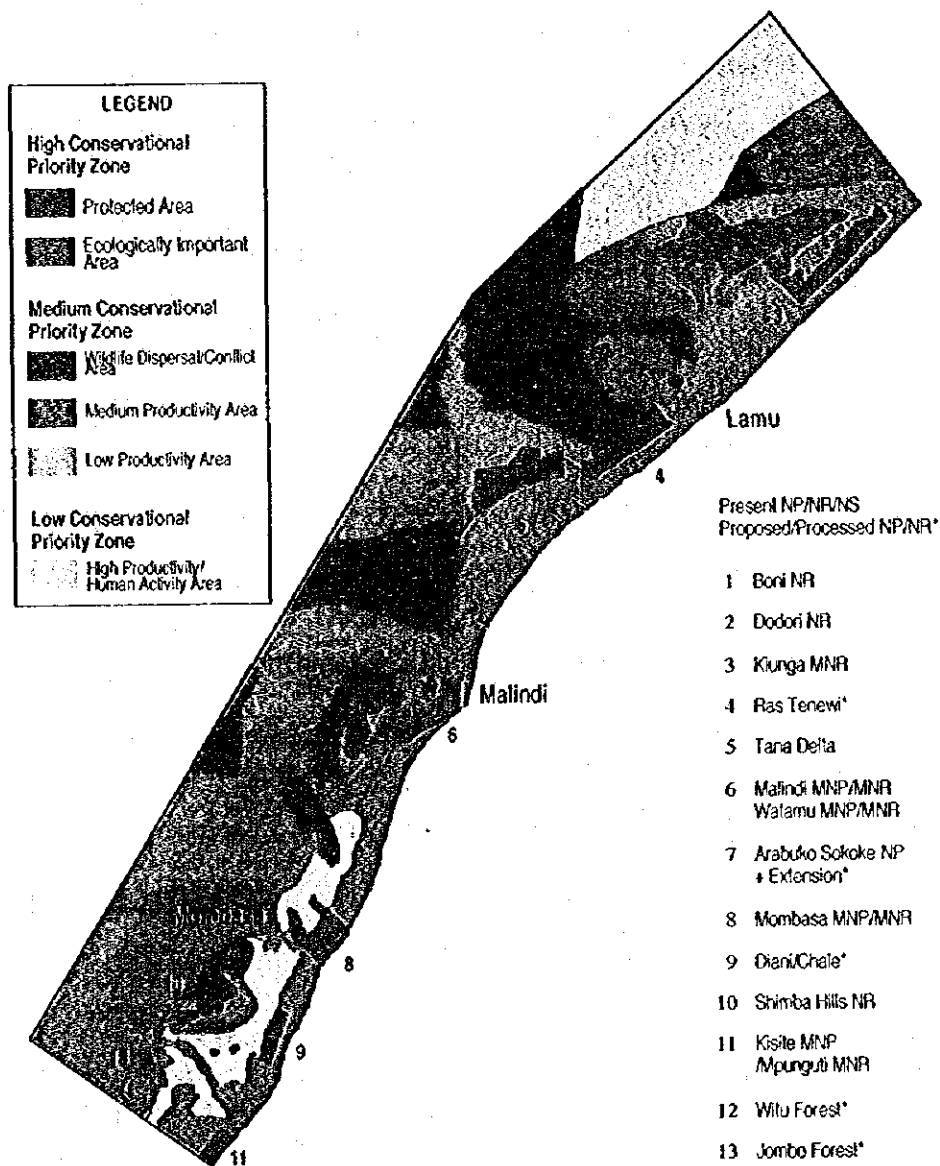
In order to comprehensively pursue environmental conservation and management, the Five Year Management Plans for Protected Areas compiled by KWS must be implemented as soon as possible in co-operation with other institutions, such as MOTW, the Forest Department, the Department of Fisheries, County Councils, foreign aid organisations and NGOs.

For coastal marine conservation, it is indispensable to carry out forest conservation and prevention of soil erosion, not only in the inland, but also in the upper land in other tourism regions, including the Central Tourism Region. Conservation of mangroves, coral reefs and seagrass beds can contribute to the sustainable use of marine resources and protection from beach erosion. In particular, mangroves are considered to be a key element to mitigate affects from the inland.

The following areas have been processed or promoted to be gazetted as protected areas by KWS for enforcement of further conservation : Coastal forests (e.g. Jombo Forest, Witu Forest), Tana Delta, Arabuko Sokoke Forest, Ras Tenewi and Diani/Chale. They are shown in Figure 4. 2. In addition, Tana Delta is in process to be registered as Ramsar Site.

Main environmental considerations with proposed measures should be put on these issues as follows :

