

**Environmental and Social Considerations in Detailed Planning Survey
(Technical Cooperation for Development Planning)**

1. Full title of the Project

Project for Formulation of Master Plan on Logistics in Northern Economic Corridor

2. Type of the study (e.g. Master Plan, Feasibility Study, Detailed Design, etc.)

Master Plan

3. Categorization and its reason

(1) Category: B

(2) Reason:

The project is not likely to have significant adverse impact on the environment under the JICA Guidelines for Environmental and Social Consideration (April, 2010) in terms of its sectors, characteristics and areas.

4. Agency or institution responsible for the implementation of the project

Ministry of Transport and Infrastructure (Kenya), KMOTI

Ministry of Works and Transport (Uganda), UMOWT

5. Outline of the Project (objectives, justification, location, proposed activities, and scope of the study)

5.1. Objectives

The objective of the Project is to formulate logistics and regional development master plan along the Northern Economic Corridor.

5.2. Location

Northern Corridor and its vicinity area in Kenya and Uganda.

5.3. Scope of the Project

(1) Formulation of integrated regional development strategies

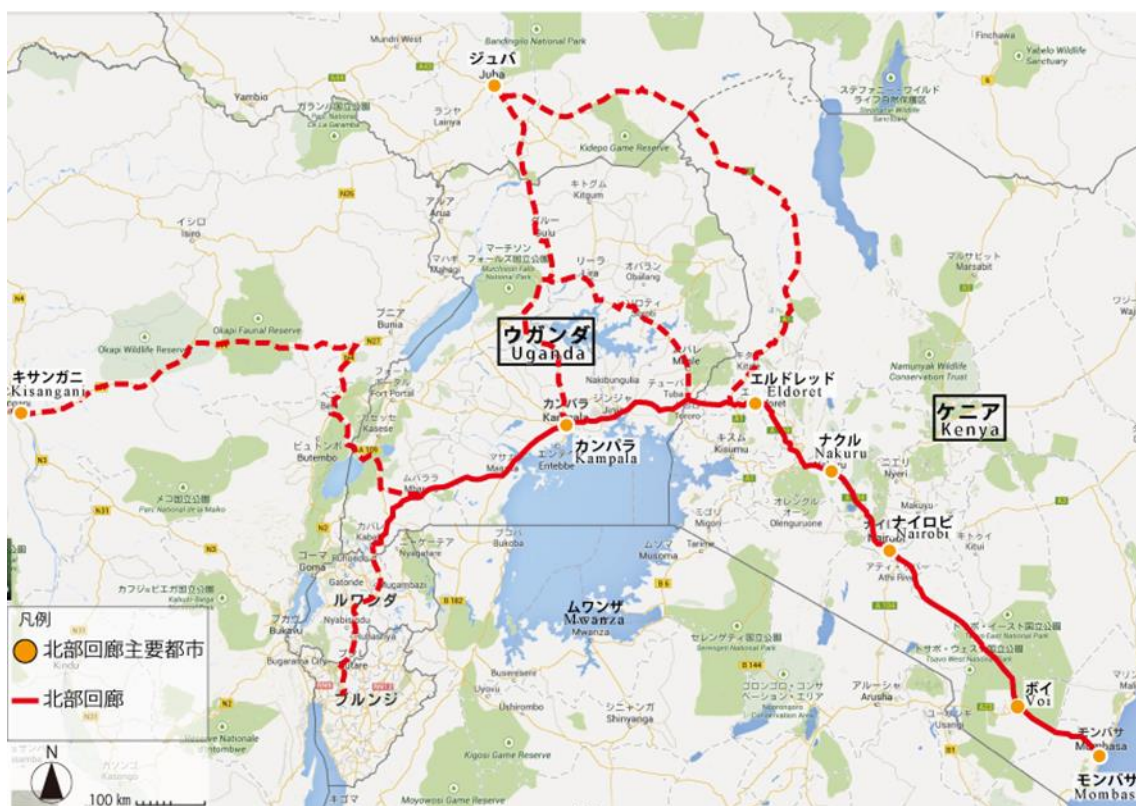
(2) Formulation of Master Plan on Logistics in Northern Corridor composed of optimized transport system and regional development

(3) Recommendation of measures to complement on-going and planned development project

- (4) Prioritization of existing and proposed development projects of Sub-regional and country level
- (5) Holding of international seminars and individual meetings to share the progress, get input and feedback from the stakeholders including the private sector, and results of the Project

6. Description of the project site (maps, environmental and social condition, current issues, etc.)

6.1. Location Map of Project Site



6.2. Environmental condition

Half of populations within Kenya and Uganda, approximately 36.8 million people, live in the Corridor region. In addition, protected areas and national parks are located along the Corridor, and attract many tourists visiting both countries. General environmental conditions in Kenya and Uganda are as follows.

