The Government of the Republic of Namibia (GRN)
National Planning Commission (NPC)

MASTER PLAN FOR DEVELOPMENT OF AN INTERNATIONAL LOGISTICS HUB FOR SADC COUNTRIES IN THE REPUBLIC OF NAMIBIA

Final Report

Appendix

March 2015

Japan International Cooperation Agency (JICA)

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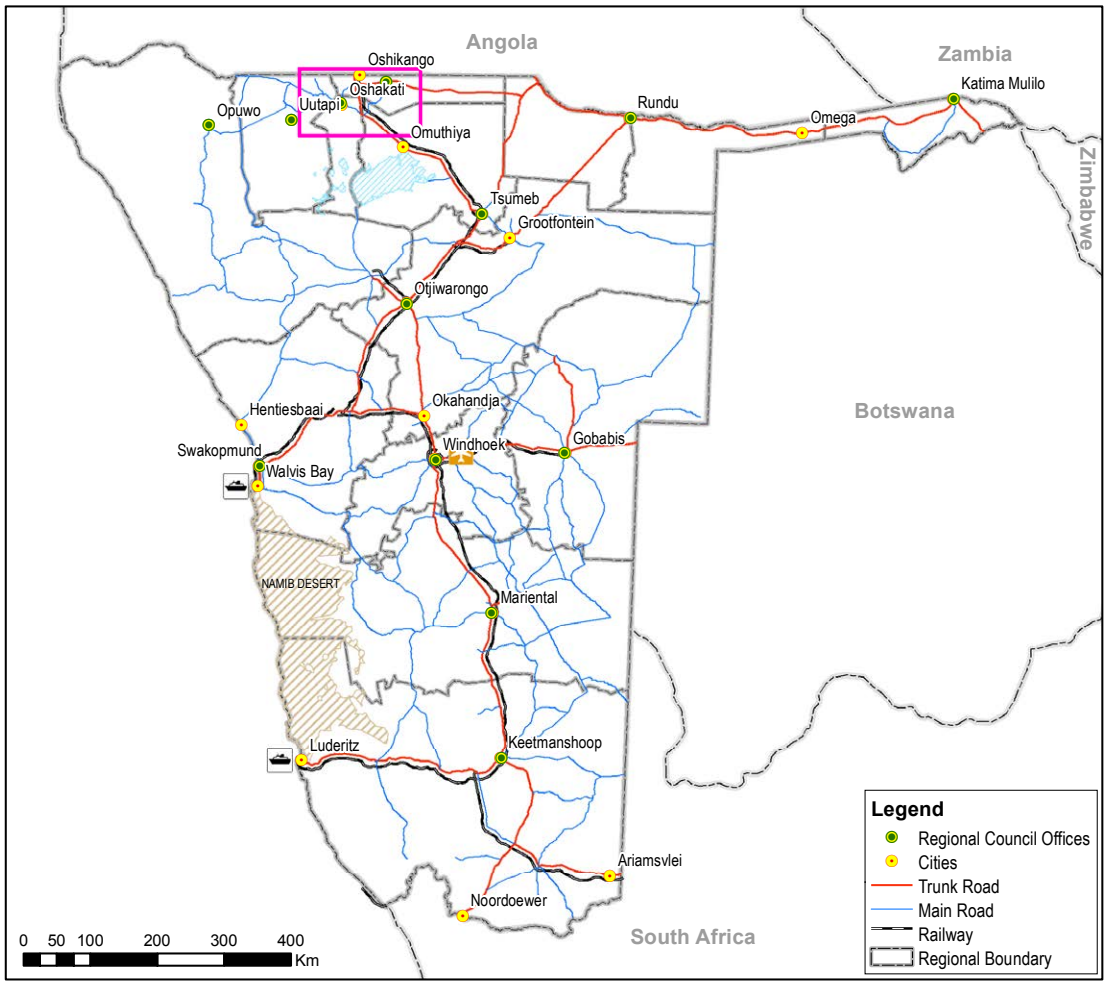
The following exchange rate is applied to this report.
1 US Dollar = 107.37 Yen
1 US Dollar = 10.93 Namibia Dollar
(Average rate used by JICA in commissioned projects during the period of February 2014 to February 2015)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Grootfontein
Otjiwarongo
Okahandja
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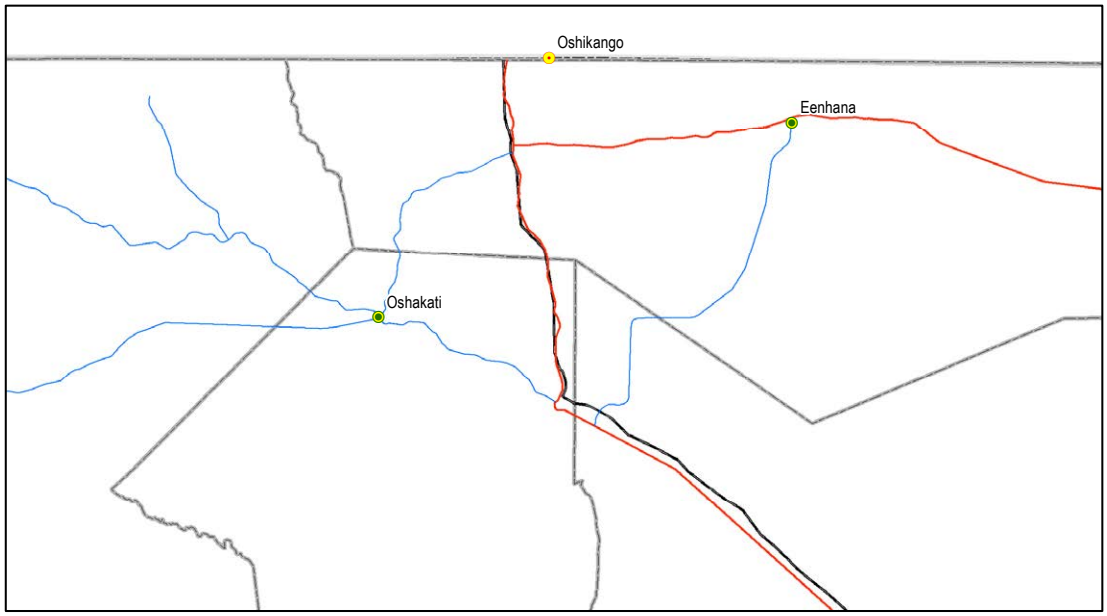
Oshikango
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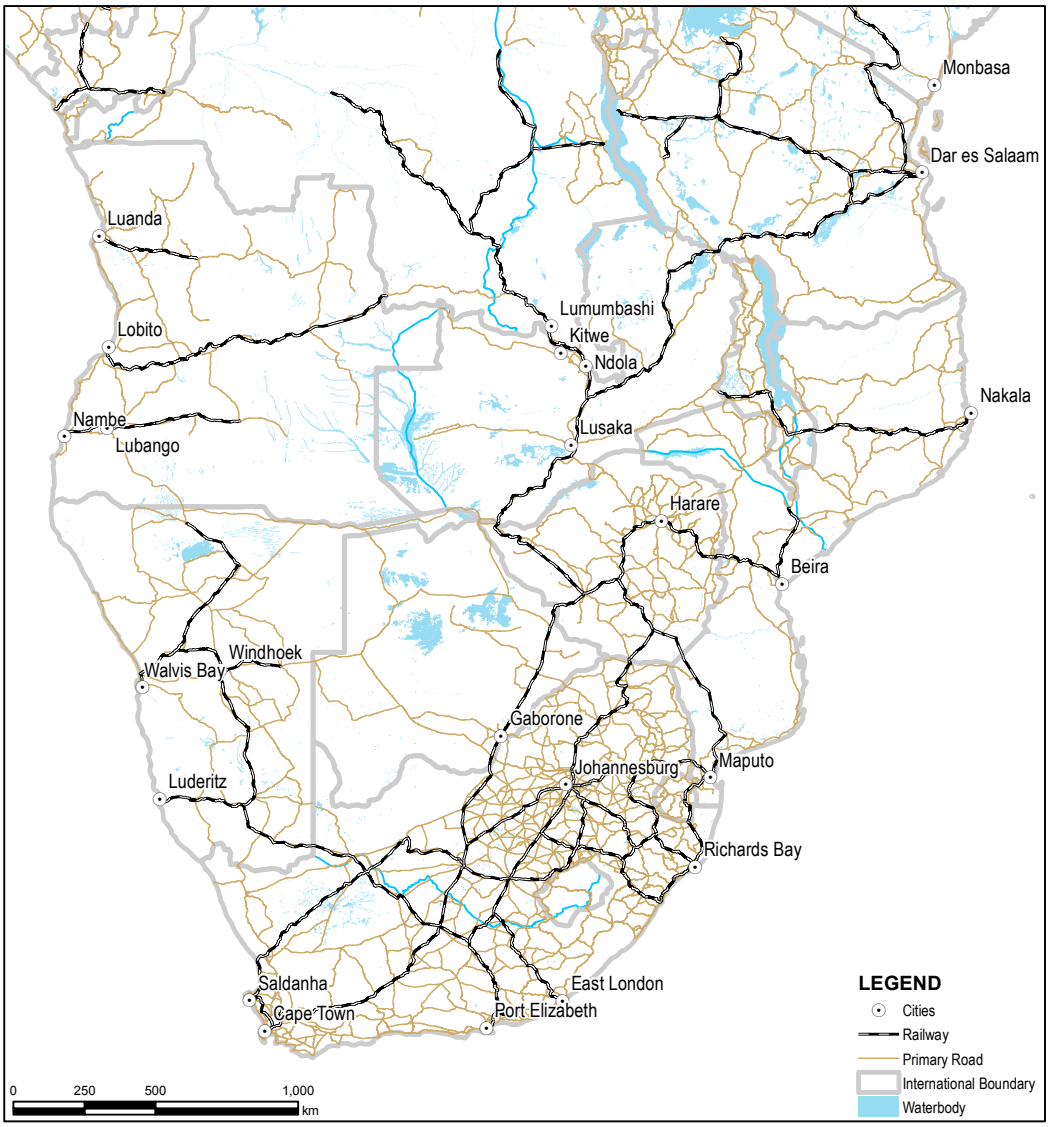
Namibia



Cities and transport infrastructures in the southern Africa

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

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Abbreviations

AADT	Average Annual Daily Traffic
ADB	African Development Bank
AEO	Authorized Economic Operator
AIDS	Acquired Immune Deficiency Syndrome
APDP	Automobile Production and Development Program
B/L	Bill of Lading
CBD	Convention on Biological Diversity
CBM	Coordinated Border Management
CBNRM	Community Based Natural Resource Management
CBO	Community-Based Organization
CdM	Cornelder de Moçambique
CEO	Chief Executive Officer
CFM	Portos e Caminhos de Ferro de Moçambique
CFS	Container Freight Station
CMA	Common Monetary Area
COMESA	Common Market for Eastern and Southern Africa
DCA	Directorate of Civil Aviation
DEA	Department of Environmental Affairs
DEM	Digital Elevation Model
DFID	Department for International Development
DO	Desired outcome
DOR	Directorate of Railways
DR	District Roads
DRC	Democratic Republic of Congo
DRSPM	Directorate of Regional Services and Parks Management
EA	Environmental assessment
EAC	Eastern African Community
EAP	Environmental assessment practitioner
ECB	Electricity Control Board
ECC	Environmental Clearance Certificate
EFTA	European Free Trade Association
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental management plan
EPA	Economic Partnership Agreement
EPZ	Export Processing Zone
EQOs	Environmental Quality Objectives
EU	European Union
FDI	Foreign Direct Investment
FISIM	Financial intermediation services indirectly measured
FTA	Free Trade Agreement
FY	Fiscal Year
GDP	Gross Domestic Products
GIS	Geographic Information System
GNI	Gross National Income
GOJ	Government of Japan
GRN	Government of the Republic of Namibia
GT	Gross Tons
GVM	Gross Vehicle Mass
HCM	Highway Capacity Manual
HDI	Human Development Index
HFV	Heavy freight vehicles
HIV	Human Immunodeficiency Virus
HKIA	Hosea Kutato International Airport
HS code	Harmonized Commodity Description and Coding System
HSE	Health Safety and Environment issues
IAP	Interested and affected party
IBA	Important Bird Area
ICAO	International Civil Aviation Organization
ICT	Information and Communication Technology
ILS	Instrument Landing System