Figure 4.2 Nature Conservation Areas in the Coastal Tourism Region



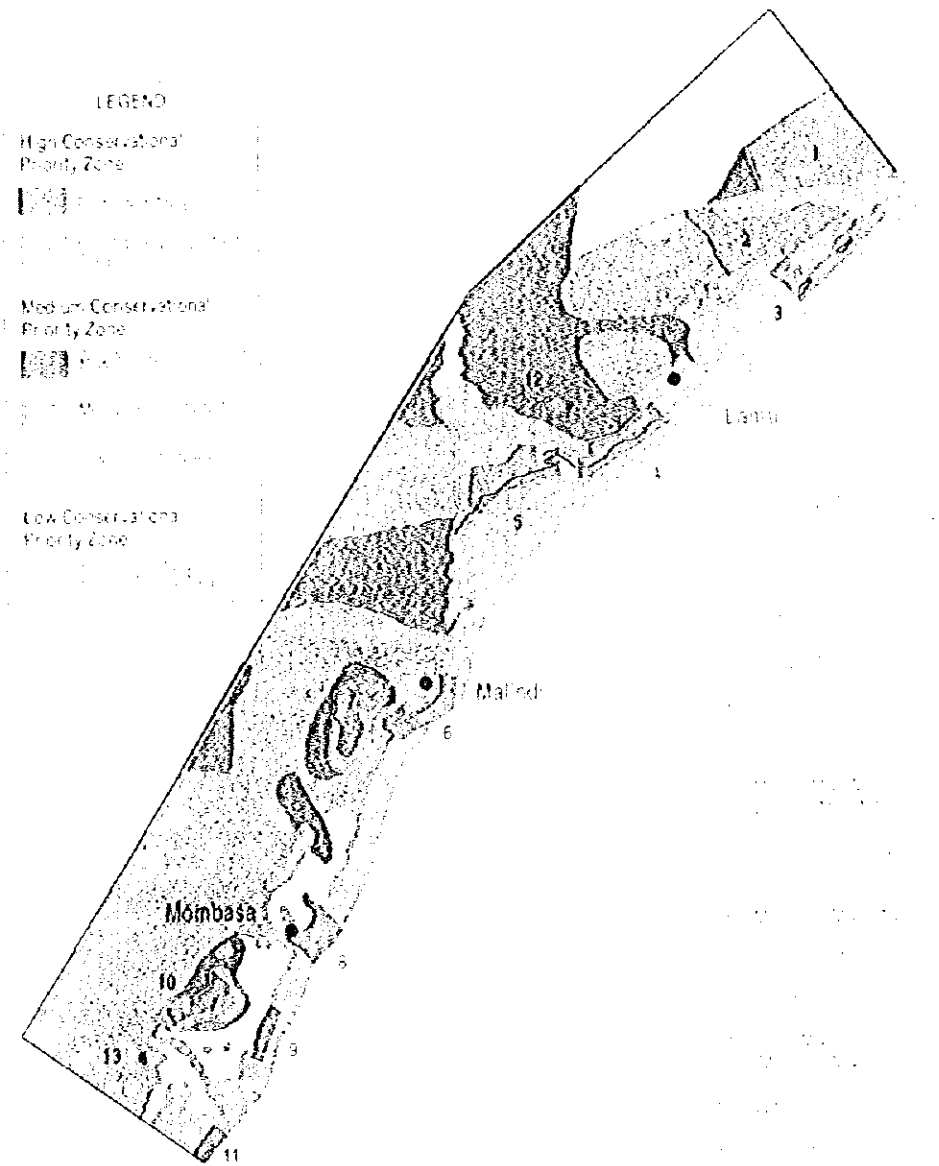
Source: JICA Study Team

(1) Coastal Marine Conservation : Coastal Wetland, Including Tana Delta

Special consideration should be given to mangroves around Lamu and Pate Islands, coral reefs and seagrass beds around Shimoni and Kiunga and breeding with feeding sites of dugong, sea turtles and sea birds. Major measures include:

- Prevention of soil erosion on the upper land and siltation

Figure 4.2 Nature Conservation Areas in the Coastal Tourism Region



Source: UNWTO, 2011

(D) Coastal Marine Conservation : Coastal Wetland, Including Fama Delta

Special consideration should be given to mangroves, mudflats and Pate Islands, coral reefs and seagrass beds around Shauri Moyo, Kiunga and breeding with feeding sites of migratory waterfowl and sea birds. Major measures include:

- Prevention of soil erosion on the upper land and saturation

- Pollution control by effluent treatment, restriction, reduction and monitoring
- Control of fish harvesting accompanied by destruction of mangroves
- Development of sustainable fisheries management and reinforcement of fishing regulations
- Introduction of new fishing methods, which are harmless for marine mammals and sea turtles
- Reinforcement of MNP/MNR/FR (mangrove forests) management by field patrol
- Gazettement of new MNPs, MNRs and FRs and promotion of Tana Delta to a Ramsar Site, and
- Intensification of scientific research on marine animals and promotion of their important breeding and feeding sites to a kind of conservation areas.

(2) Forest Conservation : Coastal Lowland Forest, Especially in Arabuko Sokoke and Shimba Hills

The proposed measures are the same as mentioned for the Central Tourism Region.

(3) Mitigation of Wildlife Conflict

The proposed measures are the same as mentioned for the Central Tourism Region.

2.3.2. Tourism Considerations

In the case of tourism development in the coastal wetland, such as Manda Island and Funzi Island and Bay, it should be basically noted not to destroy elements of the coastal marine ecosystem as much as possible, especially mangroves, coral reefs and seagrass beds. Especially tourism development in high sensitive areas, such as around Wasini Island, where coral reefs are preserved in best condition in Kenya, must be carried out with the greatest care.

The crucial points for coastal marine conservation in terms of tourism development are pollution control of effluents from hotels or restaurants and control of tourism activities. Additionally, it is considered that sustainable management of fisheries will be important in the future; because it is conjectured that marine resources may decrease further, due to over-fishing to serve enough food for the increasing number of visitors.

The common proposed actions and the proposed actions for specific problems, such as off-road and over-speed driving, litter and sewage and facility and road construction are the same as those mentioned for the Central Tourism Region.

In order to implement these actions effectively, it is recommended to establish or improve some facilities for visitor services and human resource training, such as Environmental Education Centre in Mombasa, Field Study Centres in Arabuko Sokoke NP and Malindi MNP and Information Centres for all NPs and NRs.

Other actions for the remainder of specific problems are mentioned. They include the common actions, which are very important for MNP/MNR conservation and management.

(1) Destruction of Coral Reefs

Control measure should include:

- Instruction on activities allowed to tourists in MNPs and MNRs by both, oral speaking and printed materials in major foreign languages : English, Italian, German, Spanish, French
- Differentiation of tourism activities depending on their experience in marine sports and zoning to be adapted in each MNP and MNR
- Prohibition of some tourism activities, such as marine skiing and high-speed boat driving inside coral reefs
- Development of other marine amusements, which will not damage the marine ecosystem, and
- Restrictions on anchorages for tourist's boats to places, where no coral reefs occur.