(1) Kenya

Kenya is located in eastern Africa under the equator, facing to Indian Sea, adjacent to Somalia on east, to Ethiopia and South Sudan on north, to Uganda on west, and to Tanzania on south. High plateau with altitude of over 1,200m dominates most of Kenyan lands although geographical feature varies from narrow coastal plain on south east, to increasing altitude on west. The largest lake in Africa, Victoria Lake is located in between Uganda, Tanzania and Kenya. Agriculture is very popular in the high plateau, especially irrigated agriculture in Victoria Lake basin. Northern part of Kenya is dry region. Mombasa port is the largest port in Kenya, also operated as trade ports for the inland countries. Climate in Kenya is mostly warm and dry although 2 rainy seasons in a year.

(2) Uganda

Uganda is an inland country adjacent to Kenya on east, to Tanzania on south, Rwanda on southwest, to Democratic Republic of Congo on west, and to South Sudan on north. There are many lakes and wetlands in the national lands with approximately 15% of the Ugandan area. Precipitation in Uganda is 1,000mm per year, which is largest in eastern Africa. Most of the lands are located on high plateau with altitude 1,200mm, and climate is generally warm although it depends on locations. Capital City Kampala is hilly with wetlands in low area. Climate in the mountain region located in western Uganda is unstable with low temperature at night and in the morning. It rains all year in southern Uganda, but dry season continues in Northern Uganda.

6.3. Current issues

The Northern Corridor is a multi-modal corridor, encompassing road, rail, pipeline and inland waterways transport, and a significant corridor for logistics in East Africa. The main road network runs from Mombasa Sea Port through Kenya and Uganda to Rwanda, Burundi and to Democratic Republic of Congo. The road network also links Kenya and Uganda to Juba in South Sudan. The importance of the Northern Corridor is

increasing and the current combined transit and transshipment traffic through the Corridor has been growing at a rate of 20 percent annually.

However, there are some obstacles in Northern Corridor, such as inadequate infrastructure, poor interconnectivity of modes, stagnations of cargo at the port and border post, and lack of goods to transport for the return trip from the inland area to Mombasa port. They raise transport cost within the Corridor, which accounts for about 30 percent of the value of goods. The high transport cost is one of the obstructive factors to promote economic development of the region, especially inland area.

7. Legal Framework of Environmental and Social Considerations

7.1. Laws, Regulations and Relative agencies and institutions

(1) Laws and Regulations

1) Kenya

Environmental Management Coordination Act (EMCA) was established in 1999 to strengthen the legal and institutional framework for environmental management. Under EMCA, various regulations concerning implementation of Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA), and Environmental Audit (EA), and management activities for air, water, wastes, and noise, to protect environment. Other regulations related to environmental consideration include wildlife conservation, forest management, water resources management, and health and safety for workers.

The basic idea and principle of social considerations are mentioned in the new constitution 2010. It is clearly mentioned that vulnerable groups within society including women, older members of society, persons with disabilities, children, youth, members of minority or marginalized communities, and members of particular ethnic, religious or cultural communities is considered. According to the constitution, "marginalized community" means (a) a community that, because of its relatively small population or for any other reason, has been unable to fully participate in the integrated social and economic life of Kenya as a whole, (b) a traditional community that, out of a need or desire to preserve its unique culture and identity from assimilation, has remained outside the integrated social and economic life of Kenya as a whole, (c) an indigenous community that has retained and maintained a traditional lifestyle and livelihood based on hunter or gatherer economy, or (d) pastoral persons and communities.

Kenya's land system defines 3 types of land: Public Land, Community Land, and Private Land. Laws and regulations related to land have been drastically integrated or newly formulated. In principle, National Land Commission is

responsible for land acquisition and resettlement on public projects on behalf of the central and local governments.

2) Uganda

National Environment Act (NEA), established in 1995, is grounds for implementation of Environmental Impact Assessment (EIA). In accordance with Paragraph 107 in NEA, Environmental Impact Assessment Regulations is established in 1998.