IMF	International Monetary Fund
IPP	Independent Power Producer
ITUC	International Trade Union Confederation
IUSDF	Integrated Urban Spatial Development Framework
JAMA	Japan Automotive Manufacturer Association
JICA	Japan International Cooperation Agency
JOGMEC	Japan Oil, Gas and Mineral National Corporation
KAZA	Kavango–Zambezi Transfrontier Conservation Area
MAWF	Ministry of Agriculture, Water and Forestry
MET	Ministry of Environment and Tourism
MFMR	Ministry of Fisheries and Marine Resources
MFN	Most favourite nation
MIDP	Motor Industry Development Program
MLR	Ministry of Lands and Resettlement
MLTRMP	Medium to Long Term Road Master Plan
MMS	Maintenance Management System
MOF	Ministry of Finance
MOU	Minutes of Understanding
MPA	Marine Protected Area
MPDC	Maputo Port Development Company
MR	Main Roads
MRLGHRD	Ministry of Regional and Local Government, Housing and Rural Development
MTEF	Medium-term Expenditure Framework
MTI	Ministry of Trade and Industry
MWT	Ministry of Works and Transport
NAC	Namibia Airport Company
NACOMA	Namibian Coast Conservation and Management project
NAMPOL	Namibian Police Force
NDC	Namibia Development Corporation
NDP4	Fourth National Development Plan
NGO	Non-Governmental Organization
NHIS	Namibia Household Income & Expenditure Survey
NIC	Namibia Investment Centre
NIMPA	Namibian Islands' Marine Protected Area
NLFS	Namibia Labour Force Survey
NPC	National Planning Commission
NSA	Namibia Statistics Agency
NSDI	National Spatial Data Infrastructure
NTBs	Non-Tariff Barriers
NUNW	National Union of Namibian Workers
OD	Origin-destination
ODC	Offshore Development Corporation
OSBP	One Stop Border Post
p/p/p	policy/plan/programme
PCE	Passenger Car Equivalent
PCU	Passenger Car Unit
PEG	Partnership for Economic Growth Program
PPAIF	Public-Private Infrastructure Advisory Facility
PPP	Public Private Partnership
PPP	Policies, Programmes and Projects
PSU	Primary Sample Unit
PTA	Preferential Trade Agreement
R&D	Research and Development
RA	Road Authority
RCC	Road Contractor Company
REDs	Regional Electricity Distributors
RF	Road Fund
RFA	Road Fund Administration
RIDMP	Regional Infrastructure Development Master Plan
RISDP	Regional Indicative Strategic Development Plan
RMS	Road Maintenance System
RSA	Republic of South Africa
RUC	Road User Charge
SACU	Southern African Customs Union

SADC	Southern African Development Community
SEA	Strategic Environmental Assessment
SEMP	Strategic Environmental Management Plan
SIPO	Strategic Indicative Plan for Organ
SMEs	Small and Medium Enterprises
SOE	State Owned Enterprise
SSG	Ship to Shore Gantry Cranes
STD	Sexually Transmitted Disease
SWAPO	South-West Africa People's Organisation
SXEW	Solvent extraction and electrowinning
TAC	Total Allowable Catch
TAZ	Traffic analysis zone
TEU	Twenty-feet equivalent unit
TICAD	Tokyo International Conference on African Development
TIDCA	Trade, Investment and Development Cooperation Agreement
TMS	Transit Management System
TMSA	TradeMark Southern Africa
TPA	Tanzania Port Authority
TR	Trunk Roads
TTTFP	Tripartite Trade and Transport Facilitation Program
TUCNA	Trade Union Congress of Namibia
UN	United Nations
UNDP	United Nations Development Programme
USA	United States of America
USAID	United States Agency for International Development
USD	US dollar
VAT	Value Added Tax
VPD	Vehicle per day
WBCG	Walvis Bay Corridor Group
WINCON	Windhoek Container Terminal
WNLDC	Walvis Bay–Ndola–Lubumbashi Development Corridor
WTO	World Trade Organization
ZAM	Zambian Association of Manufacturers

1. Introduction

1.1 Background to the study

1.1.1 Background

Namibia shares borders with Angola, Botswana, South Africa, and Zambia having good ports and trunk roads to link them with the rest of the world. This gives her a huge potential to be an international logistics hub for the inland areas of Southern African Development Community (SADC).

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 enable Namibia to become a regional leader in logistics and distribution. In order to realize this, NDP4 included the 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 logistics industries already established in Namibia as well as invite further logistics industries to Namibia.

The Government of the Republic of Namibia (hereinafter referred to as "GRN"), embarking upon this new challenge of development, requested the Government of Japan (hereinafter referred to as "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".

1.1.2 Goals for industrial development and expected role of the development plan for an International Logistics Hub in Namibia

1.1.2.1 Growth and disparity adjustment by overcoming limitations of the small domestic economy and escaping from the existing mining monoculture

Goals for industrial development in Namibia are summarized into the following two points.

- To go beyond the limits of the small domestic economy – economic development by utilizing economic growth in the whole southern African region.
- To exit from the dual structure economy overly dependent on a very narrow scope of mining industry, which causes disparity and unemployment – diversification of economic activities.

1.1.2.2 Direction of the new industrial development – International Logistics Hub Master Plan as a national development strategy

Given these goals, the new industry should have the following three characteristics.

- The new industry should be the one that directly taps on economic growth in neighbouring countries and brings its multiplier effects to Namibia – need to utilize links among the economies of the southern African region.
- The new industry should be the one to enhance the competitiveness of Namibia over a relatively short period of time even in spite of the fact that the population density is low and labour cost is rather high – better focus on geographical advantages of Namibia where the efficient Walvis Bay Port and the southern African inland region are directly connected by the good paved roads and Katima Mulilo Bridge.
- The new industry should offer an employment opportunity to the low-income group – the need to have some elements of labour intensive activities within the local economy.

International logistics is now being watched with keen interest internationally as a new industry that has the potential to comply with all these requirements. Namibia has a high potential because there are speedy and safe logistics routes that connect the world with the southern African region, especially landlocked countries. In particular, there have been some recent events to further enhance the potential of Namibia, including the following:

- Walvis Bay Port is being expanded (from 350,000 TEUs to 750,000 TEUs per year) and expectations about this are quite high among major shipping lines. Once this has been done, Walvis Bay can become the foremost port of call for large container ships on the west coast of Africa, which makes it possible for Namibia to be one of the major international logistics hubs in the region.
- Namibia shares borders with Angola, Zambia, Botswana and South Africa, has Walvis Bay Port as a front door to the southern African region, and international transport corridors (roads in good condition) that lead to neighbouring countries.
- In 2004, the bridge was constructed over the Zambezi River that forms the border between Namibia and Zambia, and accessibility has been improved dramatically. On the other hand,

there is no bridge over the Zambezi River along the North-South route that goes through South Africa, Botswana and Zambia, and the small transportation capacity leads to congestion because cargo trucks have to wait for the ferry at *Kazungula* crossing point. (It should be noted, however, there is a plan to build a bridge there by 2018 and it's financing through a joint loan by ADB and JICA has already been agreed.)

- Namibia has the highest standard of public safety among African countries that assures safety of the corridors to the inland countries.
- Due to a favourable business environment, the time required for customs clearance is shorter and the risk of fraud is lower in Namibia than many other African countries. Namibia also has a modern financial sector, which is essential for international logistics (as good as the financial sector in South Africa).

Table 1.1: Business environment indicators in African countries

Countries	Days to clear customs		Corruption (%)		Losses due to theft and vandalism	Transport Infrastructure	Electricity	Water
	Export	Import	Firms expected to give gifts to get an import license	Firms expected to give gifts to public officials "to get things done"	Percentage of annual sales	Percentage of firms identifying transportation as a major constraint	Number of electrical outages in a typical month	Number of water shortages in a typical month
Namibia	1.4	2.2	0.0	11.4	1.3	7.9	0.4	0.1
South Africa	4.5	5.3	2.7	15.1	1.0	3.9	0.9	0.1
Mozambique	10.1	10.4	10.6	14.8	1.8	23.0	1.6	0.4
Angola	6.7	11.4	55.6	48.9	1.5	25.3	4.7	2.5
Kenya	5.6	11.8	18.6	79.2	3.9	30.6	5.8	3.1
Tanzania	5.7	14.3	6.6	49.5	1.2	14.1	9.1	6.0
Sub-Sahara Africa	7.9	13.8	16.1	34.9	1.7	26.9	8.9	2.4
World	7.2	11.5	14.1	25.3	1.0	21.8	7.0	1.4

Source: World Bank "Enterprise Survey", 2006, respective edition for each country

Namibia should make the most of its geographical advantages and streamline the whole logistics system by shortening the lead-time for cargo transit and reducing the handling cost in freight transport. It is possible for Namibia to have an international competitive edge in the logistics sector. Utilizing this potential is quite important for Namibia, as it cannot attract a labour-intensive manufacturing industry at the moment.

On the one hand, this potential to become a gateway for these landlocked countries is not fully utilized at present. While the transhipment volume at Walvis Bay Port is growing, the volume of cargo unloaded at Walvis Bay and transported to the southern African landlocked countries is limited. At present, the function of transportation to the landlocked countries is concentrated at Durban Port in South Africa. In order to increase the distribution volume for landlocked countries through Walvis Bay Port, it is necessary to improve the international competitiveness and reputation of the port and

corridors. To achieve this, there are some critical issues to be addressed.

In this regard, a vision to transform Namibia into a regional leader in logistics and distribution was identified in NDP4 as one of the top priorities. NDP4 requires that a Master Plan for Development of an International Logistics Hub be established in order to make this vision a reality. On the one hand, it is expected that the implementation of the National Logistics Master Plan contributes to the improvement of living conditions and economic growth of the whole southern African region through the promotion of export of resources from landlocked countries and import of commodities into them. On the other hand, it brings the growth of a new logistics industry such as a processing industry for distribution which should result in job creation in Namibia. Therefore, it is expected that the logistics industry will be one of the major engines of the economy to lift Namibia out of the dual structure and narrow based economy, which causes disparity and unemployment.

1.2 Outline of the Study

1.2.1 Goals which will be attained after project completion

1.2.1.1 Goal of the proposed plan (objective of the Project)

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

1.2.1.2 Goals which will be attained by utilizing the proposed plan (overall goal)

- Accelerated economic growth by development of Namibia as "A Logistics Nation", which will contribute to making SADC as a region more competitive in the global market
- Accelerated growth of other sectors in the Namibian economy spearheaded by the logistics industry,
- Increased employment and improved income equality in Namibia

1.2.2 Expected outputs

The expected output of the study is the preparation of the **International Logistics Hub Master Plan**, which includes the following items.

- Development strategies and implementation plans which aim to make Namibia "A Logistics Nation" with a target year of 2025
- A comprehensive list of strategic projects and profiles for the selected priority projects
- A set of action plans including allocation of resources and capacity building

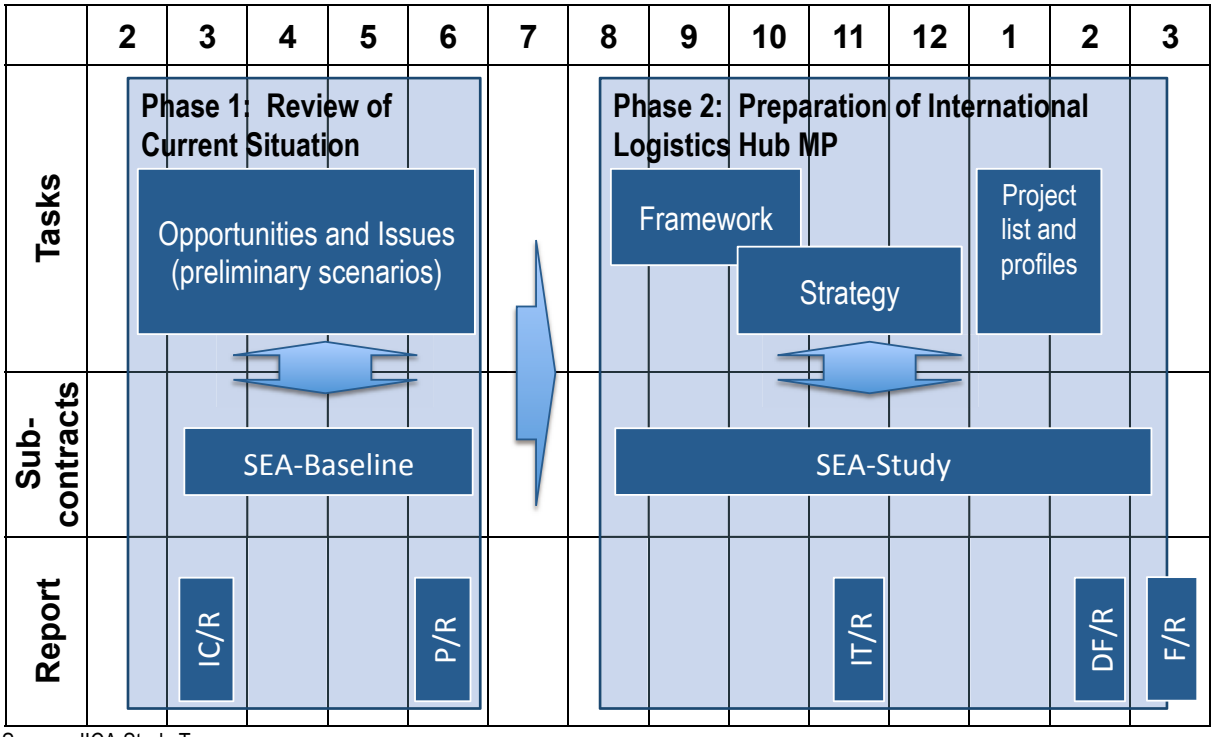
- Involvement of local stakeholders in the process of developing an International Logistics Hub Master Plan Study to make it a common framework of "All Namibia" to realize the concept of "A Logistics Nation"
- Dissemination of the International Logistics Hub Master Plan as a common framework to promote this "Logistics Nation" to the international donors and investors

1.2.3 Project site(s)

The Project covers the whole area of the country. It also targets the southern African region and surrounding countries in order to analyse the present situation regarding cargo volumes and forecast the freight flows.