(2) Illegal Collection of Marine Creatures

This should be controlled by the following:

- Instructions on activities allowed to tourists in MNPs and MNRs by both, oral speaking and printed materials in major foreign languages, and
- Retention of the instructions before leaving diving points and, if necessary, check the inside pockets of tourists.

(3) Disturbance of Sea Turtle's Breeding

Control measures include:

- Restriction on tourism activities on their breeding sites and establishment of a guideline for sea turtle watching, such as for approach, timing and tourist numbers, and
- Regulation on lighting toward beaches by hotels during night time.

3. Development Framework

Targeted visitor arrivals to the region up to the year 2010 are as indicated in Table 4. 1. The target is based on the framework discussed in Volume 1.

Table 4. 1 Targeted Visitor Arrivals up to 2010

	Year	Existing	2000	2005	2010
Visitor Arrivals ('000)		404	588	857	1,110
Average Length of Stay (Nights)		14.0	13.0	12.0	12.0

Source: JICA Study Team

Table 4. 2 Room Requirement by Each Tourism Area

Tourism Region Area	Sub-area	Unit Number of Rooms											
		Hotel/Lodge/Permanent Camp				Homestay/Villa/Apartment/Tent				Total			
		Existing	2000	2005	2010	Existing	2000	2005	2010	Existing	2000	2005	2010
70 Coastal	Region total	9,820	13,280	19,120	24,750	4,000	3,800	3,800	4,900	13,820	17,080	22,920	29,700
71 South Mombasa Coast	Simoni/Wasini	31	300	850	1,300		100	100	250	31	400	950	1,550
	Funzi	15	80	400	1,000					15	80	400	1,000
	Gazi	20	50	170	400					20	50	170	400
	Thwi/Diani/Galu	2,514	2,900	4,100	4,700				300	2,514	2,900	4,100	5,000
72 Mombasa Coast	Mombasa	800	850	1,500	1,700	900	900	900	900	1,700	1,750	2,400	2,600
	N.Mombasa	4,300	4,500	4,500	4,700					4,300	4,500	4,500	4,700
73 Malindi Coast	Kilifi	150	500	1,700	2,000					150	500	1,700	2,000
	Watamu	600	2,200	3,200	3,800					600	2,200	3,200	3,800
	Malindi	1,200	1,600	1,700	1,800	3,000	2,700	2,700	3,200	4,200	4,300	4,400	5,000
74 Lamu Coast	Lamu/Shefa	100	150	300	500	100	100	100	250	200	250	400	750
	Manda Is.	50	50	400	1,700					50	50	400	1,700
	Pate Is.			100	300					0	0	100	300
75 Northern Coast	Kwayuu	20	50	100	650					20	50	100	650
	Boni Dodori N.R.	20	50	100	200					20	50	100	250

Source: JICA Study Team

4. Tourism Products Development Strategy

4.1. General Directions

Although the Coastal Tourism Region has been established as a beach destination for European countries, efforts should be made to enhance and diversify her tourism products to be more competitive among international beach destinations. Enhancement of cultural tourism products is identified as the most feasible direction for diversification. Another important issue is to establish resort areas instead of isolated tourist enclaves, in order to promote local communities' participation in tourism. General directions for planning in the region are:

- Enhancement of cultural attractions centred on Swahili cultural heritage and quaint Swahili towns
- Enhancement of gourmet attractions
- Expansion of beach resort areas based on the tourism promotion zone system
- Enhancement of Mombasa's gateway function for Cruise, Rail Safari, and after-safari tourists from East African countries, and
- Adoption of ecotourism style attractions.

4.2. Target Market

Beach resort tourism will continue to constitute a predominant tourism demand to the Coastal Tourism Region. However, development of tourism objectives based on Swahili cultural heritage would attract cultural tourists to the region and diversify tourists' origin countries.

- Beach resort tourists from Europe
- Safari tourists, who would like to enjoy a leisurely stay after safaris in East African countries, and
- Culturally motivated tourists interested in Swahili culture and townscape.

4.3. Regional Development Concept

As culture and gourmet is added to the existing "sun, sea and sand," new keywords are :

- Sun, Sea and Sand
- Swahili cultural heritage and exotic stone towns, and
- Seafood.

4.4. Potential Tourism Products and Their Development Plans

4.4.1. Quaint Swahili Towns

(1) Directions for Development

Unique traditional townscapes seen in the old districts of Mombasa and Lamu can be one of the principal tourism objectives of Kenya. Utilisation of the townscape with appropriate conservation measures would give the region a distinctive tourism image. The old districts should be "tourist areas" that give benefits to both, tourists and host communities.

(2) Measures

a. Creation of "Tourist Areas" in Mombasa and Lamu

A "Tourist Area" is defined as an area, where the whole area is an attraction, and tourists are encouraged to roam about the host community freely. Tourist areas require conservation of traditional townscape together with promotion of establishing tourism related businesses such as shops, restaurants, cafes and appropriate tourist attractions that work as channels to feed back tourism benefits to local communities. Beautification of the area is also important to attract tourists to the area.

b. Introduction of Construction Guidelines

Conservation of the townscape requires the introduction of construction guidelines. The guidelines should not only aim to conserve individual historical buildings, but also the townscape as a whole.

4.4.2. Swahili Seafood

(1) Directions for Development

Improve and sophisticate seafood cuisine at resort areas by educating local people how to participate in tourism business. This does not only increase tourists' satisfaction level, but provides a channel for local products and feeds back tourism benefits to the local communities.

(2) Measures

a. Allocation of Commercial Zones in Respective Resort Areas

Allocation of commercial zones in resort areas will facilitate local enterprises to participate in tourism business.

b. Education on Entrepreneurship and Catering Skills

This aims to improve management skills to run tourism related establishments, including sanitation and cooking skills.

c. Improvement of Seafood Distribution System

This aims at improving the quality of seafood by introducing modern storage facilities and the establishment of a distribution organisation that maintains the facility.

d. Hosting of Cooking Competition and Promotion of Technical Exchanges with abroad

This aims at improving and innovating local cooking skills. The competitions could be used also as a tourism event that attracts tourists to the area and promotes Swahili cuisine. A local tourism organisation as proposed in Chapter 3 of Volume 1 would be the appropriate organiser of the event.