Land Act 1998 stipulates land holding, control of land use, land management, and conflict resolution. All land in Uganda shall vest in the citizens of Uganda and shall be owned in accordance with the following land tenure systems: customary, freehold, *Mailo*, and leasehold. Currently 80% of Ugandan land is Customary, which is rarely surveyed and has no title. The remaining 20% of the land, mostly *Mailo* land, has been surveyed and had land title. Under Paragraph 42 of LEA, the Government or a local government may acquire land in accordance with articles 26 and 237(2) of the Constitution. The detail procedure for the acquisition is stated in Land Acquisition Act.

(2) Related agencies and institutions

1) Kenya

NEMA is established under EMCA, as principal instrument of government in the implementation of all policies relating to the environment. One of the departments, Department of Compliance and Enforcement is responsible for pollution control through formulation of regulations, setting up standards, issuance of licenses or permits to operators, and issuances of EIA and SEA licenses after its review.

2) Uganda

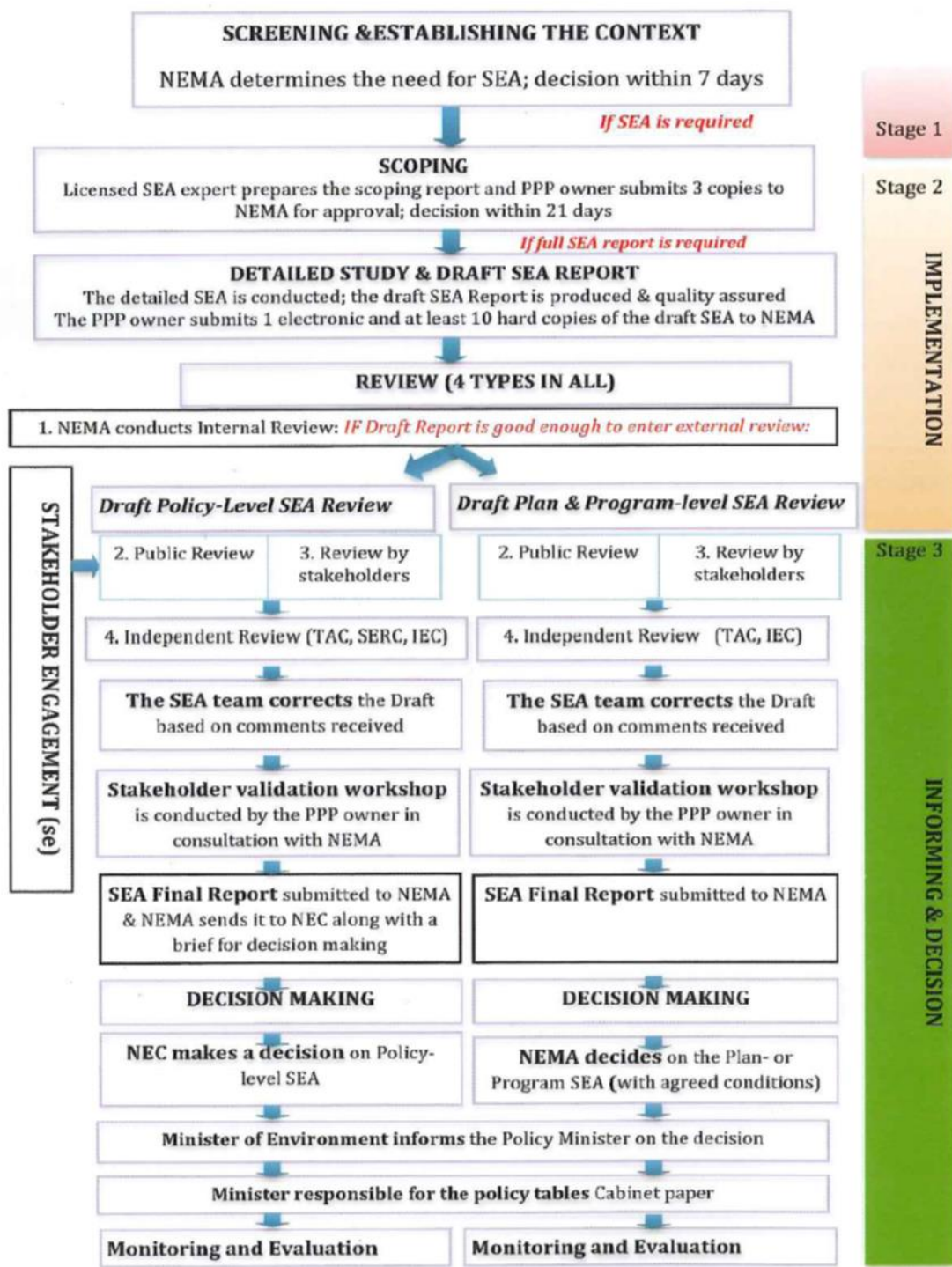
The National Environment Act (NEA) stipulates the Mandate of NEMA as the principal Agency in Uganda responsible for the management of the environment by coordinating, monitoring, regulating, and supervising all activities in the field of environment. One of the department, Department of Environment Monitoring and Compliance implements environmental monitoring and compliance of the regulated community. It ensures effective implementation of procedures and guidelines and provides technical guidance in the area of Environment Impact Assessment (EIA); carries out environmental audits and inspections to ensure compliance with environmental standards and regulations.