1.2.4 Project schedule

The Project started in February 2014, and will be completed in March 2015. It comprises two phases as indicated in Figure 1.1. Phase 1 from February to June 2014 is for review of current situation and identifying opportunities and issues of logistics sector in Namibia. Phase 2 from August 2014 to March 2015 is for preparation of the International Logistics Hub Master Plan. Strategic Environmental Assessment (SEA) was conducted in parallel with the master plan study, and feedbacks from the SEA are utilized for the formulation of the master plan.



Source: JICA Study Team

Figure 1.1: Project schedule

In the process of formulating the master plan, many meetings with stakeholders in major cities/towns in Namibia and Livingstone in Zambia are organised as indicated in Table 1.2. Most meetings were arranged by NPC, WBCG, and feedbacks from the stakeholders were also incorporated in the master plan.

Table 1.2: Meetings with stakeholders

Date	Location	Major participants
Steering Committee		
10 March 2014	Windhoek	NPC, MWT, MOF, MTI, WBCG
18 March 2014	Windhoek	NPC, MWT, MOF, MTI, Namport, RA, TransNamib, Air Namibia, NAC, WBCG
24 June 2014	Windhoek	NPC, MWT, MOF, MTI, TransNamib, NAC, WBCG
20 November 2014	Windhoek	NPC, MWT, RA, Air Namibia, GIPF, D&M Rail, NGCL, WBCG
29 January 2015	Windhoek	NPC, MWT, MOF, MTI, MHAI, MRLGHRD, MET, Roads Authority, TransNamib, Air Namibia, NAC, D&M Rail, NGCL, WBCG
Stakeholder meeting/information session (Arranged by NPC and Walvis Bay Corridor Group)		
14 March 2014	Walvis Bay	NPC, MWT, Namport, Roads Authority, TransNamib, NAC, Erongo Regional Electricity Distribution Company, WBCG, Municipality of Walvis Bay, Municipality of Swakopmund, Walvis Bay Port Users Association, Container Liner Operators Forum, private companies
16 April 2014	Windhoek	NPC, MWT, MTI, Namport, Roads Authority, TransNamib, WBCG, Municipality of Windhoek, Namibia Logistics Association, Namibia Chamber of Commerce and Industry, private companies
22 April 2014	Lüderitz	NPC, MWT, Namport, WBCG, Lüderitz Town, NAC, NamPower, private companies
24 April 2014	Keetmanshoop	NPC, MWT, Namport, WBCG, Karas Region, Keetmanshoop Town, NAC, private companies
15 May 2014	Tsumeb	NPC, MWT, Namport, TransNamib, WBCG, Tsumeb Town, Grootfontein Town, Otijwarongo Town, private companies
27 August 2014	Oshakati	NPC, MTI, MOF, TransNamib, WBCG, Helao Nafidi Town, Ongwediva Town, Oshakati Town, private companies
08 September 2014	Livingstone	MWT, WBCG, MOF (Zambia), Zambia Chamber of Commerce and Industry, private companies, journalists
10 September 2014	Katima Mulilo	NPC, MWT, MOF, Roads Authority, WBCG, Zambezi Region, Katima Mulilo Town, private companies, NGO
Introduction of the Project to Japanese companies (arranged by JICA South Africa Office)		
22 May 2014	Johannesburg	Japanese companies in Johannesburg and Pretoria
Namibia Logistics Hub Symposium (arranged by NPC)		
19–20 September 2014	Swakopmund	NPC, MWT, MTI, MOF, MHAI, Namport, Roads Authority, TransNamib, NAC, Air Namibia, WBCG, Municipality of Walvis Bay, Municipality of Swakopmund, Erongo Region, Walvis Bay Port Users Association, Container Liner Operators Forum, logistics companies
Namibia Logistics Hub Master Plan Workshop (arranged by NPC)		
20–21 February 2015	Swakopmund, Walvis Bay	NPC, MWT, MTI, MOF, MHAI, MRLGHRD, Namport, Roads Authority, TransNamib, NAC, Air Namibia, WBCG, Local Authorities, Walvis Bay Port Users Association, Container Liner Operators Forum, logistics companies
Consultation workshop for SEA		
09 October 2014	Windhoek	Namwater, MTI
14 October 2014	Walvis Bay	Municipality of Walvis Bay, MTI, Namibia Chamber of Commerce and Industry, Namibian Coast Conservation and Management Project
16 October 2014	Lüderitz	Ministry of Fisheries and Marine Resources, Namport, Lüderitz Town, NGO
28 October 2014	Oshikango	NPC
30 October 2014	Katima Mulilo	NPC, Katima Mulilo Town, Namibia Chamber of Commerce and Industry, private companies
26 January 2015	Windhoek	NPC, MRLGHRD, WBCG, NGCL, NGO, private
27 January 2015	Walvis Bay	Municipality of Walvis Bay, WBCG, NACOMA, private

Source: JICA Study Team

1.3 Structure of the report

This Final Report is a compilation of the master plan, project and programme profiles and proposed implementation structure of the master plan which are the outcomes of "The Project on Master Plan For Development of An International Logistics Hub for SADC Countries in The Republic of Namibia". The Final Report consists of "Summary", "Main Text" and "Appendix". This volume is the

Appendix of the Final Report. This Appendix volume consists of Part 1 and Part 2, and these parts have the following chapters.

1.3.1 Part 1: Analysis of current situations relating to logistics development in Namibia and SADC (Chapter 2 to 9)

Current situation related to logistics in Namibia and SADC is analysed in Part 1. Chapter 2 deals with socio-economic development of Namibia and SADC, and Namibia's 5-year plan, National Development Plan 4. Industrial activities and value chain in Namibia and SADC are compiled in Chapter 3.

Logistics market in Namibia and SADC is analyzed in Chapter 4. Cargo demand of landlocked area of SADC is estimated, and transport network model which was developmed in "Namibia Integrated Transport Master Plan" is revewed in Chapter 4 as well. Chapter 5 compiles uraban and town development in Namibia. Urban development plans at Walvis Bay, Katima Mulilo and Oshikango (Helao Nafidi) are reviewed in Chapter 5. Chapter 6 discusses with transport infrastructure in Namibia and SADC. SADC Transport Sector Plan and regional transport infrastructure study conducted by JICA in the past are reviewed, and development of transport sector (port, road, rail and aviation) is compiled in Chapter 6.

Chapter 7 and Chapter 8 deals with environment and social conciderations. Chapter 7 compiles institutions and organizations related to environment and social considerations, and Chapter 8 summerises baseline survey of Strategic Environmental Assessment. Chapter 9 explains preparation process of GIS database which is used in Logistics Hub Master Plan.

1.3.2 Part 2: Supplemental information of Logistics Hub Master Plan (Chapter 10 to 13)

Part 2 of this Appendix is supplemental information of Logistics Hub Master Plan. Chapter 10 explains methodology used for forecasting logistics demand in 2025 and 2045. Outputs of the demand forecast are used in Main Text's Chapter 3 (targets of the master plan), Chapter 6 and Chapter 7 (road capacity in). Chapter 11 of this Appendix compiles market surveys (interview survey and questionnaire survey) which is targeted Zambian manufacturers. Result of the survey is used in Main Text's Chapter 4 (market promotion) and Chapter 5 (target cargos for Logistics Hub Center). Chapter 12 of the Appendix compiles current situation of target towns for which bypass road and truck stop will be developed. Chapter 13 of Appendix supplemental information of Strategic Environmental Assessment which is compiled in the Chapter 10 of the Main Text. The Chapter 13 describes baseline information of Lüderitz, comments and inputs from SEA scoping workshops and public meetings and Strategic Environmental Plan.

Part 1

Analysis of current situations related to logistics development in Namibia and SADC

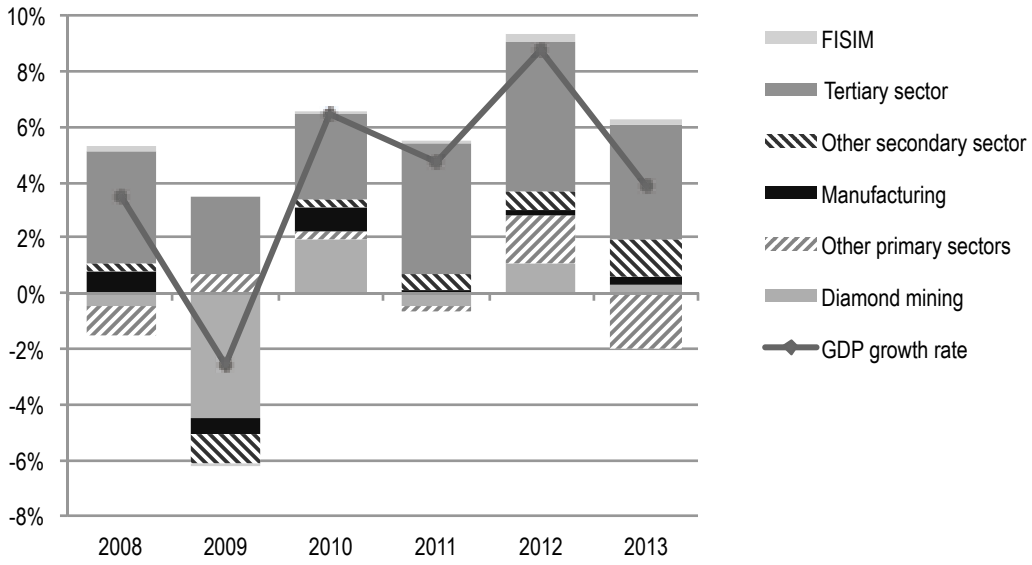
2. Overview of Namibia and SADC

2.1 Development profile of Namibia

2.1.1 Macroeconomic overview

2.1.1.1 Macro-economic development in recent years

Gross National Income (GNI) per capita[1] in Namibia accounted for 5,610 US dollars in 2012, and the World Bank defined Namibia as an "upper-middle income economy". Namibia experienced rapid economic growth in 2000s. It achieved a 6.8% average GDP growth during 2003 and 2007. In particular, the growth rate was recorded as 10.5% in 2004 and 7.3% in 2006, respectively[2]. However, the growth rate dropped to 3.4% in 2008 when the "Lehman Shock" occurred, and recorded a negative GDP growth (-2.6%) in 2009 as shown in Figure 2.1. After 2010, the Namibian economy recovered from the recession, and went back to a steady economic growth path.



Source: Preliminary Annual National Accounts 2013, Namibia Statistics Agency (NSA)

Figure 2.1: Economic growth of Namibia from 2008 to 2013

Regarding the contribution of economic sectors to the GDP growth, the tertiary sector played an important role to push the growth rate up during 2008 and 2013. Diamond mining and the secondary sector (both in manufacturing and construction) were major reasons for negative growth in 2009.

[1] GNI per capita, Atlas method (current USD) which is measured by the World Bank
[2] The percentages are calculation from Annual National Accounts 2002-2012. After publication of the Annual National Accounts 2002-2012, NSA has prepared new National Account statistics, Annual National Accounts 2013.

When the economy stagnated in 2008 and 2013, other primary sectors (consisting of agriculture and fishery, and mining other than diamond) put a brake on the economic growth.

Namibian economic development in recent years has been affected by the world economic recession; however, its socio-economic characters which impacts on middle- and long-term economic growth has not changed. The following sections explain the characters of the Namibian economy.

2.1.1.2 Domestic market: small and integrated with the South African economy

The first characteristic of the Namibian economy is its very small domestic market. The national territory is 800,000 km^2, but the majority of the territory is desert/semi-arid with poor water resources. Therefore, the population dependent force of the country is small, and the current population is only 2.1 million. Namibia does not have a sufficient market scale performing as a single economic unit, and its economic development depends largely on economic ties with the neighbouring countries. Relationships with South Africa, Angola, Botswana, Zambia and DRC, in particular, are key to economic growth. Among them, the ties with South Africa and Botswana are strong, and the country has been integrated with the economy of South African by the customs union[3] and monetary union[4].

2.1.1.3 Monoculture structure relying on mineral resource extraction

The second characteristic of the Namibian economy is a monoculture structure that relies heavily on mineral resource extraction. Major industries which have international competitiveness are only mining of diamonds and uranium. Large-scale manufacturing development is not observed in Namibia, and almost of all manufactured goods are imported from foreign countries[5].