4.4.3. Beach Resorts

(1) Directions for Development

The development framework as already discussed assumes improvement and expansion of beach resort areas to facilitate the inflow of beach resort tourists, primarily from Europe as well as "after-safari" tourists.

(2) Measures

a. Expansion and Development of Beach Resort Areas

Expand and/or develop beach resort areas based on the tourism promotion zone system.

b. Designation of Commercial Districts in Each Tourism Zone

Designate commercial districts in the respective tourism promotion zones in order to facilitate small and medium sized enterprises to participate in tourism. Education on entrepreneurship and catering services aims at giving support for their participation.

c. Introduction and Enhancement of Tourist Attractions for Excursionists from Beach Resorts

Enhance and diversify attractions for those, who stay at beach resort areas to increase their satisfaction level. A point to note is the market's increasing preference for ecotourism. Possible attractions include utilisation of traditional townscape as discussed previously, and various "ecotourism" style attractions, as will be discussed in the wildlife and nature tourism section of this chapter.

d. Improvement of Sports Facilities in Resort Areas

Improve and develop sports facilities in the respective resort areas. Prospective facilities are :

- Golf course
- Diving facilities in Shimoni and Funzi, and
- Marine sports centres (a facility that provides various marine sports menus) in each tourism promotion zone.

e. Improvement of Water Supply

As water supply actually constraints tourist capacity as well as tourists' satisfaction in the coast, its improvement must have the first priority.

f. Directions for Specific Areas

Mombasa South Tourism Area

Funzi and Shimoni should be more nature-based resort areas contrasting with Diani and Tiwi, which are proposed as the core of the Coastal Tourism Region.

Lamu Tourism Area

The area is less convenient from international airports compared with other areas of the region. However, since it has a competitive tourism objective of Swahili old town, the future target market should be more upper-market and culturally motivated tourists than in other areas of the region. The resort area is designated outside of the old town so as to conserve the historical townscape.

4.4.4. Wildlife and Nature Tourism

(1) Development Directions

Wildlife in the Coastal Tourism Region is characterised by mangroves and corals on the coast and games in national parks and reserves in the hinterland. Adaptation to the global trend for nature-based tourism would be an important issue for the region to tackle, and mangrove cruise and boat trips are proposed as a principal new attraction of the region.

Since inland parks and reserves tend to suffer from congestion in the tourist seasons, those in the hinterland as well as Tsavo National Parks should absorb some portion of wildlife tourism demand from the coast.

(2) Measures

a. Introduction of Ecotourism Attractions

Introduce new attractions based on the concept of ecotourism to further improve the attractions in the beach resort area. Also noted is that these attractions could be managed even by small local enterprises and serve social development.

- Introduction of mangrove cruise in Manda and Lamu, and construction of mangrove observation facility
- Introduction of boat safaris in the creeks in Kilifi and Watamu
- Introduction of Turtle spawning for observation
- Robinson Crusoe tour on a deserted island (survival experience), and
- Swimming raft (a huge raft floating off-shore that make swimming easy in shallow coral areas).

b. Better Utilisation of Hinterland Parks and Reserves

Improve the park facilities of Shimba Hills National Reserve, Arabuko Sokoke National Park, Boni/Dodori National Reserves and access to Tsavo National Parks from Malindi.

4.4.5. Indian Ocean Cruise

(1) Outline and Objectives

Introduction and enhancement of Indian Ocean Cruises will enhance the gateway function of Mombasa, as is the case with the introduction of Rail Safari. The fact that cruise ship tourism is an upper market segment is an incentive for Kenyan tourism that seeks to shift her tourism demand in that direction.

(2) Measures

a. Introduction of Mombasa-Zanzibar-Madagascar-Seychelles-Lamu Cruise

The prospect cruise route is supposed to be Mombasa - Zanzibar - Madagascar - Seychelles - Mombasa as already initiated by a few cruise ship companies. Mombasa is the most suitable base for the cruise ship taking into account the port and airport capacity. From a long-term perspective, Lamu could be added to the itinerary, since the town has fascinating cultural tourism resources.

b. Improvement of Port Facilities and Services

As Mombasa is the prospective home port for cruise ships, port development must consider the requirements from tourists and cruise ship companies. Beautification of the port area and hospitable immigration procedure is important for the former, while efficient supply of fuel, water and food is important for the latter.

c. Enhancement of Port Sales toward Cruise Ship Companies

Port sales activities toward cruise ship companies need to be enforced with the improvement of port facilities and services.

4.4.6. Rail Safari

Introduction of luxurious rail safari from Mombasa to Kitale will enhance the gateway function of Mombasa city, and serves to attract after-safari tourists for a rest and to relax on the coast. Details have been discussed in Chapter 2.

4.4.7. Swahili Ruins and Monuments

(1) Development Directions

The Coastal Tourism Region abounds in ruins and monuments related to the Swahili culture. They can be utilised for day-trip attractions for those, who stay at a beach resort.

(2) Measures

a. Development/Improvement of "Museum Parks"

Develop the areas around historical ruins and monuments as parks for better conservation and tourists' appreciation.

4.4.8. Convention, Seminar & Incentive Tourism

(1) Development Directions

The Coastal Tourism Region could be another convention centre of Kenya rivalling Nairobi. The region should consider a way to differentiate convention demand to the coast from that of Nairobi.

(2) Measures

As the region abounds in luxurious resort hotels that could be used for small to medium sized conventions, no facility is planned for the region.

a. Concentration on "Incentive Convention" Market

The region has a strength over Nairobi in the "incentive convention" segment, typically represented by commendation ceremonies for efficient employees, as this type of convention is preferably held at resort areas.

b. Establishment of a Local Convention Bureau

The convention bureau should be tasked to promote convention tourism to the region. The local government should establish a convention bureau that promotes convention tourism both, domestic and international.

