

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

1. Full title of the Project

The Project on Master Plan for Development of an International Logistics Hub for SADC Countries in the Republic of Namibia

2. Type of the Study

Master plan

3. Categorization and its Reason

3.1 Categorization

Category B

3.2 Reason

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

4. Agency or Institution Responsible for the Implementation of the Project

(1) National Planning Commission (NPC): Initiator

NPC will be responsible for overall coordination of the Project.

(2) Ministry of Works and Transport (MWT): Supervisor of Implementer

MWT will be responsible for supervision of implementation of the Project.

(3) Walvis Bay Corridor Group (WBCG): Implementer

WBCG will be responsible for daily operations and implementation of the Project.

5. Outline of the Project

5.1 Objective

The Government of Namibia uses the International Logistics Hub Master Plan as a part of the “Logistics Nation” Strategy.

5.2 Justification

Namibia borders with Angola, Botswana, South Africa, and Zambia, and has good access to these countries and other countries through good ports and trunk roads, and huge potential to be

an international logistics hub for Southern African Development Community (SADC) countries. One of the Desired Outcomes stipulated in the Fourth National Development Plan (NDP4), which is a roadmap of Namibia up to 2016/17, is to lead Namibia to be a regional leader in logistics and distribution. In order to realize this, NDP4 included preparation of a "National Logistics Master Plan" that provides a detailed future image of Namibia as an international logistics and distribution centre and identifies key policy measures and actions to be taken to promote and invite logistics industries in Namibia.

The Government of the Republic of Namibia (GRN), embarking upon this new challenge of development, requested the Government of Japan (GOJ) to provide technical cooperation for development planning on "The Project on Master Plan for Development of an International Logistics Hub for SADC Countries in the Republic of Namibia".

### 5.3 Location

The Project will cover whole area of the country.

### 5.4 Scope of the Study

#### (1) Outputs

International Logistics Hub Master Plan:

- Development strategies and implementation plans which aims to formulate a "Logistics Nation" for Namibia with a target year of 2025
- A long list of strategic projects, and profiles for the selected priority projects
- A set of action plans including resource allocation and capacity building
- Involvement of local stakeholders in making process of International Logistics Hub Master Plan as a set of common framework to realize "Logistics Nation"
- Dissemination of International Logistics Hub Master Plan as a set of common framework to promote "Logistics Nation", to the international donors and investors

#### (2) Study Items

Phase 1: Review of current situation of the study area

- Review of economic situations of Namibia and SADC countries
- Review of industrial activities and value chain in Namibia and SADC countries
- Review of international logistics network in Namibia and SADC countries
- Review of the results of "National, Regional and International Integrated Transport Master Plan"
- Review of the factors regarding Environmental and Social Considerations including Strategic Environmental Assessment(hereinafter referred to as "SEA")

Phase 2: Formulation of the International Logistics Hub Master Plan

- Preparation of a development vision with target year of 2025
- Forecast of logistics demand and scenario setting of Namibian position as an international logistics hub in SADC
- Identification of major issues and critical success factors
- Assessment of the existing plans and projects
- Formulation of comprehensive international logistics hub strategies
- Formulation of institutional development plan
- Formulation of a long list and outlines of candidate development projects with target years of 2020 and 2025
- Conducting Strategic Environmental Assessment in accordance with JICA Guidelines for Environmental and Social Considerations (April 2010)

## 6. Description of the Project Site

The Project will cover whole area of the country. Following table shows the country overview.