According to the Namibian Labour Force Survey in 2013, the work force in agriculture and fisheries accounts for 31% of the total work force[6], however, the stake of agriculture and fisheries in the national GDP was only 8.7% in 2011, and the percentage is decreasing consistently. The self-sufficiency rate regarding grain is low, and almost all agricultural products and agricultural processed goods are imported from South Africa. Exported agricultural and fisheries products is limited to fruit and vegetables in the southern part, marine products by the trawler fishing industry[7], weaner calves for export and meat products.

Table 2.1 indicates the merchandise trade balance and change in major trade goods in recent years.

[3] Refer to section 4.1 about Southern African Customs Union (SACU)
[4] Namibia has established "Common Monetary Area (CMA)," a monetary union with South Africa. South Africa Rand can be used for daily economic activities in Namibia but Namibian dollar cannot be used in South Africa.
[5] Beer is one of the few items that are internationally competitive. Refer to section 3.1 about the situation of beer production.
[6] Refer to Table 2.7 in detail.
[7] Small-scale fishery has not been conducted to date, and large scale fishing companies are conducting fishing in Namibia.

Export value of diamonds had decreased from 910 million US dollars to 771 million dollars in 2009 due to the world economic recession after the Lehman Shock. However, the export value of diamonds recovered in 2010, and it exceeded the level of pre-Lehman Shock in 2012. Export of other minerals (including uranium and zinc, etc.) has been constant except 2009, and is almost at the same level as the export value of diamonds.

Table 2.1: Trade structure in recent years

Unit: USD million

	2007	2008	2009	2010	2011	2012	2013
Total of export	2,915.3	3,169.7	3,114.6	4,010.3	4,404.0	4019.9	4,094.1
Diamonds	909.8	770.6	540.2	827.2	882.1	984.2	963.4
Other minerals	804.6	939.6	728.6	938.4	927.2	851.9	855.5
Fish	445.1	367.0	339.9	408.9	421.4	403.7	397.5
Import total	-3,087.3	-3,852.4	-4,339.7	-4,899.4	-5,630.2	-5,652.2	-6,091.8
Trade balance	-172.0	-682.7	-1,125.1	-889.1	-1.226.1	-1,632.3	-1997.8

Note: *Estimation; **projection
Source: Article IV Consultation Report, IMF, annual issues

The annual average growth rate of export value accounted for 5.8% from 2007 to 2013. On the other hand, the growth rate of import value exceeded the level to 12.0%. The trade balance is getting worse in recent years.

2.1.1.4 Wide economic disparity and dual structure of economy

The third character of Namibian economy is the wide economic disparity and dual structure of the national economy. According to the Namibia Household Income & Expenditure Survey (NHIS) 2009/2010, the Geni Coefficient, which indicates inequality of income distribution, was 0.597[8]. The level is the third highest after South Africa (0.631 in 2009) and Honduras (0.613 in 2008) in comparison with the Geni Coefficient of the world countries around 2010. There was a record of an extreme disparity of income in that 31.9% of the people lived on $ 1.25 or less per day while the population of the 10% income-level accounted for 54.8% of all income in 2004, according to the World Development Indicator database. Such situation has not changed so far.

Distortion of income results from the dual structure of the national economy. A modernized market economy generates almost all of national wealth while a traditional self-sufficiency economy still exists in rural areas. Export of primary goods such as diamonds and minerals, meat products and fishery push Namibia up to the position of an "upper-middle-income economy." Only a part of Namibian population such as urban residents and people working for mining and commercial agriculture receive a high level of income. On the other hand, people's income in rural areas is limited. These people represent around 60% of the national population, and are working for

[8] Geni Coefficient of Namibia is decreases gradually. It recorded 0.701 in NHIS 1993/94 and 0.603 in NHIS 2003/04, respectively.

self-sufficiency agriculture and traditional livestock farming[9].

According to the Namibia Labour Force Survey of 2013, 48% of the farmers are concentrated in the northern 4 regions (Ohangwena, Oshikoto, Oshana and Omusati)[10]. The Oshiwambo people inhabit the area of the northern 4 regions, which account for 40% of the national population. They constitute the largest tribe, which accounts for half of the national population, and are stable supporters of the current administration, South-West Africa People's Organisation (SWAPO).

Table 2.2 indicates the major income source of household and income per capita by regions. In Erongo, Khomas and Karas Regions[11], wages and salary represents more than 70% of the total household income, and the percentage exceeds the national average of Namibia (47.7%) in 6 regions. The percentage for farming is not so high excluding Kavango East and West Regions (43.0%). Even in the 4 northern regions, the percentage for farming is between 13% and 33%, and is at the same level as wages and salary. Meanwhile, the percentage for pensions in the 4 regions is higher than other regions.

In regard to consumption per person, Erongo and Khomas account for 1.6 times and 2.3 times higher than the national average while Ohangwena, Omusati and Oshikoto are around half or less than half of the national average.

Table 2.2: Income source and per capita consumption by regions

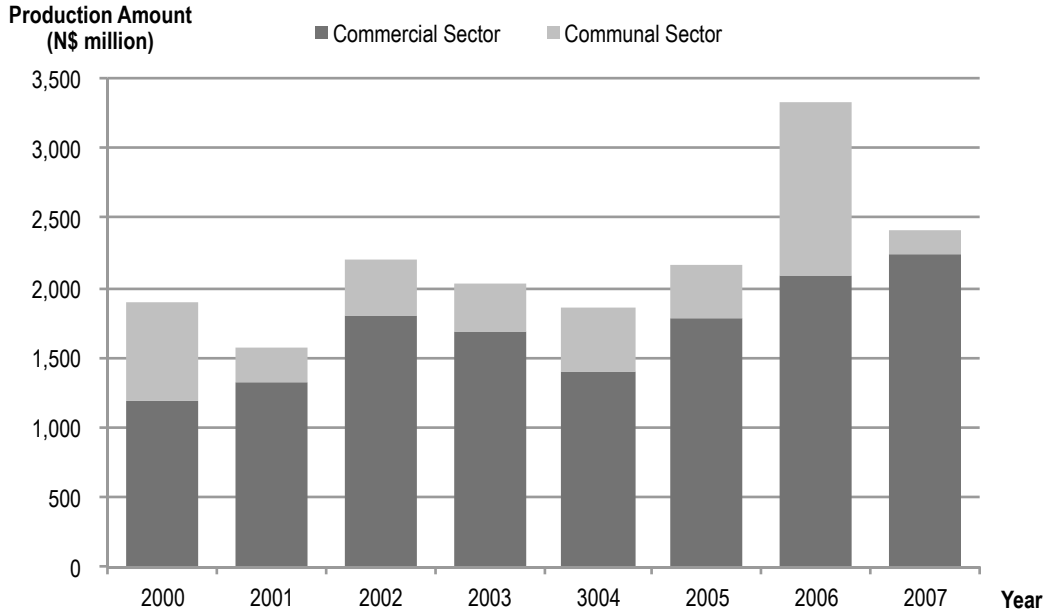
Area	No of Households	Main income source (proportion to total household number, %)						Adjusted per capita income (N$ in 2010)
		Farming	Own business	Wages and salaries	Pension	Cash remittance	Other	
Namibia	464,839	16.4	11.6	47.7	14.9	5.4	3.9	16,895
Erongo	44,116	2.5	9.2	72.8	8.3	4.9	2.2	27,029
Hardap	19,307	6.9	4.2	64.2	14.5	6.7	3.6	18,573
Karas	20,988	4.7	5.1	71.6	10.5	5.0	3.0	21,516
Kavango (East and West)	36,741	43.0	11.9	21.9	12.7	5.7	4.7	6,766
Khomas	89,438	1.4	14.1	72.7	4.2	5.2	2.4	36,238
Kunene	18,495	31.6	7.7	41.0	11.7	5.2	2.8	12,807
Ohangwena	43,723	25.7	12.1	22.2	29.0	6.1	4.9	9,162
Omaheke	16,174	21.5	7.3	48.8	12.9	6.4	3.2	15,940
Omusati	46,698	22.0	10.4	25.4	31.4	5.0	5.7	11,034
Oshana	37,284	13.1	17.2	40.3	19.2	4.8	5.5	15,482
Oshikoto	37,400	33.3	8.5	29.7	18.9	5.4	4.2	8,163
Otjozondjupa	33,192	10.1	10.1	59.6	10.1	5.8	4.4	17,006
Zambezi	21,283	20.6	25.2	29.5	14.6	5.9	4.1	8,387

Source: Census 2011 Main Report (main income source); Household Income & Expenditure Survey 2009/10 (Adjusted per capita income)

Figure 2.2 indicates agricultural production from 2000 to 2007. "Communal Sector" of the graph means self-sufficient farming conducted by small-scale farmers in Ohangwena, Omusati, Oshikoto Oshana, Kavango East, Kavango West and Zambezi Regions[12]. On the other hand, large-scale

[9] According to NHIS 2009/10, per capita in urban was N$28,020; on the other hand, per capita in rural is only N$9,785.
[10] Region is the widest and 1st layer of local autonomous body of Namibia.
[11] Walvis Bay and Swakopmund are included in Erongo Region, and Windhoek is included in Khomas Region, respectively.
[12] President Hifikepunye Pohamba announced sepalation of Kavango Region into Kavango East Region and Kavango West

agriculture and animal husbandry is conducted in the "Commercial Sector," and weaners and produced beef are exported to South Africa and EU, etc. The production value of the Commercial Sector has increased during the period from 2000 to 2007 while that of the Communal Sector has fluctuated. Commercial agriculture production accounted for two thirds of the total agricultural production.



Source: Agriculture Statistics Bulletin (2000-2007), Ministry of Agriculture, Water and Forestry

Figure 2.2: Change in agricultural production

Out of 7 regions in the Communal Sector, Kavango East, Kavango West and Zambezi Regions have rivers (Kavango River and Zambezi River). Maize and sorghum is cultivated in these regions. Millet is cultivated in the northern 4 regions (Ohangwena, Omusati, Oshana and Oshikoto) since rainfall is lower in these regions.

2.1.2 Population and labour force

2.1.2.1 Population growth since 1991

In Namibia, a population census is conducted every 10 years, in 1991, 2001 and 2011 after independence. Table 2.3 indicates changes of population by region.

The average growth rate of the national population was 2.0% during 1991 and 2011. At regional level, higher average growth rates are observed in Khomas Region (3.6%) and Erongo Region (5.1%).

Region,and renamed Caprivi Region to Zambezi Region in August 2013.

Windhoek is included in Khomas Region and Walvis Bay is included in Erongo Region, respectively[13]. Meanwhile, population of the northern 4 regions (Ohangwena, Omusati, Oshana and Oshikoto) accounts for 40% of the national population.

Table 2.3: Change of population in Namibia

Region	Population (persons)			Population growth rate (%)			Share (%)		
	1991	2001	2011	91-01	01-11	91-11	1991	2001	2011
Erongo	55,740	107,663	150,809	6.8%	3.4%	5.1%	4.0%	5.9%	7.1%
Hardap	66,495	68,249	79,507	0.3%	1.5%	0.9%	4.7%	3.7%	3.8%
Karas	61,162	69,329	77,421	1.3%	1.1%	1.2%	4.3%	3.8%	3.7%
Kavango East & West	116,830	202,694	223,352	5.7%	1.0%	3.3%	8.3%	11.1%	10.6%
Khomas	167,071	250,262	342,141	4.1%	3.2%	3.6%	11.8%	13.7%	16.2%
Kunene	64,017	68,735	86,856	0.7%	2.4%	1.5%	4.5%	3.8%	4.1%
Ohangwena	179,634	228,384	245,446	2.4%	0.7%	1.6%	12.7%	12.5%	11.6%
Omaheke	52,735	68,039	71,233	2.6%	0.5%	1.5%	3.7%	3.7%	3.4%
Omusati	189,919	228,842	243,166	1.9%	0.6%	1.2%	13.5%	12.5%	11.5%
Oshana	134,884	161,916	176,674	1.8%	0.9%	1.4%	9.6%	8.8%	8.4%
Oshikoto	128,745	161,007	181,973	2.3%	1.2%	1.7%	9.1%	8.8%	8.6%
Otjozondjupa	102,536	135,384	143,903	2.8%	0.6%	1.7%	7.3%	7.4%	6.8%
Zambezi	90,152	79,826	90,596	-1.2%	1.3%	0.0%	6.4%	4.4%	4.3%
Total	1,409,920	1,830,330	2,113,077	2.6%	1.4%	2.0%	100.0%	100.0%	100.0%

Source: Reports of Census 2001and Census 2011, NSA

Population is gradually being concentrated in urban areas. As indicated in Table 2.4, 5 municipalities/towns (Oshakati, Walvis Bay, Rundu, Windhoek and Katima Mulilo) experienced higher population growth during 1991 and 2011. Population has increased by more than double in these towns. In most towns, annual growth rates of 2001–2011 decelerate compared to those of 1991–2001. However, population growth is accelerating at Rundu, and its population has exceeded Walvis Bay in 2011. As a result, Rundu is the second most populous town after Windhoek in 2011.