4.5. Tourism Facilities Development Plan

4.5.1. Tourism Products Related Facilities

To facilitate the tourism products identified in the preceding section, several programmes for improving and upgrading existing promotional activities, the institutional set-up and organisations, infrastructure and facilities projects for supporting tourism products are necessary. Table 4. 3. shows the proposed programmes and projects for each of the tourism products in the Coastal Tourism Region.

Table 4.3 Formulation of Programmes and Projects of Tourism Products for the Coastal Tourism Region(1)

No.	Products	Description	Location	Resources to be Utilised	Necessary Programme and Project	
					Institutional/ Promotional Programmes	Infra. & Facility Project
Coastal Tourism Region						
CO-HP-1	Jumba la Mwapa Historical Park Development	Promoting visitors by improving historical site and attaching tourist facilities	North Mombasa	Jumba la Mwapa Ruins	Ruins Conservation Project, Visitor Facilities Development	Visitor Facilities Development
CO-HP-2	Mbarani Historical Park Development	Promoting visitors by improving historical site and attaching tourist facilities	Malindi	Mbarani Ruins	Ruins Conservation Project, Visitor Facilities Development	Visitor Facilities Development
CO-HP-3	Gezi Historical Park Development	Promoting visitors by improving historical site and attaching tourist facilities	Malindi	Gezi Ruins	Ruins Conservation Project, Visitor Facilities Development	Visitor Facilities Development
CO-HP-4	Mgungu Historical Park Development	Promoting visitors by improving historical site and attaching tourist facilities	Malindi	Mgungu Ruins	Ruins Conservation Project, Visitor Facilities Development	Visitor Facilities Development
CO-HP-5	Vasco da Gama Pillar Park Development	Promoting visitors by improving historical site and attaching tourist facilities	Malindi	Vasco da Gama Pillar, sea, cliff	Ruins Conservation Project, Visitor Facilities Development	Visitor Facilities Development
CO-HP-6	Jamandani Historical Park Development	Promoting visitors by improving historical site and attaching tourist facilities	Malindi	Jamandani Ruins	Ruins Conservation Project, Visitor Facilities Development	Visitor Facilities Development
CO-HP-7	Kilifi Historical Park Development	Promoting visitors by improving historical site and attaching tourist facilities	Kilifi			
CO-HP-8	Re-development of Mombasa Old Port	Re-developing Mombasa old port and utilising it as a tourism attraction	Mombasa (Mombasa Town)	Mombasa old port	Building Conservation Programme	
CO-HP-9	Conservation of Mombasa Old Town	Conserving old Islamic townscape of Mombasa old town to utilise it as a tourism attraction	Mombasa (Mombasa Town)	Mombasa old town	Building Conservation Programme	
CO-HP-10	Conservation of Traditional Village Landscape	Conserving traditional rural landscape with traditional style houses to utilise them as a tourism attraction	South Mombasa	Villages along the south Mombasa Coast	Village Conservation Programme	
CO-HP-11	Conservation of Lamu Old Town	Conserving old Islamic townscape of Lamu old town to utilise it as a tourism attraction	Lamu	Lamu old town	Building Conservation Programme	
CO-MU-1	Improvement of Fort Jesus Museum	Improving Museum	Mombasa (Mombasa Town)	Fort Jesus Museum		Aquarium Development Project, Visitor Facilities Development
CO-MU-2	Development of New Museum at Lamu	Developing a new museum at Lamu town	Lamu	Old colonial architecture		Museum Improvement, Visitor Facilities Development
CO-NP-1	Improvement of Shimba Hill National Park	Providing visitor supporting facilities	South Mombasa	Shimba Hill National Park		Tourist Centre, Visitor Amenity Facilities
CO-NP-2	Improvement of Arabuko Sokoke National Park	Providing visitor supporting facilities	Malindi	Arabuko Sokoke National Park		Visitor Amenity Facilities
CO-NP-3	Improvement of Tsavo East National Park	Providing visitor supporting facilities	Malindi	Tsavo East National Park		Visitor Amenity Facilities
CO-NP-4	Improvement of Boni National Park	Providing visitor supporting facilities	Northern Coast	Boni National Park		Visitor Amenity Facilities
CO-NP-5	Improvement of Doodoi National Park	Providing visitor supporting facilities	Northern Coast	Doodoi National Park		Visitor Amenity Facilities
CO-NP-6	Improvement of Malindi Marine National Park	Providing visitor supporting facilities	Malindi	Malindi Marine National Park		Tourist Centre
CO-WF-1	Improvement of View Point at Gansu					Tourist Wayside Facility Area Development
CO-WF-2	Improvement of View Point at Malindi					Tourist Wayside Facility Area Development
CO-VA-1	Promotion of Robinson Crusoe Tour	Promoting new tour as a eco-tourism	South Mombasa	Islands	Formulation of tour	Visitor Amenity Facilities

Source: JICA Study Team

Table 4.3 Formulation of Programmes and Projects of Tourism Products for the Coastal Tourism Region (2)