Area	825,418 km <sup>2</sup>
Population	Approx. 2,100,000 (2011 Namibia Population and Housing Census), Density: 2.54/km <sup>2</sup>
Capital (Population)	Windhoek (300,000)
Ethnic group	50%: Ovambo, 9%: Kavango, 8%: Damara, 8%: Herero, 6%: White, 5%: Nama, 4%: Coloured, 4%: Caprivian, 6%: Others
Region	90%: Christian, 10%: Indigenous beliefs
Economy	- GNI per capita (Atlas method, current US\$): 5,640 (World Development Indicator, World Bank 2012) - GDP by sector: Agriculture 10%, Industry 30%, Service 60% - Employment by sector: Agriculture 16%, Industry 16%, Service 68% - Unemployment: 27% (Namibia Labour Force Survey 2012) - Rich in mineral resources such as diamond, uranium, etc. - 80% of total import from South Africa

Source: (If not specifically mentioned in the table) “Data Collection Survey on the Namibia – Japan High-level Forum on Economic Development in Republic of Namibia, Final Report (Japanese version)”, October 2011 (JICA, IDCJ).



Source: <http://www.nationsonline.org/oneworld/map/namibia-administrative-map.htm>

Figure: Republic of Namibia (Map)

### 6.1 Geography and Climate

Namibia is a country in Southern Africa whose western border is the Atlantic Ocean. It shares land borders with Angola and Zambia to the north, Botswana to the east and South Africa to the south and east. The country, being situated between the Namib and the Kalahari deserts, consists of mostly plateaus and deserts. The Namib Desert is a broad expanse of hyper-arid gravel plains and dunes that stretches along Namibia's entire coastline and up to 160km inland while the Kalahari Desert occupies most of the eastern parts of the country.

The climate is characterised by aridity, defined as sub-humid (mean rainfall above 500mm), semi-arid (300-500 mm) embracing most of the waterless Kalahari, arid

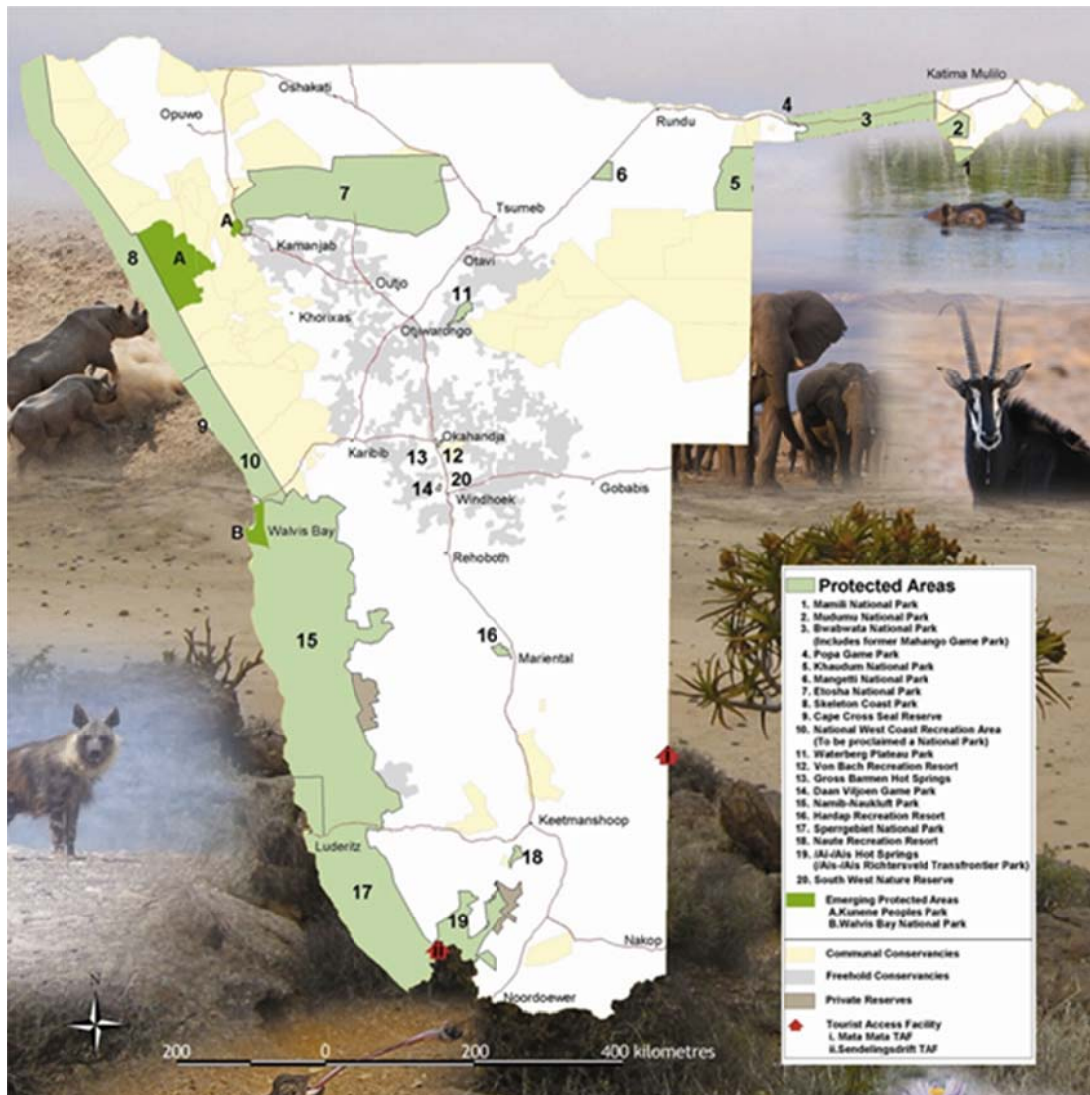
(150-300mm), and hyper-arid coastal plain with less than a 100mm mean rainfall. The rainfall is very low and highly variable. The permanently flowing rivers lie only near to, or form part of, the country's international boundaries in the north and south while other rivers have water flow only for 2-3 months a year after rainy season.