Table 2.4: Increase of population in major municipalities/towns

Municipalities/towns	1991	2001	2011	Average growth rate from 1991 to 2001 (%)	Average growth rate from 2001 to 2011 (%)	Average growth rate from 1991 to 2011 (%)
Oshakati	9,303	28,255	36,541	11.7%	2.6%	7.1%
Walvis Bay	21,249	43,611	62,096	7.5%	3.6%	5.5%
Rundu	26,125	36,984	63,431	3.5%	5.5%	4.5%
Windhoek	141,562	233,529	325,958	5.1%	3.4%	4.3%
Katima Mulilo	12,599	22,134	28,362	5.8%	2.5%	4.1%
Keetmanshoop	13,463	15,778	20,977	1.6%	2.9%	2.2%

Source: Profile of Namibia – Facts, Figures and Fundamental Information, NSA, 2013

The Namibia Statistical Agency (NSA) prepares a population forecast until 2041 based on the result of the Census 2011. The forecast has 3 scenarios, "Low Variant," "Medium Variant" and "High Variant." As indicated in Table 2.5, forecasted numbers in 2040 are 3,269,359 (Low Variant), 3,401,887, (Medium Variant) and 3,535,327 (High Variant), respectively.

[13] Walvis Bay was outside of the national territory when Namibia became indipendent in 1991, and it was incorporated into Namibia in 1994. Therefore, population of Erongo Region doubled between 1991 and 2001, and recorded a higher population growth rate. Annual average population growth rate of Erongo Region continues to be at a higher level after that. The growth rate accounted for 3.4% during 2001 and 2011, which exceeded national average (1.4%) and the growth rate of Khomas Region (3.2%).

Table 2.5: Population forecast up to 2041

Year	Low Variant	Medium Variant	High Variant
2011	2,116,077	2,116,077	2,116,077
2015	2,278,843	2,280,716	2,282,591
2020	2,494,439	2,504,498	2,514,555
2025	2,707,680	2,733,338	2,758,993
2030	2,910,729	2,960,542	3,010,364
2035	3,100,421	3,185,005	3,269,750
2040	3,269,359	3,401,887	3,535,327

Source: Namibia Population Projections 2011–2041, NSA,

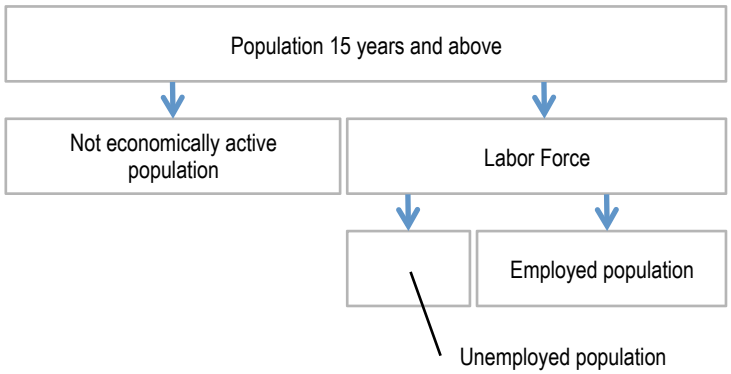
2.1.2.2 Labour force

Table 2.6 indicates change in the Labour Population in 2004, 2008, 2012 and 2013 when the Namibia Labour Force Survey was conducted[14]. Figure 2.3 explains the classification of the labour population, which is indicated in the 1st column of Table 2.6. The Population of 15 years and above has increased by 360,000 persons, and the labour force by 37,000 during 2004 and 2013. As a result, the labour force participation rate has increased 60% to 71%. Unemployment rate has decreased from 37% in 2004 to 30% in 2013. During 10 years, unemployment rate has been decreasing from 37% to 30%; however, unemployment population has increased by 70,000 persons.

Table 2.6: Change of labour population

Classification of labour population	2004	2008	2012	2013
Population of 15 years and above	1,024,110	1,106,854	1,315,662	1,384,054
Labour force	608,610	678,680	868,268	980,781
Employed population	385,329	423,496	630,094	690,019
Unemployed population	223,281	255,184	238,174	290,762
Not economically active population	415,500	428,173	404,122	403,273
Unemployment rate	36.7%	37.6%	27.4%	29.6%
Labour force participation rate	59.4%	61.3%	66.0%	70.9%

Note: JICA Study Team adjusted figures of "Not economically active population" in 2004 and "Labour force," "Employed population," "Unemployment population," and "Not economically active population" in 2008
Source: Namibia Labour Force Survey 2008, 2012 and 2013



Source: Namibia Labour Force Survey 2012, NSA, 2013

Figure 2.3: Classification of labour population

[14] Namibia Labour Force Survey (NLFS) is a sample survey. In case of NLFS 2013, two-stage sample design was applied, and 586 Primary Sample Unit (PSU) was selected from all over the country. After that 9,801 sample households were selected From PSUs. NLFS conducted the Namibia Labour Force Survey until 2008, and was taken over by NSA from NLFS 2012.

Table 2.7 indicates number of labours by industrial sectors in 2013. 31% of the total labours were working in agriculture and fishing industry. Wholesale and retail services employed 15% of the total number of labours (105,000 persons), and private households (8.4%), construction (7.0%), real estate and business services (6.3%), education (6.1%) followed it. The number of labours in manufacturing was only 33,000 persons (5%).

Table 2.7: Estimated number of labour by industrial sectors in 2013

Industrial Sectors	Number of labour	Share
Agriculture & Fishing	216,683	31.4%
Mining	13,644	2.0%
Manufacturing	32,978	4.8%
Utilities	4,773	0.7%
Construction	48,164	7.0%
Wholesale and retail service	105,720	15.3%
Transport & communications	5,627	0.8%
Hotels & restaurants	37,001	5.4%
Financial services	14,702	2.1%
Real estate & business services	43,215	6.3%
Public administration	32,147	4.7%
Education	42,063	6.1%
Health & social	16,686	2.4%
Other services	18,066	2.6%
Private households	58,035	8.4%
Extra territorial bodies	514	0.1%
Total	690,019	100.0%

Note: JICA Study Team calculated number of labours based on the share of each industrial sector.
Source: Namibia Labour Force Survey 2013, NSA, 2014

2.2 National development plans: Vision 2030 and National Development Plan 4

2.2.1.1 Vision 2030

GRN formulated a long-term national development plan called "Vision 2030" in 2000, in order to guide long-term development. Vision 2030 had a vision statement, "A prosperous and industrialised Namibia, developed by her human resources, enjoying peace, harmony and political stability." In this vision wording like, "industrialised Namibia" has a message that Namibia's per capita income would have grown to be equivalent to upper income countries. Vision 2030 identified 8 objectives for the vision as indicated in Table 2.8, and 20 strategic elements as indicated in Table 2.9. These strategic elements could realise the objectives of Vision 2030, and should be considered in the long-term perspective plan for Namibia.

Table 2.8: Objectives of Vision 2030

No.	Description of objectives
1.	Ensure that Namibia is a fair, gender responsive, caring and committed nation, in which all citizens are able to realise their full potential, in a safe and decent living environment.
2	Create and consolidate a legitimate, effective and democratic political system (under the Constitution), and an equitable, tolerant and free society that is characterised by sustainable and equitable development and effective institutions, which guarantee peace and political stability.
3.	Develop a diversified, competent and highly productive human resources and institutions, fully utilising human potential, and achieving efficient and effective delivery of customer-focused services which are competitive not only nationally, but also regionally

No.	Description of objectives
	and internationally.
4.	Transform Namibia into an industrialised country of equal opportunities, which is globally competitive, realising its maximum growth potential on a sustainable basis, with improved quality of life for all Namibians.
5.	Ensure a healthy, food-secured and breastfeeding nation, in which all preventable, infectious and parasitic diseases are under secure control, and in which people enjoy a high standard of living, with access to quality education, health and other vital services, in an atmosphere of sustainable population growth and development.
6.	Ensure the development of Namibia's 'natural capital' and its sustainable utilization, for the benefit of the country's social, economic and ecological well-being.
7.	Accomplish the transformation of Namibia into a knowledge-based, highly competitive, industrialised and eco-friendly nation, with sustainable economic growth and a high quality of life.
8.	Achieve stability, full regional integration and democratised international relations; the transformation from an aid-recipient country to that of a provider of development assistance.

Source: Namibia Vision 2030, Policy Framework for Long-Term National Development (2004)

Table 2.9: Strategic elements of Vision 2030

No.	Description of strategic elements
1.	Maintaining an economy that is sustainable, efficient, flexible and competitive;
2	Operating a dynamic and accessible financial sector;
3.	Achieving full and gainful employment;
4.	Providing excellent, affordable health care for all;
5.	Mainstreaming HIV/AIDS into development policies, plans and programmes;
6.	Creating access to abundant, hygienic and healthy food, based on a policy of food security;
7.	Providing full and appropriate education at all levels;
8.	Leveraging knowledge and technology for the benefit of the people;
9.	Promoting interpersonal harmony among all people;
10.	Operating a morally upright and tolerant society that is proud of its diversity;
11.	Ensuring an atmosphere of peace, security and hope for a better life for all;
12.	Maintaining stable, productive and diverse ecosystems managed for long-term sustainability;
13.	Establishing and sustaining business standards of competence, productivity, ethical behaviour and high trust;
14.	Upholding human rights and ensuring justice, equity and equality in the fullest sense for all, regardless of gender, age, religion, ethnicity, ability or political affiliation;
15.	Maintaining a low-level, responsive bureaucracy;
16.	Implementing a land- and natural resource policy that ensures fair access by all to the means of production;
17.	Establishing and operating a fiscal policy that distributes wealth fairly, and encourages production, employment and development of wealth in a stable and sustainable economic climate;
18.	Operating a responsive and democratic government that is truly representative of the people, and able to adhere to transparent, accountable systems of governance, proactively;
19.	Achieving collaboration between public, private and Civil Society organisations, in policy formulation, programming and implementation;
20.	Maintaining sound international policies that ensure effective cooperation, favourable trade relations, peace and security.

Source: Namibia Vision 2030, Policy Framework for Long-Term National Development (2004)

Vision 2030 also says that "The programmes of Vision 2030 have specific targets and, periodically, through the National Development Plans and related programme instruments, we will evaluate the Vision programme performance." Therefore, it is necessary to refer to Vision 2030 when the National Development Plans and a master plan like the Logistics Master Plan are prepared.

2.2.2 National Development Plan 4 (NDP4)

GRN has formulated 5-year plans called National Development Plans (NDP) to achieve the long-term vision. The present 5 year plan is the "Namibia's Fourth National Development Plan (2012/13–2016/17; NDP4)," which was published in July 2012. NDP4 assesses achievements of the previous development plans in its introduction. It appreciates that Namibia was included as a "upper-medium income country" in 2009 after steady economic growth. On the other hand, it points

out that major issues such as limited social development represented by limited improvement of the Human Development Index (HDI), gradual increase of unemployment in the population, limited improvement of disparity, remains, and that more rapid economic development and implementation of policies to narrow income disparity are needed.

NDP4 concludes that achievements of the previous development plans have not lived up to expectations, and indicates the following reasons.

- Some projects had not been activated.
- Responsible bodies for the projects had not been clarified.
- Financial resources for investment had been too diversified.
- The process of implementation, monitoring and evaluation had not been prepared before project implementation.

Based on the assessment above, priority areas are narrowed down, and clear targets (desired outcomes) are prepared. The NDP4 also shows strategic actions to achieve the targets with due date for implementation. Figure 2.4 shows the structure of NDP4, consisting of overall goals, basic enablers and economic priorities. Economic priorities include the industries such as logistics, tourism, manufacturing and agriculture, and basic enablers include the factors such as public infrastructure, reducing extreme poverty, health, education and skills and institutional environment.

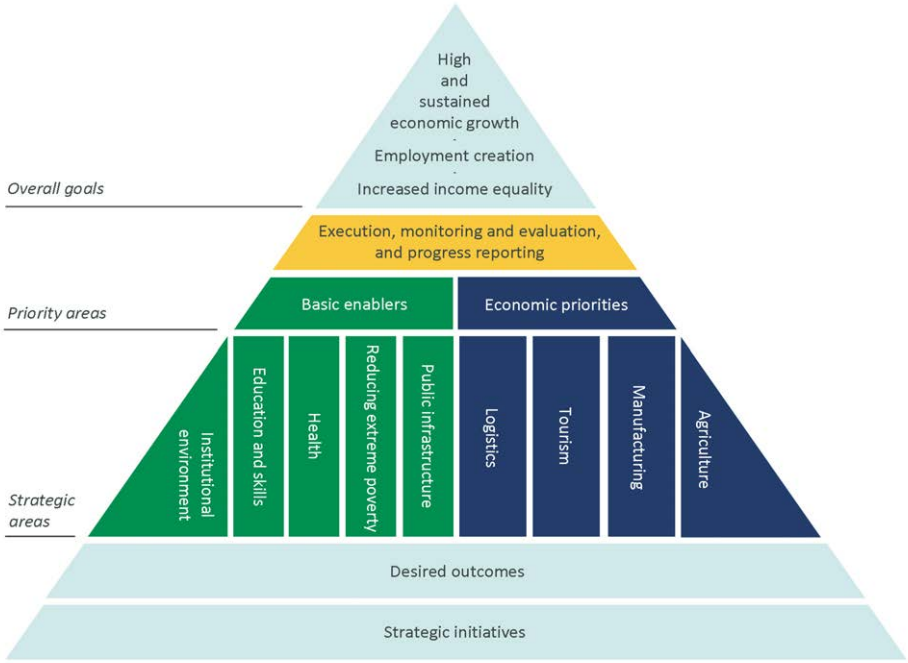


Figure 2.4: Structure of NDP4

Source: Namibia's Fourth National Development Plan: NDP4, NPC, 2012

Based on NDP4, relevant ministries and agencies were to prepare sector plans in 17 sectors. The sector plans have been completed in 5 sectors such as transport (MWT), Agriculture (MAWF) and

Housing (MRLGHRD) as of March 2014.