7.2. Procedures of EIA, stakeholder participation and information disclosure

(1) SEA

1) Kenya

NEMA has formulated the National Guidelines for SEA to show the basic steps and how to integrate environmental issues into policies, plans, and programs through a rigorous stakeholder engagement process. The latest version of the guidelines released in 2012, shows following SEA procedures.



2) Uganda

Implementation of SEA is not regulated under Ugandan laws or regulations. According to NEMA, a SEA guideline has been under development and the establishment of new SEA regulation is expected in late 2015.

(2) EIA

1) Kenya

Environmental Impact Assessment Guidelines and Administrative Procedures were developed in Kenya in 2002, and sectoral guidelines are now under development. EIA system in Kenya does not show significant gaps with World Bank's safeguards and Japanese EIA system. The second schedule of EMCA lists project types, and any project proponent need to submit a project report (similar to IEE) to NEMA. After its review, NEMA determines if the proposed project is subject to undertake EIA or not. However, specific criteria used for the determination on the necessity of EIA are not clear.

2) Uganda

In 1997, NEMA developed Guidelines for Environmental Impact Assessment in Uganda. The guideline explains Uganda's world-standard EIA process, including screening, scoping, and implementation of public consultation. Sectoral guidelines for mineral resource development, forestry, fisheries, agriculture, telecommunication, roads were also developed in consultation with relevant ministries and agencies.

8. Provisional Scoping (types and magnitudes of possible adverse impacts and mitigation measures)

The provisional scoping on possible environmental and social impacts related to the formulation of the regional development master plan is shown below.

Category	No.	Item		Possible Impacts					Description
				Logistics infrastructure	Agriculture	Industry	Tourism	Mineral Resources	
Pollution	1	Air Pollution	Construction Phase	B	B	B	B	B	<p>Construction Phase: Exhaust gas from construction vehicles and heavy equipment may increase during construction works.</p> <p>Operation Phase: Local air pollution may be improved associated with the ease of traffic congestion by implementation of projects under the Master Plan. If infrastructure and industrial development is implemented, air quality may be affected negatively.</p>
			Operation Phase	B	D	B	B	B	
	2	Water Pollution	Construction Phase	B	B	B	B	B	
			Operation Phase	B	B	B	B	B	
	3	Waste	Construction Phase	B	B	B	B	B	
			Operation Phase	B	B	B	B	B	
	4	Soil Contamination	Construction Phase	B	C	C	C	C	
			Operation Phase	B	B	B	D	B	

Category	No.	Item		Possible Impacts					Description
				Logistics infrastructure	Agriculture	Industry	Tourism	Mineral Resources	
	5	Noise and Vibration	Construction Phase	B	B	B	B	B	Construction Phase: Noise and vibration may occur due to construction vehicles and heavy equipment operation.
			Operation Phase	B	D	B	D	B	Operation Phase: Railway, truck operation, and industrial operation, and mineral resources development may produce noise and vibration.
	6	Ground Subsidence	Construction Phase	D	D	D	D	D	Operation Phase: Over-loaded truck operation may cause tilted road. If groundwater is pumped excessively for industrial, agricultural and domestic use, ground subsidence may occur.
			Operation Phase	B	C	C	C	B	
	7	Offensive Odor	Construction Phase	D	D	D	D	D	Operation Phase: Animal industry and Livestock facility, agricultural fertilizer, chemicals such as ammonium may produce offensive odor.
			Operation Phase	D	B	B	D	C	
	8	Bottom Sediment	Construction Phase	B	C	C	C	C	Construction Phase: If port development is initiated, dredging and sediment disturbance may occur. Discharged sediments associated with land reclamation construction works may impact on river and wetland bottom characteristics.
			Operation Phase	B	C	C	D	C	Operation Phase: Hazardous chemical release from ships may give negative impact on bottom sediment. If industrial and agricultural operation is implemented nearby water bodies, its effluent may give adverse impact.
Natural Environment	9	Protected Areas	Construction Phase	C	C	C	C	C	Construction Phase: Depending on location of infrastructure, facility, and land development, land reclamation and construction work may cause destruction of protected areas and ecosystem. Operation Phase: Railway and road operation, fencing industrial properties may disturb animal's migration pathway.
			Operation Phase	C	C	C	C	C	