## 6.2 Ecology

Namibia has a high level of biodiversity. Species richness is the lowest in the Namib Desert and the highest in the wetter north-east, where there are large, perennial tropical river systems. Species in the Namib Desert, however, are characterised by a high degree of endemism. The southwest arid zone is an endemism hot spot for mammals, birds, and amphibians. The Kalahari, while popularly known as a desert, has a variety of localized environments, including some verdant and technically non-desert areas. One of these, known as the Succulent Karoo, is home to over 5,000 species of plants. Namibia's coastal zone provides valuable migration and nursery habitats for many shorebirds and other coastal organisms. It also sustains vast populations of fish and other marine organisms due to the Benguela's cold and nutrient-rich upwelled waters.

## 6.4 Protected Areas

Namibia is one of a few countries in the world to specifically address conservation and protection of natural resources in its constitution. As of June 2011, 21 protected areas, accounting for 17% of total national land, are designated by the government. In order to perform tourism business in these state protected areas, concession from the government should be obtained. In addition, the government allows local communities to create conservancies, where the communities are responsible for protecting and managing wildlife on their communal land sustainably by managing their own tourism business in cooperation with private companies. As of March 2013, 64 conservancies are registered.



Source: Ministry of Environment and Tourism

Figure: Namibia's Protected Area Network

#### 6.4 Economy

Namibia has undergone a steady economic growth in recent years with 4.8% GDP growth rate (2003 – 2006). Salient features of Namibian economy are summarized below.

- The economy is heavily dependent on mining sector. Mining accounts for 8% of GDP, but provides more than 50% of foreign exchange earnings. Rich alluvial diamond deposits make Namibia a primary source for gem-quality diamonds. In addition, Namibia is the world's fourth-largest producer of uranium and also produces large quantities of zinc. On the other hand, the mining sector employs only about 3% of the population.