2.2.3 Economic priorities

2.2.3.1 Logistics

It is remarkable that logistics is in the first position of the economic priorities, and its desired outcome is set "Port of Walvis Bay has become the preferred African West coast port and logistics corridor for southern and central African logistics operations." One of the high-level strategies to achieve the desired outcome, development of a logistics master plan is described as indicated in Table 2.10.

In order to achieve the desired outcome, 8 high-level strategies have been prepared. Many ministries are going to work as major role players/agents to carry out the high-level strategies. Those are MWT, MRLGHRD, MOF and NPC. It means that the cooperation of these players is very important to promote logistics development. MWT is designated as the "champion" and is the responsible entity to achieve the desired outcome regarding logistics.

Implementation of the high level strategies in Table 2.10 has been delayed. Development of the logistics master plan was to be completed in 2013, and the institutional setting for public-private partnership and international and bi-lateral agreements to ease the cross border flow of goods has not commenced yet[15].

Table 2.10: Desired Outcome and high-level strategy for Logistics

Desired outcome/Champion	High-level strategy (Due date)	Main role player/agent responsible
By 2017, the volume in cargo handling and rail-transported cargo is double that of 2012, and the Port of Walvis Bay has become the preferred African West coast port and logistics corridor for southern and central African logistics operations. Ministry of Works and Transport	Maintain and expand critical infrastructure (see also all DO5s; 2017)	Ministry of Works and Transport
	Make land available in Walvis Bay and in other municipalities along Corridor routes to support logistics activities (2017)	Ministry of Regional and Local Government, Housing and Rural Development
	Put in place a public–private partnership funding framework to create synergies and funding for the logistics hub (2012)	Ministry of Finance
	Transform the Walvis Bay Corridor Group, moving away from its focus on transport to a focus on logistics and distribution (2012)	Ministry of Works and Transport
	Pursue international and bilateral agreements to ease the cross- border flow of goods (On-going)	Ministry of Trade and Industry
	Identify and develop the skills necessary to make the logistics hub a reality, i.e. focus on long-term development as well as short-term measures, including attraction of expatriates (2012)	National Planning Commission
	Develop a National Logistics Master Plan, detailing Namibia as an international logistics hub, including images of networks, population distribution, and the spatial distribution of economic growth and job creation (2013)	National Planning Commission
	Develop a Master Plan on Regional Urban Centres, with a focus on the greater coastal area, an inland hub, the northern core Regions, and various border towns (2014)	Ministry of Regional and Local Government, Housing and Rural Development

Source: Namibia's Fourth National Development Plan: NDP4, NPC, 2012

[15] For example, One Stop Border Post at Mamuno Border Point has not been started due to delay of law preparation.

2.2.3.2 Tourism, manufacturing and agriculture

Table 2.11 indicates desired outcomes and main role players/agents responsible for the other 3 economic priorities, tourism, manufacturing and agriculture. The desired outcome for tourism is stipulated as improvement of "Travel and Tourism Competitiveness Index" prepared by the World Economic Forum. It is a very concrete target but the improvement of the index can be achieved after improvement of many aspects of tourism. Tourism has 9 high-level strategies, and the Ministry of Environment of Tourism (MET) works as main role player in the 5 strategies. MTI, the Ministry of Lands and Resettlement (MLR), NPC and NSA are also involved in tourism development.

The desired output of manufacturing is measured by the increase of value added by manufacturing by 50% in 2017 over that in 2010. Manufacturing has 14 high-level strategies, and MTI acts as a major role player in 10 of these strategies. Efforts of the ministry will be key to promote development of manufacturing sector.

The desired output of agriculture is steady growth of the industry in GDP. Agriculture has 4 high-level strategies, and MAWF acts as major role player in the all strategies.

Table 2.11: Desired Outcome for Tourism, Manufacturing and Agriculture

Economic priorities/ Champion	Desired outcome	Main role player/agent responsible
Tourism Ministry of Environment and Tourism	In line with the National Tourism Growth and Development Strategy, Namibia is the most competitive tourist destination in Africa by 2017, as measured by the Travel and Tourism Competitiveness Index of World Economic Forum. Namibia's ranking has increased from being third in sub-Saharan Africa with an overall ranking of 3.84 out of 7.0 (2011/12) to being first, with a ranking of at least 4.40 out of 7.0.	Ministry of Environment and Tourism; Ministry of Trade and Industry; Ministry of Lands and Resettlement; National Planning Commission; Namibia Statistics Agency
Manufacturing Ministry of Trade and Industry	By 2017, the contribution of general manufacturing in constant Namibia Dollar terms has increased by 50% over the baseline figure of the 2010 National Accounts, and significant strides have been made in identifying and developing upstream and downstream economic activities in the minerals sector.	Ministry of Trade and Industry; Ministry of Finance; Ministry of Mines and Energy
Agriculture Ministry of Agriculture, Water and Forestry	Agriculture experiences average real growth of 4% per annum over the NDP4 period	Ministry of Agriculture, Water and Forestry

Source: Namibia's Fourth National Development Plan: NDP4, NPC, 2012

2.2.4 Basic enablers

NDP 4 listed 5 basic enablers, institutional environment, education and skills, health, extreme poverty and public infrastructure. According to NDP4, basic enablers are "essential but not necessarily sufficient conditions for economic development," and they are "also referred to as foundation issues, and while the positive presence of these factors need not always translate into rapid development,

without them, sustained development cannot take place." Details of "institutional environment" and "public infrastructure" which are strongly related to logistics development are reviewed in this section.

2.2.4.1 Institutional environment

"Institutional environment" means a supportive institutional environment to enable sustainable economic development. It includes factors such as environmental management, macroeconomic stability and good business environment. The good business environment is broken down into the following sub-factors: easiness of starting business, access to finance, access to land, access to skills, R&D and innovation, flexible laws and regulations on labour, public service delivery, and public and private sector cooperation.

Table 2.12 indicates desired outcome, high-level strategies and major role player/agent responsible for institutional environment. The desired outcome stipulates that Namibia has the most competitive economy in the SADC region, and the competitiveness is measured by the "Global Competitiveness Index" measured by the World Economic Forum. According to the Global Competitiveness Report 2013–14, Namibia's index was 3.93 and it was ranked in the 90th position in 148 countries. Namibia was in the 3rd position among SADC member states after South Africa (4.37, 53rd) and Botswana (4.13, 74th). It has weaknesses in "health and primary education," "higher-education and training," "market size," and "innovation."

12 High-level strategies were prepared to improve the factors and sub-factors mentioned above, and many Ministries and Agencies are responsible for implementation of the strategies. MTI will coordinate the overall high-level strategies as a champion. Improvement of the institutional environment significantly impacts on logistics development.

Table 2.12: Desired Outcome and high-level strategy for Institutional Environment

Desired outcome/Champion	High-level strategy (due date)	Main role player/agent responsible
By the year 2017, Namibia is the most competitive economy in the SADC region, according to the standards set by the World Economic Forum. Ministry of Trade and Industry	Rebuild policy buffers to maintain macroeconomic stability through continued prudent fiscal policy and promotion of monetary and price stability (On-going)	Ministry of Finance – fiscal policy Bank of Namibia – monetary and price stability
	Reform the business environment by making it easier for existing and new business to register (2013)	Ministry of Trade and Industry
	Address the financial constraints of start-ups and micro and small-scale enterprises, and promote risk capital for rapid economic development, i.e. implementation of the Namibia Financial Sector Strategy) (2012–17)	Bank of Namibia
	Ensure availability of sufficient serviced land in towns and municipalities (2017)	Ministry of Lands & Resettlement
	Streamline the importation of foreign skills as a short-term measure to enable industries to operate optimally (2013)	Ministry of Home Affairs and Immigration
	Elevate the importance of research and development as well as innovation to a national level to sustain long-term	Ministry of Education

Desired outcome/Champion	High-level strategy (due date)	Main role player/agent responsible
	competitiveness (2017)	
	Introduce more labour flexibility without infringing on the rights of workers (2013)	Ministry of Labour and Social Welfare
	Regularly assess the productivity of Namibian labour and promote a productive work force in order to be globally competitive (On-going)	Ministry of Labour and Social Welfare
	Improve public service delivery to improve quality of life, and reform State-owned enterprises to be globally competitive (2017)	Office of the Prime Minister – public service delivery Ministry of Finance – State-owned enterprises
	Reform the Tender Board to ensure timely execution of Government programmes (2012)	Ministry of Finance
	Streamline the incentive regime to make it more transparent and link it to industries with growth potential (2012)	Ministry of Finance
	Strengthen and institutionalise public–private sector dialogue, and strengthen (2012)	Ministry of Trade and Industry

Source: Namibia's Fourth National Development Plan: NDP4, NPC, 2012

2.2.4.2 Public Infrastructure

Improvement of public infrastructure, in particular transport infrastructure, is also closely related to logistics development. As indicated in Table 2.13, 5 different desired outcomes were prepared for transport, energy, water, housing and ICT sectors. The desired outcome for transport is development of well-functioning and high quality infrastructure from Walvis Bay to domestic and SADC markets and improvement of the railway network.

Table 2.13: Desired Outcome and high-level strategy of Public Infrastructure

Desired Outcome	High-level strategy (due date)	Main role player/agent responsible
	Develop a skills audit and skills development programme for public infrastructure (2012)	National Planning Commission
	Develop a funding mechanism to ensure adequate funding for infrastructure development (2012)	Ministry of Finance
By 2017, Namibia shall have a well functioning, high quality transport infrastructure connected to major local and regional markets as well as linked to the Port of Walvis Bay: 70 percent of railway network to comply with SADC axle load recommendation of 18.5 tonnes. Ministry of Works and Transport	Ensure the timely expansion of the Port of Walvis Bay (2015)	Ministry of Works and Transport
	Renovate and maintain critical sections of the core rail network (2012)	Ministry of Works and Transport
	Renovate and maintain of critical sections of the road network (2015)	Ministry of Works and Transport
	Strike a balance between maintaining and expanding the road network (2012)	Ministry of Works and Transport
	Ensure aviation security, development and maintenance as well as the availability of an integrated Transport Master Plan for 2030 (2012)	Ministry of Works and Transport
	Upgrade the Hosea Kutako International Airport (2017)	Ministry of Works and Transport
By 2017, Namibia will have in place adequate base load energy to support industry development through construction of energy infrastructure and the	Ensure the baseload level of energy for Namibia (2017)	Ministry of Mines and Energy

Desired Outcome	High-level strategy (due date)	Main role player/agent responsible
production capacity would have expanded from 400 to more than 750 mega watts to meet demand. Ministry of Mines and Energy		
By 2017, increased access to water for human consumption from 85.5% to 100% of the population as well as sufficient water reserves for industrialisation. Ministry of Agriculture, Water and Forestry	Ensure water security for human consumption and industry development (2017)	Ministry of Agriculture, Water and Forestry
By 2017, Namibia will have a robust and effective housing delivery programme where affordability is the key feature of the programme; and that 60 per cent of households will be living in modern houses from 41 per cent in 2009/2010. Ministry of Regional and Local Government, Housing and Rural Development	Provide low-cost housing and review National Housing Policy (2015)	Ministry of Regional and Local Government, Housing and Rural Development
By 2017, adequate ICT infrastructure will be in place to facilitate economic development and competitiveness through innovation, research and development: Availability of latest technologies score improves to 6.0 from 5.5, according to the World Economic Forum. Ministry of Information, Communication and Technology	Ensure modern and reliable ICT infrastructure (2015)	Ministry of Information, Communication and Technology

Source: Namibia's Fourth National Development Plan: NDP4, NPC, 2012

In the transport sector, 6 high-level strategies were prepared. In particular, expansion of Walvis Bay Port is strongly linked to the Logistics Master Plan. MWT acts as the main role player in all the strategies.