No.	Products	Description	Location	Resources to be Utilised	Necessary Programme and Project	
					Institutional/ Promotional Programmes	Infra. & Facility Project
CO-AT-1	Introduction of Rail Safari	Promoting tourism use of railway by introducing luxurious trains and special diagram	Mombasa (Mombasa Town)	Railway, rail station, scenery, NP & NR	Tourism Train Introduction Programme	Introduction of luxurious and special design coaches, Railway Track Improvement Project
CO-AT-2	Promotion of Kanga Products	Promoting tourism use of Kanga products by improving design and variety	Mombasa (Mombasa Town)	Kanga	Art Improvement Programme, Training Programme	
CO-AT-3	Introduction of Turtle's Breeding Watching	Promoting new tour as a eco-tourism	Northern Coast	Turtle	Manner Improvement Programme, Designation of watching spots	
CO-SP-1	Mangrove Safari at Manda Island	Promoting new tour as a eco-tourism	Lamu	Mangrove, forest, wildlife	Formulation of tour route	Walking Path and Deck Development Project
CO-SP-2	Introduction of Mombasa Cruise	Introducing cruising tour by providing marina facilities	Mombasa (Mombasa Town)	Sea, islands, fishing	Formulation of Cruising route	Marina Development Project
CO-SP-3	Introduction of Shimoni Cruise	Introducing cruising tour by providing marina facilities	South Mombasa	Sea, islands, fishing	Formulation of Cruising route	Marina Development Project
CO-SP-4	Introduction of Kilifi Cruise	Introducing cruising tour by providing marina facilities	Malindi	Sea, islands, fishing	Formulation of Cruising route	Marina Development Project
CO-SP-5	Introduction of Lamu Cruise	Introducing cruising tour by providing marina facilities	Lamu	Sea, islands, fishing	Formulation of Cruising route	Marina Development Project
CO-SP-6	Promotion of Fungi Diving	promoting diving by providing related facilities	South Mombasa	Coral, fish	Divers Manner Improvement Programme, Designation of Diving spots	
CO-SP-7	Introduction of Turtle's Breeding Watching	Promoting new tour as a eco-tourism	South Mombasa	Turtle	Manner Improvement Programme, Designation of watching spots	
CO-SP-8	Creek Boat Safari	Promoting new tour as a eco-tourism	North Mombasa	Mangrove, wildlife	Formulation of tour	
CO-SP-9	Creek Boat Safari	Promoting new tour as a eco-tourism	Malindi	Mangrove, forest, wildlife	Formulation of tour	
CO-SP-10	Introduction of Turtle's Breeding Watching	Promoting new tour as a eco-tourism	Malindi	Turtle	Manner Improvement Programme, Designation of watching spots	
CO-SP-11	Introduction of Mangrove Safari at Manda Island	Promoting new tour as a eco-tourism	Lamu	Mangrove, forest, wildlife	Formulation of tour route	Walking Path and Deck Development Project
CO-SP-12	Introduction of Turtle's Breeding Watching	Promoting new tour as a eco-tourism	Lamu	Turtle	Manner Improvement Programme, Designation of watching spots	
CO-BT-1	Improvement of Tourist Amenity at Mombasa	Creating appropriate atmosphere to tourists and providing information facilities	Mombasa (Mombasa Town)	Mombasa City		Beautification
CO-BT-2	Improvement of Tourist Amenity at Malindi	Creating appropriate atmosphere to tourists and providing information facilities	Malindi	Malindi City		Beautification
CO-BT-3	Improvement of Tourist Amenity at Lamu	Creating appropriate atmosphere to tourists and providing information facilities	Lamu	Lamu Town		Beautification
CO-FU-1	Utilisation of Swahili Seafood Distribution at Shimo la Tewa	Promoting tourism use of seafood		seafood	Fisherman Group's tourism Participation Programme New Cuisine Development Programme Education Programme Goods Distribution Improvement Programme Fisherman Group's tourism Participation Programme	Ice Supply Terminal, Cooler Box Instruction
CO-FU-2	Utilisation of Salt Water Fish at Malindi	Promoting tourism use of seafood		seafood	New Cuisine Development Programme Education Programme Goods Distribution Improvement Programme	Ice Supply Terminal, Training Facilities Development

Source: JICA Study Team

Table 4.3 Formulation of Programmes and Projects of Tourism Products for the Coastal Tourism Region (3)

No.	Products	Description	Location	Resources to be Utilised	Necessary Programme and Project	
					Institutional/Promotional Programmes	Infra. & Facility Project
CO-FU-3	Utilisation of Salt Water Fish at Wazamtu	Promoting tourism use of seafood		seafood	Fisherman Group's Tourism Participation Programme New Cuisine Development Programme Education Programme Goods Distribution Improvement Programme	Ice Supply Terminal
CO-FU-4	Utilisation of Salt Water Fish at Kilifi	Promoting tourism use of seafood		seafood	Fisherman Group's Tourism Participation Programme New Cuisine Development Programme Education Programme Goods Distribution Improvement Programme	Ice Supply Terminal
CO-FU-5	Utilisation of Salt Water Fish at Diani	Promoting tourism use of seafood		seafood	Fisherman Group's Tourism Participation Programme New Cuisine Development Programme Education Programme Goods Distribution Improvement Programme	Ice Supply Terminal
CO-FU-6	Improvement of Swahili Seafood	Promoting tourism use of seafood		seafood	Fisherman Group's Tourism Participation Programme New Cuisine Development Programme Education Programme Goods Distribution Improvement Programme	Cold Storage Project Training Facilities Improvement Project
CO-IN-1	Development of Diani/Tiwi New Beach Resort	Developing tourist base for long-term stay	South Mombasa	Diani beach, Tiwi Beach, coral	Land Use Control Programme (introduction of Tourism Promotion Zone), Commercial and Public facilities Development Programme	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IN-2	Development of Fuji Marine Resort	Developing tourist base for long-term stay with marine sports facilities	South Mombasa	Fuji beach, coral, fish	Land Use Control Programme (introduction of Tourism Promotion Zone), Commercial and Public facilities Development Programme, Divers Manner Improvement Programme, Designation of Diving spots	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IN-3	Development of Shimoni Marine Complex	Developing tourist base for long-term stay with marine sports facilities	South Mombasa	beach, Washini island, coral	Land Use Control Programme (introduction of Tourism Promotion Zone), Commercial and Public facilities Development Programme, Divers Manner Improvement Programme, Designation of Diving spots	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IN-4	Improvement of Nyali Beach Resort	Providing commercial and public facilities to improve the existing beach resort	North Mombasa	Nyali Beach	Land Use Control Programme (introduction of Tourism Promotion Zone), Effluent Control Programme, Commercial and Public facilities Development Programme	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IN-5	Improvement of Kenyatta Beach-Resort	Providing commercial and public facilities to improve the existing beach resort	North Mombasa	Kenyatta Beach	Land Use Control Programme (introduction of Tourism Promotion Zone), Effluent Control Programme, Commercial and Public facilities Development Programme	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IN-6	Improvement of Mtwapa Beach Resort	Providing commercial and public facilities to improve the existing beach resort	North Mombasa	Mtwapa Beach	Land Use Control Programme (introduction of Tourism Promotion Zone), Effluent Control Programme, Commercial and Public facilities Development Programme	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IN-7	Development of Kilifi Marine Resort	Developing new marine resort with marine sports facilities	Malindi	Kilifi Bay	Land Use Control Programme (introduction of Tourism Promotion Zone), Commercial and Public facilities Development Programme	Infrastructure Provision Project for Tourism Promotion Zone New Marina Development Project
CO-IN-8	Development of Wazamtu New Beach Resort	Developing tourist base for long-term stay	Malindi	Beach, coral, fish	Land Use Control Programme (introduction of Tourism Promotion Zone), Commercial and Public facilities Development Programme, Divers Manner Improvement Programme, Designation of Diving spots	Infrastructure Provision Projects for Tourism Promotion Zones