- The domestic market is very small and the economy remains integrated with that of South Africa. For instance, about 80% of total imports, including foodstuffs, are from South Africa.
- Agriculture consists primarily of livestock ranching. Cattle raising is predominant in the central and northern regions while sheep and goat farming are concentrated in the more arid southern regions. Self-sufficiency rate of cereal is very low and most of agricultural products (including processed products) are imported from South Africa.
- There are about 4,000 commercial farms, mostly owned by whites, occupy almost half of arable land that accounts for only 1-2% of the country, while about 23% of Namibian households depend on subsistence agriculture and herding for livelihood. Subsistence farming is mainly confined to the communal lands in the north regions where roaming cattle herds are prevalent and the main crops are millet, sorghum, corn and peanuts.
- The economic disparity is very large. Relatively high per capita GDP hides one of the world's most unequal income distributions, as shown by Namibia's 0.60 GINI coefficient (Namibia Household Income & Expenditure Survey 2009/2010). The population of the top 10% income occupies 64.5% of total income in the country while about 50% of population lives on less than 1.25USD per day. According to the Namibia Labour Force Survey Report 2012, the country's unemployment rate is 27.4%.

## 7. Legal Framework of Environmental and Social Considerations

### 7.1 Laws, regulations and standards related to environmental and social issues

#### (1) Environmental Management Act

The Environmental Management Act (No. 7 of 2007) was enacted in 2007 and come into operation on 6 February 2012. It aims to promote the sustainable management of the environment and the use of natural resources by preventing and mitigating the significant effects of various activities on the environment.

Under the Environmental Management Act, several regulations, procedures and guidelines have been issued but not all are enforced as shown in the following table.

Title	Gazetted date	Current situation
Environmental Impact Assessment Regulations	6 February 2012	In force
List of activities that may not be undertaken without environmental clearance certificate	6 February 2012	In force
Regulations for Strategic Environmental Assessment	Draft	Not finalized yet

(SEA) and Environmental Impact Assessment (EIA)	April 2008	
Procedure and Guidelines for Strategic Environmental Assessment (SEA) and Environmental Management Plan (EMP)	April 2008	Not finalized yet
Draft Procedure and Guidelines for Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP)	April 2008	Not finalized yet

(2) Procedure of Strategic Environmental Assessment (SEA)

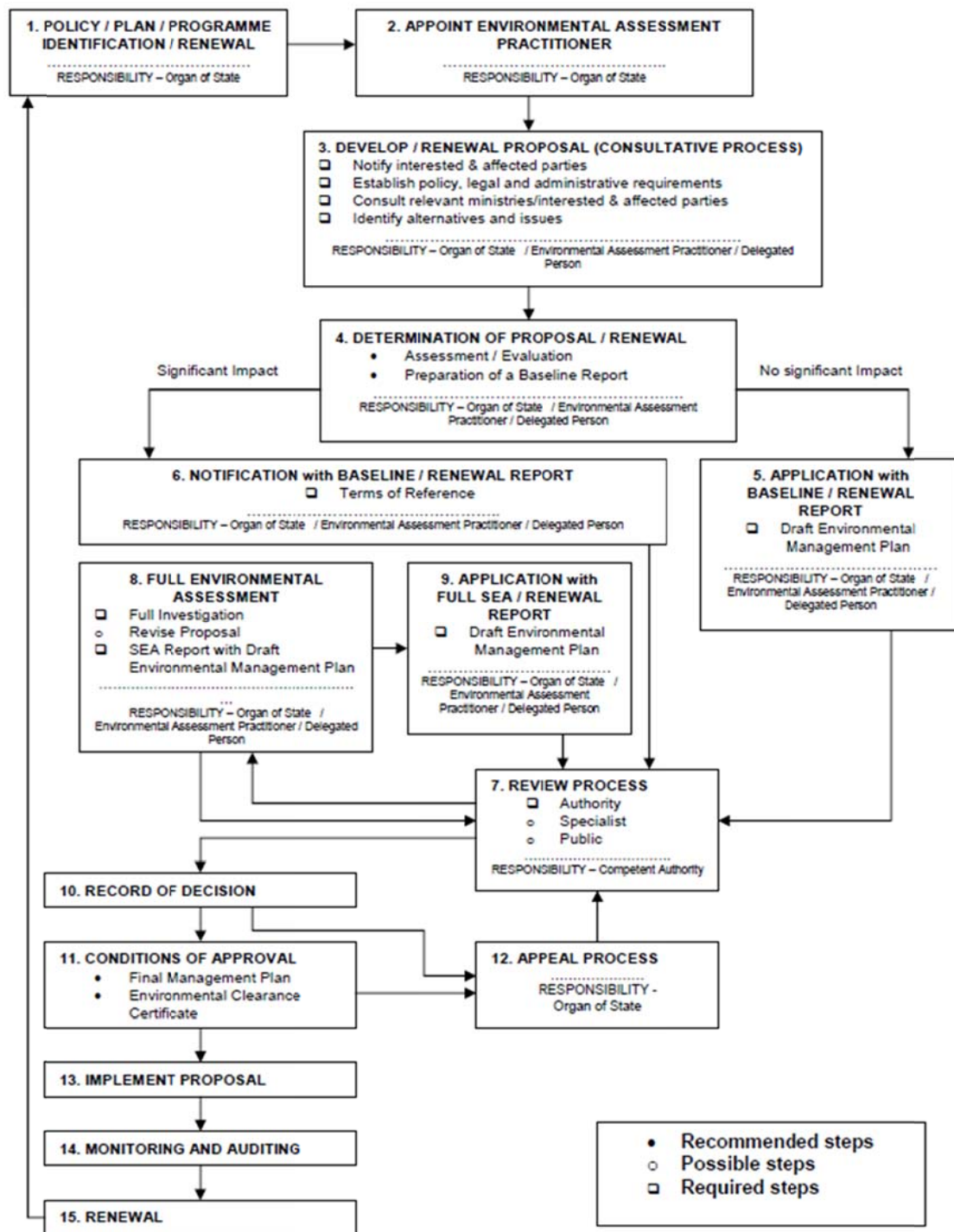
It should be noted that following information is just referential for the full-scale study in the Project since the regulation for SEA is still at a draft level.