Category	No.	Item		Possible Impacts					Description
				Logistics infrastructure	Agriculture	Industry	Tourism	Mineral Resources	
	10	Hydrology	Construction Phase	C	C	C	C	B	Construction Phase: Land reclamation and construction work nearby water body may cause hydrological changes.
			Operation Phase	C	B	C	C	B	Operation Phase: : Excessive water use in irrigation and other development may affect water resources amount. If mineral resources development is implemented, mining may affect groundwater hydrology.
	11	Topography and Geographical Features	Construction Phase	C	B	C	C	C	Construction Phase: Land reclamation may change topography and geographical features.
			Operation Phase	D	D	D	D	B	Operation Phase: If large-scale mineral resource development is implemented, it may change topography and geographical features.
Social Environment	12	Involuntary Resettlement and Land Acquisition	Construction Phase	C	C	C	C	C	Construction Phase: Involuntary resettlement and land acquisition may occur associated with infrastructure and facility development. Such action should be avoided, mitigated and compensated properly
			Operation Phase	D	D	D	D	C	
	13	The Poor, Minority, and Indigenous Peoples	Construction Phase	C	C	C	C	C	Construction and Operation Phase: Slums exist in large cities, and the poor, minority and indigenous peoples may live along the Corridor. They should be considered in the master plan planning for proper protection.
			Operation Phase	C	C	C	C	C	
14	Local Economy (Employment,	Construction Phase	B	B	B	B	B	Construction Phase: Employment opportunity may increase during infrastructure and facility	

Category	No.	Item		Possible Impacts					Description
				Logistics infrastructure	Agriculture	Industry	Tourism	Mineral Resources	
		Livelihood etc.)	Operation Phase	B	B	B	B	B	development. Operation Phase: The master plan envisages regional development along the Corridor. Employment opportunity, vitalization of regional economy, improvement of people's livelihood may be expected.
	15	Land Use and Utilization of Local Resources	Construction Phase	C	C	C	C	C	Construction Phase: Use of local forest and agricultural resources may be affected by construction work. Operation Phase: Effective utilization of local resources is fully considered in the master plan planning. Land use change may occur associated with the master plan implementation.
			Operation Phase	C	B	B	B	B	
	16	Water Use	Construction Phase	C	C	C	C	C	Construction Phase: Turbid water from construction work may affect local residents' water resources. Operation Phase: Increase of water use by industrial operation may bring conflict with traditional water user.
			Operation Phase	C	C	C	C	C	
	17	Existing Social Infrastructure and Services	Construction Phase	C	C	C	C	C	Construction Phase: Increase of population caused by construction workers may pressurize the capacity of existing health care facility, and generate traffic congestion locally. Operation Phase: Infrastructure services of roads and railway may be improved.
			Operation Phase	B	C	C	C	C	
	18	Social Institutions such as Local Decision Making Institutions	Construction Phase	C	C	C	C	C	Construction and Operation Phase: Industrial structure change may cause conflict between new comers and existing residents.
			Operation Phase	C	C	C	C	C	
	19	Misdistribution of Benefit and Damage	Construction Phase	C	C	C	C	C	Construction and Operation Phase: Misdistribution of benefit may occur between area of influence and outside of the area.
			Operation Phase	C	C	C	C	C	