Source: JICA Study Team

Table 4.3 Formulation of Programmes and Projects of Tourism Products for the Coastal Tourism Region (4)

No.	Products	Description	Location	Resources to be Utilised	Necessary Programme and Project	
					Institutional/ Promotional Programmes	Infra. & Facility Project
CO-IV-9	Improvement of Malindi Resort Complex	Developing tourist base for long-term stay with marine sports facilities	Malindi	Beach, coral, fish	Land Use Control Programme (introduction of Tourism Promotion Zone), Commercial and Public facilities Development Programme	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IV-10	Development of Manda Marine Resort	Developing tourist base for long-term stay with marine sports facilities	Lamu	Beach, mangrove, wildlife	Land Use Control Programme (introduction of Tourism Promotion Zone), Commercial and Public facilities Development Programme	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IV-11	Development of Lamu Beach Resort	Developing tourist base for long-term stay	Lamu	Beach, mangrove, wildlife	Land Use Control Programme (introduction of Tourism Promotion Zone), Commercial and Public facilities Development Programme	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IV-12	Development of Pate Island Resort	Developing tourist base for long-term stay	Lamu	Beach, mangrove, wildlife	Land Use Control Programme (introduction of Tourism Promotion Zone), Commercial and Public facilities Development Programme	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IV-13	Development of Kiunga Marine Safari Resort	Developing tourist base for long-term stay with marine sports facilities	Northern Coast	Beach, coral, wildlife	Land Use Control Programme (introduction of Tourism Promotion Zone), Commercial and Public facilities Development Programme	Infrastructure Provision Projects for Tourism Promotion Zones
CO-IV-14	Promotion of Conferences with Resort	Promoting conference tourism with beach resort.	Mombasa (Mombasa Town)		Hotel Conferences Promotion Programme	

Source: JICA Study Team

4.5.2. Accommodation Facilities

In accordance with the framework presented in Table 4.4, the required number of rooms are determined. The accommodation facilities are roughly classified into three classes, which are high class, medium class and low class.

Table 4.4 Number of Rooms Required in the Coastal Tourism Region

Tourism Region	Class	-2000	-2005	-2010	Total	
		Increase No of Rms	Increase No of Rms	Increase No of Rms	Increase No of Rms	%
Coastal	High	913	1,542	1,486	3,942	26
	Med	1,595	2,692	2,595	6,883	46
	Low	955	1,612	1,554	4,121	28
	Total	3,460	5,840	5,630	14,930	

Source: JICA Study Team

4.5.3. Tourist Service Facilities

The following tourist service facilities are proposed in the Coastal Tourism Region. A detailed development concept and proposed facility are discussed in Chapter 5 of Volume 1.

- Visitor Facilities Development Project
- Visitor Amenity Facilities Project
- Tourist Centre Project
- Tourist Wayside Facility Area Development Project
- City Beautification Project.

Table 4.5 Tourist Service Facilities in the Coastal Tourism Region

	Number of Projects
Visitor Facilities Development Project	8
Visitor Amenity Facilities Project	5
Tourist Centre Project	2
Tourist Wayside Facility Area Development Project	2
City Beautification Project	3