According to the “Draft” Regulations for Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA), SEA is the necessary assessment process for policies, plans and programmes while EIA is for the projects. Schedule 1 of the regulations specifies the activities that require SEA or EIA as follows.

1. Construction and related activities, which include power generation, supply and transmission, facilities for hazardous substance, public roads, railways, harbours, airports, facilities associated with aquaculture, communication networks, canals, dams, reservoirs, tourism facilities, sewage treatment plants, facilities associated with industry, waste disposal and treatment facilities, oil refineries, and bulk supply pipelines (e.g. water, oil, gas, etc.),
2. Land use planning and development activities, which include rezoning and land use changes,
3. Resource extraction, manipulation, conservation and related activities such as mining, water abstraction, forestry (clearance, reforestation and afforestation), and genetic modification of any organism, and
4. Other activities

Procedure of SEA is illustrated below.





Source: Government Notice No.1, Government Gazette of the Republic of Namibia, April 2008

### Procedure of Strategic Environmental Assessment

(3) Other relevant laws

Other major laws, relevant to environmental and social considerations, are listed in the

following table.

Title	Responsible government agency	Note
The Protected Areas and Wildlife Management Bill	Ministry of Environment and Tourism (MET)	It is supposed to replace the Nature Conservation Ordinance (No. 4 of 1975) and Nature Conservation Amendment Act (No. 5 of 1996)
Pollution Control and Waste Management Bill	MET	It is still under preparation.
Access to Biological Resources and Associated Traditional Knowledge Bill	MET	It is still under preparation. (Confirmation is needed)
Water Resource Management Act (No. 24 of 2004)	Ministry of Agriculture, Water and Forestry (MAWF)	It is supposed to replace the Water Act (No. 54 of 1956). It has been approved and published in 2004 but not yet come into force. (Confirmation is needed.)
Forest Act (No. 12 of 2001)	MAWF	Forest Amendment Act (No. 13 of 2005) should be also referred.
Soil Conservation Act (No. 76 of 1969)	MAWF	-
Marine Resource Act (No. 27 of 2000)	Ministry of Fisheries and Marine Resources (MFMR)	-
Land Bill	Ministry of Lands and Resettlement (MLR)	It will be an integrated law associated with land, supposed to replace The Agricultural (Commercial) Land Reform Act (No. 6 of 1995) and Communal Land Reform Act (No. 5 of 2002).
Flexible Land Tenure Act (No. 4 of 2012)	MLR	It was enacted in June 2012. A major objective of the Act is to provide security of land title for informal urban settlers.