Category	No.	Item		Possible Impacts					Description
				Logistics infrastructure	Agriculture	Industry	Tourism	Mineral Resources	
	20	Local Conflict of Interest	Construction Phase	C	C	C	C	C	Construction Phase and Operation Phase: Conflict between benefited group and non-benefited group within the area.
			Operation Phase	C	C	C	C	C	
	21	Cultural Heritage	Construction Phase	C	C	C	C	C	Construction Phase: Land use change or new construction works may displace or demolish cultural sites. Operation Phase: Industry operation may impact on protected cultural sites.
			Operation Phase	C	C	C	C	C	
	22	Landscape	Construction Phase	B	B	B	B	B	Construction Phase: Depending on location of construction works, use of heavy equipment and construction vehicles may give impact on landscape. Operation Phase: New infrastructure or facility development may change landscape.
			Operation Phase	C	C	C	C	C	
	23	Gender	Construction Phase	C	C	C	C	C	Construction Phase: Women employment opportunity may be expected. Operation Phase: Women's group activities may be strengthened. Sex workers may increase along the corridor associated with logistics improvement (including rest area installation for truck drivers).
			Operation Phase	C	C	C	C	C	
	24	Children Right	Construction Phase	C	C	C	C	C	Construction and Operation Phase: Any impact to children right is unknown. The master plan should consider impact on indigenous peoples during planning.
			Operation Phase	C	C	C	C	C	
	25	Sanitation and Infectious Diseases (HIV/AIDS)	Construction Phase	B	B	B	B	B	Construction Phase: Workforce influx may cause increase of infectious diseases.
			Operation Phase	B	B	B	B	B	Operation Phase: : Population influx with urbanization may increase infectious diseases such as HIV/AIDS.

Category	No.	Item		Possible Impacts					Description
				Logistics infrastructure	Agriculture	Industry	Tourism	Mineral Resources	
	26	Public Health	Construction Phase	C	C	C	C	C	Construction Phase: Increase workforce influx into the region may cause lack of health care facilities. Operation Phase: Increase of new comers as workers and the Corridor users, which lead to increase of waste, may worsen publish health environment.
			Operation Phase	C	C	C	C	C	
	27	Accidents and Safety	Construction Phase	B	B	B	B	B	Construction Phase: Accidents may occur during construction works. Operation Phase: Increase of traffic accidents, spillage from pipeline, accidents during industry operation (such as machinery accidents and unexpected chemical releases) may occur.
			Operation Phase	B	B	B	B	B	
Others	28	Cross-Border Impact	Construction Phase	C	C	C	C	C	Construction and Operation Phase: Job seeker influx from neighboring countries may occur.
			Operation Phase	C	C	C	C	C	
	29	Global Warning	Construction Phase	C	C	C	C	C	Construction Phase: CO2 emission may increase due to construction works using heavy equipment and construction vehicles. Operation Phase: New industries may increase CO2 emissions. New traffic at newly constructed roads may bring another CO2 emission.
			Operation Phase	C	C	C	C	C	

9. Alternatives to the project activities including “without project” option

Since the Project aims at master plan formulation, development strategy alternatives will be examined in the Project during the process of the master plan formulation by Strategic Environmental Assessment.

10. Result of the consultation with recipient government on environmental and social consideration including roles and responsibilities.

KMOTI and UMOWT agreed to abide JICA guidelines for Environmental and Social Considerations (April 2010) in order to ensure that appropriate considerations will be

made for the environmental and social impacts of the Project.

11. Terms of Reference for Environmental and Social Considerations

- (1) Review of existing development plans, development projects, studies, and public and private investments
- (2) Analysis to identify constraints to development, factors of promoting development
- (3) Analysis of alternatives for achieving the goals of the Project
- (4) Consideration of contents of developed policy and plans
- (5) Scoping (clarify extremely important items on environmental and social impacts and its evaluation methods at the time of decision making of Master Plan)
- (6) Confirmation of existing environmental and social conditions of the proposed projects area in Master Plan as a baseline data (land use, natural environment, culture and lifestyle of indigenous people and their communities, local economy and socio-cultural environment and others)
- (7) Confirm legal framework and institution of Kenya and Uganda on environmental and social considerations, and examine the experiences of SEA study in Kenya and Uganda:
 - A) Laws, regulations and standards related to environmental and social considerations (environmental impact assessment, resettlement, public participation, information disclosure and others)
 - B) SEA study reports conducted in Kenya development projects, and other relevant information
 - C) Gaps between the “JICA Guidelines for Environmental and Social Considerations (April 2010)” and legal framework of Kenya on environmental and social considerations
 - D) Outlines of relative agencies and institutions responsible of implementation of the projects
- (8) Prediction of likely impacts of proposed projects in Master Plan
- (9) Evaluation of likely impacts of the projects above (8) and comparative analysis of alternatives of proposed projects, including ‘without project’ option
- (10) Examination of the mitigation measures (to be avoided, minimized and compensated)
- (11) Examination of the monitoring methods (monitoring items, frequencies and methods)
- (12) Support to hold stakeholder meetings