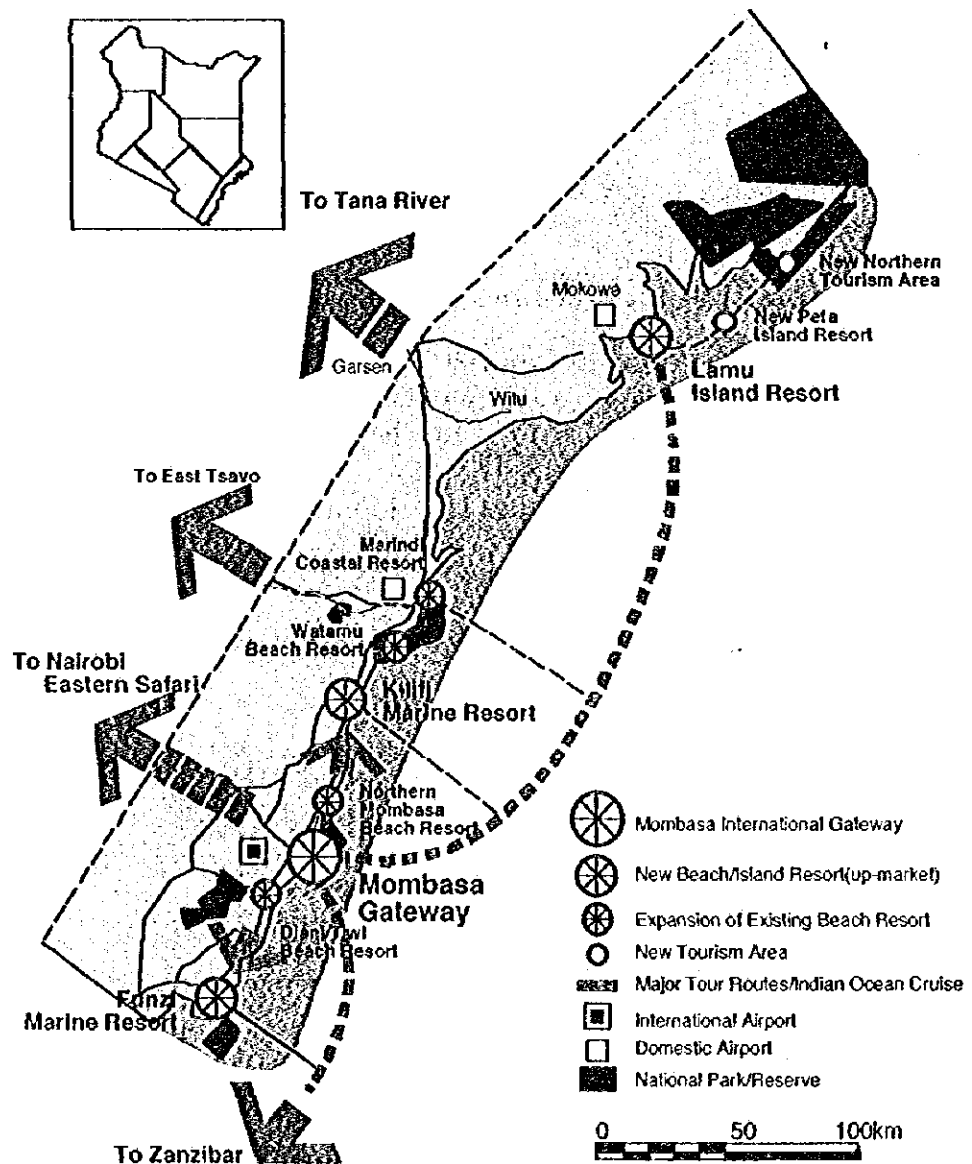
Source: JICA Study Team

4.6. Spatial Structure and Priority Tourism Areas

4.6.1. Spatial Tourism Structure and Development Scenario

Figure 4.3 shows the spatial structure of the Coastal Tourism Region. It has been formulated based on tourism resources, environmental conditions, transport network and utilities' availability. It consists of major tour routes, tourism cores and spheres of tourism activities.

Figure 4.3 Spatial Structure of the Coastal Tourism Region



Source: JICA Study Team

The transportation network, water supply, sewerage and power supply to support the tourism cores are planned based on this structure.

4.6.2. Tourism Areas in the Coastal Tourism Region

(1) Characteristics of the Tourism Areas

Based on the tourism product development strategy for the Coastal Tourism Region, suitability of tourism areas for respective development directions are identified as shown in Table 4. 6.

Table 4. 6 Tourism Areas in the Coastal Tourism Region

NO.	Development Direction	Tourism Area name				
		South Mombasa Coast	Mombasa Coast	Malindi Coast	Lamu Coast	Northern Coast
1	Enhancement of cultural attraction (swahili culture)	●	●	●	●	
2	Enhancement of government attraction	●	●	●	●	
3	Expansion of existing beach resort area	●	●	●	●	
4	Enhancement of Mombasa's gateway function		●			
5	Adoption of eco-tourism style attractions	●		●	●	●

Source : JICA Study Team

(2) Accommodation Concentration Level

Appropriate percentages of accommodation facilities to be located within the tourism core(s) of each tourism area are determined as shown in Table 4. 7.

Table 4. 7 Accommodations Concentration Level

Tourism Area	Accommodation facilities		Utilities in Tourism Core		
	* Accommodation concentration level	**Number of rooms located inside the core(s)	Water supply	Sewerage	Power supply
South Mombasa Coast	0.5	4000-4500	P/I	P/I	P/I
Mombasa Coast	0.9	6000-7000	P	P	P
Malindi Coast	0.9	8000-8200	P	P	P
Lamu Coast	0.4	1000-1200	P/I	P/I	P/I
Northern Coast	0	0	I	I	I

Note : P - connect to public line, I - provide individually

* - Type of accommodations are Hotels and Lodges only, ** - Number of rooms in year 2010

JICA Study Team

The supporting infrastructure for the tourism cores are planned based on the scale of the tourism cores calculated from these accommodation concentration levels. It has to be noted that no concentration (0 %) means that all the accommodation are located in a dispersed manner, but a service town or centre will be available in the tourism area.

4.6.3. Priority Development Tourism Area

Five (5) tourism areas are designated in the Coastal Tourism Region. The Tourism Areas are evaluated considering the potential development of the tourism core. The evaluation result of the designated tourism areas are summarised in Table 4.8.

Table 4.8 Tourism Areas in the Coastal Tourism Region

NO.	South Mombasa Coast	Mombasa Coast	Malindi Coast	Lamu Coast	North Coast
1 Suitability for resort accommodation	2	2	3	2	1
2 Environmental stability	2	3	3	1	1
3 Accessibility to major tourism products	2	3	2	2	2
4 Contribution to up-market shift	3	2	2	3	3
5 Contribution to rural employment	3	2	3	2	1
Total score	12	12	13	10	8

Source: JICA Study Team

The results of the evaluation indicate that the Malindi Coast has the highest development potential. The South Mombasa Coast has also a high potential. The Lamu Coast and North Coast indicate less potential, because of environmental constraints and water supply problems. Although efforts will be made for the diversification of tourists' destinations away from the coastal area to the inland area, the demand on accommodation expansion in this region will remain still quite high. The South Mombasa Coast, Malindi Coast and Lamu Coast are selected for priority development tourism areas.

Tourism core development at the Malindi Coast will be resort development to expand accommodation capacity with the integration of cultural attractions. The South Mombasa Coast and Lamu Coast will be developed as beach resorts attached with eco-tourism style attractions.