## 7.2 Relative agencies and institutions

### (1) Ministry of Environment and Tourism

Ministry of Environment and Tourism (MET) is an organization primarily responsible for environmental protection and management including authorization of SEA and EIA. More specifically, Department of Environmental Affairs takes the primary role in procedure of SEA and EIA.

### (2) Ministry of Lands and Resettlement

Ministry of Lands and Resettlement (MLR) is the main actor in the planning and administration of land in the country. The ministry consists of two main departments: Dept. of Land Management, and Dept. of Land Reform, Resettlement and Regional Programme Implementation. These departments are divided into several directorates.

In relation to the Project, when the development projects require land acquisition and resettlement on commercial land or communal land, consultation with and authorization of MLR is essential. Directorate of Survey and Mapping, under the Dept. of Land Management, provides map information for the planning exercises to government, private institutions and the public.

### (3) Other agencies and institutions

- When the development projects require land acquisition and resettlement in township areas, consultation with and authorization of Ministry of Regional and Local Government, Housing and Rural Development (MRLGHRD) is essential.
- Ministry of Agriculture, Water and Forestry (MAWF) is responsible for conservation and management of water resource (Directorate of Water Resource Management), forest (Directorate of Forestry) and soil (Directorate of Extension and Engineering Services). In addition, agro-ecological map and geological map are available in Directorate of Research and Training.
- Ministry of Fisheries and Marine Resources (MFMR) is responsible for protection and management of marine resources.

## 8. Provisional Scoping

### (1) General Environmental and Social Issues

Major environmental and social concerns in Namibia are summarised below. The description is based on the literature review and the interview with government agencies.

- *Land degradation and soil erosion:* Overgrazing and land clearing for crop farming are considered to be main causes for land degradation. Poverty in rural areas forces people into overgrazing and land clearing in order to ensure food supply. The most alarming effects of land degradation are deforestation, soil erosion, bush encroachment and soil salinization.
- *Deforestation:* Most of rural population are dependent on the availability of forest resources for building material for homesteads, fuel wood for cooking, light and heating, and medicines amongst others. The expansion of agricultural land, clearing for infrastructure development, logging through timber concessions and unlicensed curio carving are also the causes of deforestation. Deforestation not only leads to the loss of resources for human activities but also results in desertification and land degradation.

- *Loss of biodiversity:* Various human activities mentioned above endanger the home of rich biological diversity, such as forest areas, and lead to biodiversity loss.
- *Vulnerability of water resources:* The fragility of Namibian water resources is primarily attributed to low rainfall rates, a high degree of rainfall variation, and variable rainfall distribution patterns. Due to limited supply of surface water, 80% of population rely on groundwater for drinking water. Current population growth, rapid urbanisation and economic growth are major threats to water availability.
- *Waste and pollution:* Growth in economy and population induces an increase in pollution and waste. Recent development of food industry, meat processing and mining, carbon dioxide emissions due to growing motorisation, and increasing amount of household waste are all potential sources of pollution.
- *Poverty and inequality:* As mentioned in 6.4, Namibia has one of the most unequal income distributions in the world. It is easily predictable that the poor, who are more dependent on primary production for food and energy, become the greatest victims of environmental degradation. In addition, their low education level prevents them from capturing income earning opportunities created by economic development.
- *Prevalence of HIV/AIDS:* The prevalence of the HIV/AIDS undermines human well-being in Namibia. In 2012, 13.3% of the adult population is infected with HIV/AIDS. There are estimated 220,000 people living with HIV/AIDS, with the death toll totalling around 5,000 and 76,000 children orphaned as a result.