2.3 Development profile of SADC countries

2.3.1 Key indicators and profiles

2.3.1.1 Scale of socio-economy

Table 2.14 indicates population, GDP and GDP per capita of SADC member states (15 countries). The total population was 284 million, and the GDP amounted to 655 billion US dollars in 2012. Democratic Republic of Congo (DRC) accounted for 26% of the total population, South Africa (18%) and Tanzania (16%) followed it. The populations of Angola, Madagascar, Malawi, Mozambique, Zambia and Zimbabwe were between 10 million and 25 million, and accounted for 5 to 8% of the total population. Namibia's population was only 1%, and at the same level as Botswana, Lesotho, Mauritius, and Swaziland. Regarding to the average population growth rate from 2000 to 2012, Zambia (3.1%) has achieved the highest growth rate, and DRC (2.9%), Malawi (2.9%), Tanzania (2.9%), Angola (2.8%) and Madagascar (2.8%) followed it. On the other hand, the growth rates are low in Lesotho (0.2%), Swaziland (0.6%), Mauritius (0.7%) and Zimbabwe (0.9%). Namibia (1.4%)

is in the middle position together with South Africa (1.6%) and Botswana (1.9%). Average population growth rate in SADC was 2.5% during the period.

Table 2.14: Socio-economic Indicators of SADC member states in 2012

SADC member states	Population			GDP			GDP per capita (USD)
	Number (000 persons)	Share in SADC (%)	Average growth (2000-2012)	Value (USD million)	Share in SADC (%)	Real GDP growth (2000–2012)	
Angola	18,577	7%	2.8%	115,253	18%	10.9%	6,204
Botswana	2,063	1%	1.9%	14,447	2%	4.3%	7,003
DRC	73,419	26%	2.9%	18,795	3%	4.7%	256
Lesotho	1,903	1%	0.2%	2,450	0%	4.2%	1,287
Madagascar	21,263	7%	2.8%	9,881	2%	2.8%	465
Malawi	14,845	5%	2.9%	5,653	1%	4.8%	381
Mauritius	1,291	0%	0.7%	11,497	2%	4.6%	8,905
Mozambique	23,701	8%	2.7%	15,100	2%	8.0%	637
Namibia	2,136	1%	1.4%	12,823	2%	4.9%	6,003
Seychelles	88	0%	0.7%	1,033	0%	2.8%	11,701
South Africa	51,245	18%	1.6%	384,780	59%	3.8%	7,509
Swaziland	1,080	0%	0.6%	4,017	1%	2.3%	3,719
Tanzania	44,929	16%	2.9%	28,101	4%	7.3%	625
Zambia	14,145	5%	3.1%	21,511	3%	6.1%	1,521
Zimbabwe	12,974	5%	0.9%	9,800	1%	-0.3%	755
SADC Total	283,659	7%	2.5%	655,142	100%	4.8%	2,310

Source: SADC Selected Indicators 2012, SADC Secretariat, 2012

South Africa represented 59% of SADC GDP in 2012; however, the share has been decreasing. Meanwhile, Angola's share has been increasing from 5% in 2000 to 18% in 2012. South Africa experienced 3.8% average growth; on the other hand, Angola achieved 10.9% growth during the period. Other countries' share in GDP has not changed so much excluding Zimbabwe. Zimbabwe's average growth rate was -0.3% during the period. Namibia has achieved 4.9% GDP growth during the same period, and represents 2% of SADC GDP in 2012.

As for GDP per capita, Namibia (6,003 US dollar) is the 5th position in SADC member states excluding Seychelles. Mauritius (8,905 US dollar) has the highest GDP per capita, and South Africa (7,509 US dollar), Botswana (7,003 US dollar) and Angola (6,204 US dollar) followed it. Meanwhile, GDP per capita was less than 1,000 US dollar in DRC, Malawi, Madagascar, Tanzania, Mozambique and Zimbabwe.

Table 2.15: Import and export values of SADC member states in 2012

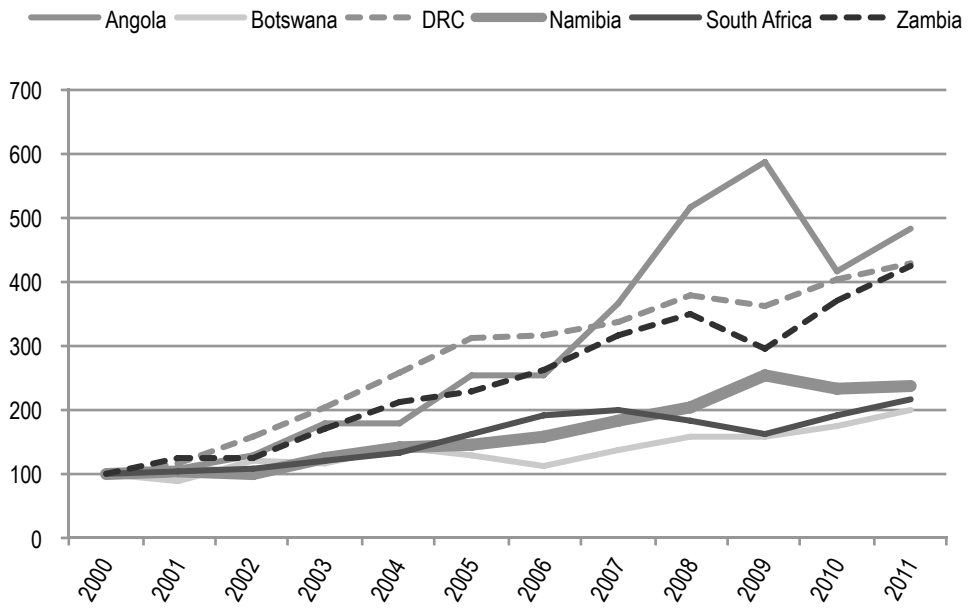
SADC member states	Import			Export		
	Value (USD million)	Share in SADC (%)	Average growth (2000-2012)	Value (USD million)	Share in SADC (%)	Average growth (2000–2012)
Angola	47,546	19%	26%	71,949	30%	21%
Botswana	7,272	3%	10%	6,470	3%	7%
DRC	11,279	4%	26%	10,109	4%	25%
Lesotho	2,721	1%	8%	1,024	0%	12%
Madagascar	4,500	2%	13%	2,800	1%	11%
Malawi	2,822	1%	11%	1,582	1%	9%
Mauritius	7,659	3%	9%	6,294	3%	7%
Mozambique	10,151	4%	16%	4,243	2%	19%
Namibia	6,240	2%	11%	5,458	2%	11%
Seychelles	1,328	1%	8%	1,089	0%	7%

SADC member states	Import			Export		
	Value (USD million)	Share in SADC (%)	Average growth (2000-2012)	Value (USD million)	Share in SADC (%)	Average growth (2000–2012)
South Africa	120,461	47%	11%	108,727	45%	9%
Swaziland	2,692	1%	6%	2,136	1%	5%
Tanzania	12,798	5%	16%	8,241	3%	16%
Zambia	8,802	3%	17%	9,368	4%	22%
Zimbabwe	8,200	3%	9%	4,200	2%	3%
SADC Total	254,470	100%	13%	243,689	100%	12%

Source: SADC Selected Indicators 2012, SADC Secretariat, 2012

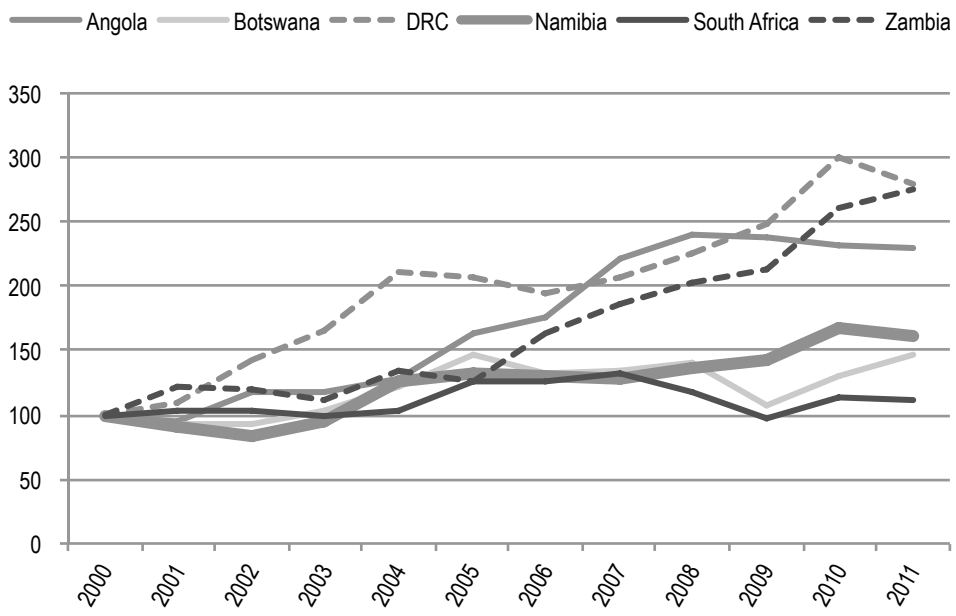
Table 2.15 indicates import and export values in 2012 and those average growth rates during 2000 and 2012. South Africa accounted for 47% of import and 45% of export in 2012; however, both average growth rates (11% for import and 9% for export) were less than the SADC average (13% for import and 12% for export). Angola was in the second position, and accounted for 19% of import and 30% of export. The average growth rates were very high, 26% for import and 21% for export. Other countries' share was small but higher average growth was observed in DRC (26% for import and 25% for export), Zambia (17% for import and 22% for export), Mozambique (16% for import and 19% for export) and Tanzania (16% for import and export). Namibia's growth rates (11% for import and export) were less than SADC average (13% for import and 12% for export).

Figure 2.5 and Figure 2.6 show a change in import and export volumes for the selected SADC member states (Angola, Botswana, DRC, Namibia, South Africa, Zambia Zimbabwe). It could be classified into two groups regarding import and export. The first group is Angola, DRC and Zambia, and the second group is Botswana, Namibia, South Africa and Zimbabwe.



Source: World Development Indicators Database, World Bank

Figure 2.5: Change of import volume in selected SADC member states (2000=100)



Source: World Development Indicators Database, World Bank

Figure 2.6: Change of export volume in selected SADC member states (2000=100)

Angola, DRC and Zambia have experienced a 4 to 5 fold increase in import volume; on the other hand, increase of import volume in the second group countries doubled from 2000 to 2011. Angola has achieved a six fold growth in 2009 but experienced a major decline in 2010 when the world economy entered into global recession.

Angola, DRC and Zambia have also experienced a two and half to three fold increase in export volume but export volume growth for Botswana Namibia and South Africa was around one and half fold. Angola's rapid export growth seems to stop after 2009.

2.3.1.2 Opportunities for economic growth for Namibia and its contribution to the SADC economy

Analysis of the previous section makes it clear that Namibia is in the middle position in terms of economic development but the population growth rate and GDP are less than average in SADC member states.

Since the population and market scale of Namibia is limited, economic development by stimulating the national economy is limited. It is necessary for Namibia to prepare a new economic development scenario.

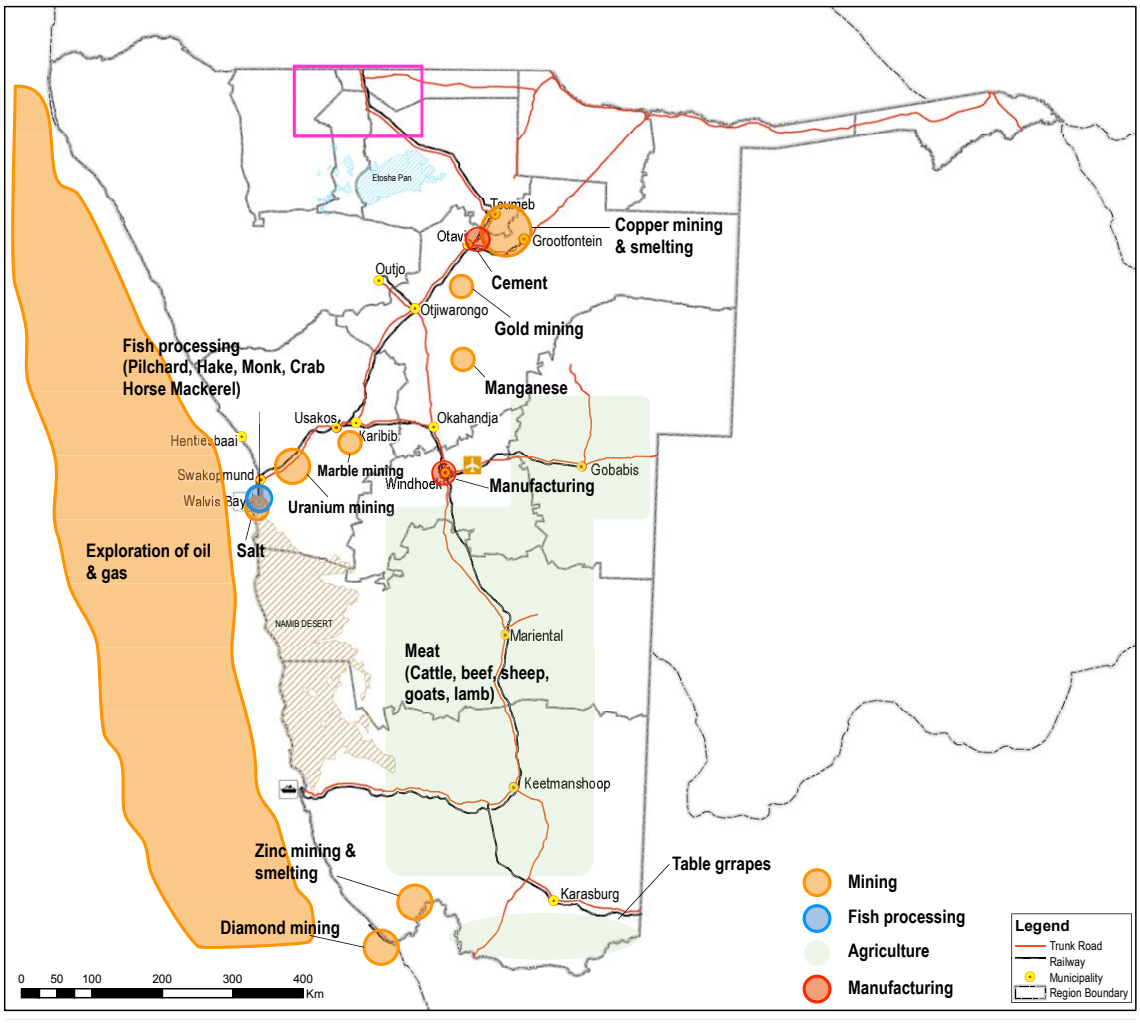
Rapid economic development of the neighbouring countries such as Zambia and DRC is an