## (2) Provisional Scoping

At this detailed planning survey stage, no specific projects are assumed for discussion. In the Project, a long list of strategic projects and the profiles for the selected priority projects will be proposed in the course of master plan formulation, but exact site location, layout design and specification of the priority projects are not determined in the Project.

Therefore, in this provisional scoping, typical and/or general scoping items are presented as a reference for environmental and social considerations implemented in the Project. Rating is also not carried out since the extent of impact is almost unknown at this detailed planning survey stage.

If serious adverse impacts are predicted in the process of master plan formulation and project identification, possible measures to avoid and/or mitigate such impacts should be proposed in the Project.

Item	Description
Pollution	
1) Air pollution	- If infrastructure or facility development/improvement is

	<p>implemented, exhaust gas from construction equipment and vehicles, and the dust caused by construction works may increase temporarily during construction period.</p> <ul style="list-style-type: none"> <li>- Growth in traffic volume due to increase of flow of goods may generate more exhaust gas.</li> </ul>
2) Water pollution	<ul style="list-style-type: none"> <li>- If infrastructure or facility development/improvement is implemented, discharge of mud, oil, etc. from the construction site may cause water pollution during construction period.</li> <li>- Possibility of water pollution due to effluents from operation of the facility will depend on what kind of facility is proposed in the Project.</li> <li>- Development of logistics industry induced by the proposed projects may create new employment opportunities and lead to population influx. Increase of inhabitants may cause sewage contamination.</li> </ul>
3) Soil contamination	<ul style="list-style-type: none"> <li>- Infrastructure or facility development/improvement may induce soil contamination during construction period.</li> <li>- Any industries to produce or use hazardous substances may not be planned, so possibility of soil contamination is low.</li> </ul>
4) Waste	<ul style="list-style-type: none"> <li>- Infrastructure or facility development/improvement may generate wastes during construction period.</li> <li>- Some industry and facility may produce various wastes during operation, but it depends on what kind of industry or facility is proposed in the Project.</li> <li>- Development of logistics industry induced by the proposed projects may create new employment opportunities and lead to population influx. Increase of inhabitants may generate more wastes.</li> </ul>
5) Noise and vibration	<ul style="list-style-type: none"> <li>- Construction noise and vibration from construction equipment and vehicles may occur during construction period if infrastructure or facility development/improvement is implemented.</li> <li>- Some industry and facility may produce noise and vibration during operation, but it depends on what kind of industry or facility is proposed in the Project.</li> <li>- Growth in traffic volume due to increase of flow of goods may generate more noise and vibration.</li> </ul>
6) Ground subsidence	Unknown.
7) Offensive odour	Some industry and facility may produce offensive odour during operation, but it depends on what kind of industry or facility is proposed in the Project.
8) Bottom sediment	In case of port facility development, it may occur when large volume of waste water and mud flowing into ocean.
9) Accident	<ul style="list-style-type: none"> <li>- If infrastructure or facility development/improvement is</li> </ul>

	<p>implemented, the risk of accident may increase during construction period.</p> <ul style="list-style-type: none"> <li>- Growth in traffic volume due to increase of flow of goods may cause an increase in traffic accidents.</li> </ul>
<b>Natural environment</b>	
10) Topography and geographical features	If infrastructure or facility development/improvement is implemented, some impact may occur.
11) Soil erosion	If infrastructure or facility development/improvement is implemented, the construction works may cause soil erosion.
12) Groundwater	<ul style="list-style-type: none"> <li>- Some industry and facility may use large amount of groundwater and it may cause some impacts such as reduction of possible pumping yield, lowering of water level, water contamination, and ground subsidence. However, it depends on what kind of industry or facility is proposed in the Project.</li> <li>- Development of logistics industry induced by the proposed projects may create new employment opportunities and lead to population influx. Increase of inhabitants may increase consumption of water which may cause some impacts.</li> </ul>
13) Hydrological situation	Unknown.
14) Coastal zone	Port facility development/improvement may cause deformation of the beach and effluent flowing into the ocean. They may affect marine ecosystem and coastal sediment.
15) Protected areas	There are many protected areas and national parks in the country. Project location should avoid such areas and their vicinities.
16) Flora, fauna and biodiversity	When selecting the site of the projects, ecologically valuable habitats (e.g. habitats of endangered species) should be avoided.
17) Meteorology	<ul style="list-style-type: none"> <li>- The scale of the project to be proposed may not so large to change the climate.</li> <li>- The type of the project to be proposed may not cause any significant impact on the climate.</li> </ul>
18) Landscape	Careful attention should be paid when selecting the project site.
19) Global warming	Growth in traffic volume due to increase of flow of goods may increase emission of carbon dioxide.
<b>Social environment</b>	
20) Involuntary resettlement	Densely populated areas are very limited in the country, so it is not so difficult to avoid such areas when selecting project sites.
21) Local economy such as employment and livelihood,	The development of the logistics industry may lead to the creation of new employment opportunities, vitalization of

etc.	local economy, and then improvement of people's livelihood. However, it is also probable that inequality of opportunity and income may be induced.
22) Land use and utilization of local resources	Unknown.
23) Social institutions such as social infrastructure and local decision making institutions	Unknown.
24) Existing social infrastructures and services	Development of logistics industry induced by the proposed projects may create new employment opportunities and lead to population influx. It is quite probable that existing social infrastructure and services such as water supply, electricity, waste disposal, education and health facilities, etc. could not meet the needs of increasing inhabitants.
25) The poor, indigenous and ethnic people	Unknown.
26) Misdistribution of benefit and damage	Unknown.
27) Cultural heritage	Careful attention should be paid to avoid such areas when selecting the project site.
28) Local conflict of interests	Unknown.
29) Water usage or water rights and communal rights	Unknown.
30) Hazards (risks), infectious diseases such as HIV/AIDS	<ul style="list-style-type: none"> <li>- Transport workers (e.g. truck drivers, dock workers), who often endure harsh working and living conditions, will be more in danger of damaging their health in general as well as at higher risk of contracting sexually transmitted infection such as HIV/AIDS.</li> <li>- Transport hubs tend to become hot spots of infectious diseases due to the influx and interaction that takes place among the mobile populations.</li> </ul>
31) Gender	Unknown.
32) Children's right	Unknown.

Note: Scoping items are prepared based on Question 9 in the Screening Format, Appendix4, and List of Environmental Checklist in JICA Guidelines for Environmental and Social Considerations.

#### 9. Alternatives to the project activities including "without project" option

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

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

GRN agreed with JICA to abide by “JICA Guidelines for Environmental and Social Considerations” 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

The major output of the Project is the international logistics hub master plan. A long list of strategic projects and the profiles for the selected priority projects will be prepared in the course of master plan formulation. However, exact site location, layout design and specification of the priority projects are not determined in the Project since none of feasibility study components are included. Thus it is appropriate to conduct Strategic Environmental Assessment (SEA) in the Project.

Terms of reference for environmental and social considerations shall cover, consequently, the followings.

- 1) To review and assess current natural and socio-economic situation
- 2) To review and assess the purpose, alternatives, and contents of the project from the point of view of environmental and social considerations
- 3) To review existing environmental and social consideration measures including laws and regulation at international, national, and regional levels; gap analysis between the Namibian laws and the JICA guideline; and institution concerned.
- 4) To identify and assess possible environmental and social impacts associated with implementation of the Master Plan
- 5) To analyse possible alternatives
- 6) To propose possible measures to mitigate adverse impacts and enhance benefits that might be resulted from the implementation of the Master Plan
- 7) To propose environmental and social management framework to monitor the implementation of the Master Plan
- 8) To assist Namibian counterpart personnel in organising stakeholder consultation
- 9) To prepare draft SEA report

The draft SEA report will be completed by GRN for necessary approval procedure in accordance with domestic laws and regulations.

#### 12. Other relevant information

None.