opportunity for Namibia to benefit. In line with the rapid population growth and economic development, both imports and exports are increasing in these countries. In addition to that, these countries are landlocked countries. Namibia can promote economic activities by transporting import and export cargo for production and consumption to these countries. From the viewpoint of landlocked countries, it is important that countries which have seaports should be used as gateways, and import and export cargo is transported smoothly and safely between the gateways and these countries. Since it has advantages such as a deep seaport, has a politically stable and secure environment, Namibia has the potential to work as a gateway for landlocked SADC countries.

3. Industrial Activities and Value Chain in Namibia and SADC

3.1 Activities of major industries along the corridors in Namibia

Figure 3.1 shows major industrial activities in Namibia. The figure is based on site reconnaissance surveys and analyses of existing reports. Details of production volume, trade volume and transport routes, etc. of each industry are explained in the following sections.



Source: Prepared by JICA Study Team based on site reconnaissance surveys and analyses of Guide to the Namibian Economy 2013/14 and other information of each industry.

Figure 3.1: Major activities of industries/businesses in Namibia

3.1.1 Meat industry

As indicated in Figure 2.2, the Namibian agricultural sector consists of two different systems. The first is commercial agriculture conducted by private commercial farmers in the central and southern part, and the second is communal agriculture almost all of which is traditional and subsistence farming in the northern part. The commercial farming tends to focus on cattle and rain-fed agronomy in the central part, and sheep husbandry and irrigated agronomy in the southern part. Meat products (beef, sheep, goats and lamb) and export of weaners is one of the major export items, and accounts for 6.0% of the total exports in 2012[1].

Table 3.1 indicates export of Namibian meat (average production from 2008 to 2012). Namibia exported 150,000 head of weaners to South Africa[2], 18,900 tons of beef, 60,000 head of sheep, 270,000 head of goats and 850,000 head of lamb. In case of beef, 44% of produced meat was exported to South Africa, EU, Norway, etc. during 2008 and 2012, as indicated in Table 3.2.

Table 3.1: Export of Namibian meat

Kinds of meat	Unit	Average of 2008–12	Destination
Weaners	head	150,000	South Africa
Beef	tons	19,600	South Africa (9,400) and EU (9,500; UK, Finland, Denmark) and Norway
Sheep	head	60,000	South Africa
Goats	head	270,000	South Africa (Kwansulu-Natal)
Lamb	carcasses tons	850,000 250	South Africa Norway

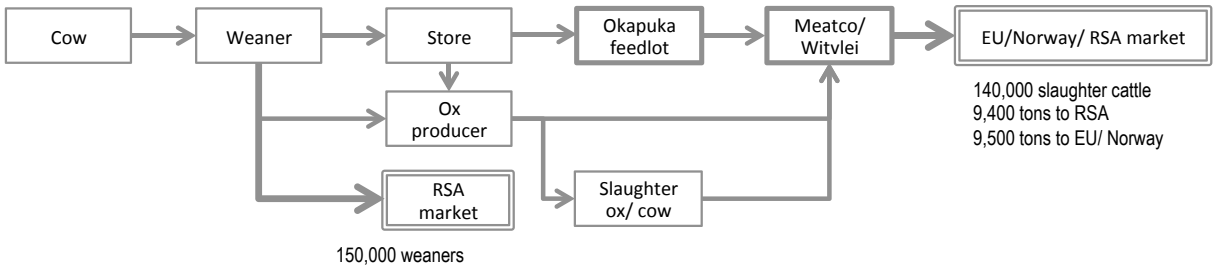
Source: Draft Joint Vision of the Livestock & Meat Industry of Namibia, Meat Board of Namibia, 2013

Table 3.2: Production, trade and consumption of beef

Unit: tons

	2007	2008	2009	2010	2011	2012
Production	46,170	46,148	45,922	48,404	49,528	34,842
Import	341	780	705	333	40	1
Export	19,797	18,469	17,902	20,614	21,913	19,150
Consumption	26,714	28,459	28,725	28,122	27,655	16,996
Share of export in production	43%	40%	39%	43%	44%	55%

Source: Draft Joint Vision of the Livestock & Meat Industry of Namibia, Meat Board of Namibia, 2013



Source: Namibian Livestock Sector Strategy Final report, Meat Board of Namibia, 2011

Figure 3.2: Value chain of beef production

[1] Sum of "Live animals" and "Meat, meat preparations." The figure comes from National Accounts 2002–2012 prepared by NSA.
[2] Exported weaners are raised to slaughter cattle and consumed at South Africa.

Figure 3.2 shows the value chain of beef production. Weaners and beef products exported to South Africa are transported though the Trans–Kalahari Corridor or Trans–Orange Corridor. The beef products exported to European countries are shipped from Walvis Bay Port.

3.1.2 Fish processing

Fish products (Prepared and preserved fish) accounted for 16.3% of the total export, and 4.2% of GDP in 2012. Table 3.3 indicates landings of major species. In Namibia, a Total Allowable Catch (TAC) system is used for most of species to conserve fishery resources. Therefore, landing of "quota species" relies on the TAC. The TAC for hake and tuna has not changed much from 2006 to 2010. Horse Mackerel was the largest landing tonnage but decreased by 60% from 310,000 tons in 2006 to 186,000 tons in 2010.

Table 3.3: Landing of major species

Unit: tons

Species	2006	2007	2008	2009	2010
Quota species					
Pilchards	2,314	23,522	18,755	20,137	20,229
Hake	137,771	125,534	117,286	137,312	127,196
Horse mackerel	309,980	201,660	186,996	215,996	185,673
Monk	9,816	8,932	7,270	6,922	7,904
Crab	2,228	3,245	2,100	1,577	766
Tuna	2,903	4,586	3,291	4,241	2,024
Non-quota species					
Kingklip	4,493	4,366	3,424	4,380	4,810

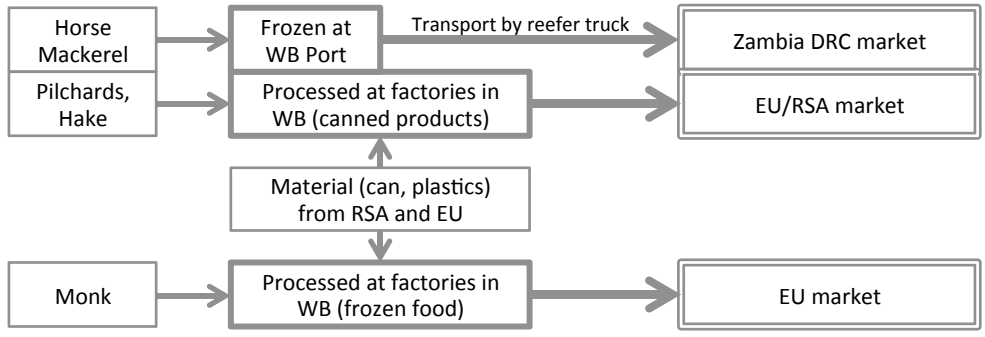
Source: Annual Report 2010/11, Ministry of Fisheries and Marine Resources

Table 3.4: Value of Landed Fish, Fish Processing and Export

Unit: N$ billion

	2006	2007	2008	2009	2010
Landed Fish	3,146	3,772	4,290	5,087	3,794
Fish Processing	3,985	4,843	5,084	4,789	4,060
Export	3,883	4,711	4,935	4,637	3,927

Source: Annual Report 2010/11, Ministry of Fisheries and Marine Resources



Source: Source: Annual Report 2010/11, Ministry of Fisheries and Marine Resources

Figure 3.3: Value chain of fish processing

Table 3.4 indicates landed value, final value (value after processing) and export value. These values

have not changed much during the period. 97% of processed fish products were exported in 2010.

Figure 3.3 shows the value chain of fish processing. Landed fish is processed and transported to two different markets. The first market is EU, South Africa and the Asian market. Pilchards and hake are processed into canned products at factories in Walvis Bay, and exported to the EU (in particular, Spain and Italy) and the South African market. Frozen sliced food products are produced from monkfish, and exported to EU and far-eastern Asian countries. Materials for fish processing such as cans, plastic trays and wrappers are imported from South Africa and European countries.

The second market is the landlocked SADC area. Horse mackerel is frozen as it is at Walvis Bay and transported to the market by reefer truck. Target consumers of horse mackerel are low-income households in Zambia and DRC, etc.

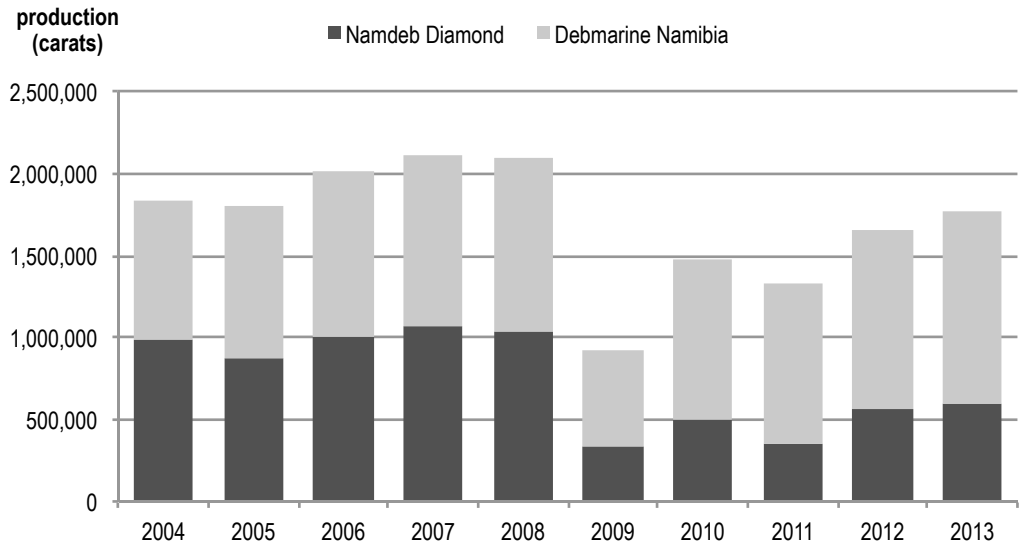
3.1.3 Mining

3.1.3.1 Diamond

In 2011, the Namibian diamond production was in the 9th position in the world but unit value of diamonds (694.82 US dollar per carat) was the highest by far[3]. Diamond mining accounted for 7.3% of GDP, and 24.4% of the total export amount in 2012. Diamonds are the biggest export item in terms of value. Diamond production has dropped significantly in 2009 when the world economy entered a recession after the Lehman Shock. The production volume which was over 2 million carats in the previous year decreased to less than 1 million carats. After 2010, production by Debmarine Namibia[4] which is the marine exploration and mining operator for the offshore licence areas, has been increasing gradually. In 2013, more than 68% of Namibia's diamond production was excavated from the sea.

On the other hand, production by Namdeb Diamond which mines a concession area on land and adjacent to the Orange River has been staying stagnant. It produced 1 million carats in 2008 but the production volume decreased to 300,000 carats in 2008. The production volume has been recovering and production volume in 2013 was 600,000 carats. Unworked diamonds are transported to Botswana, Belgium and United Kingdom from Eros Airport. Export to Botswana has increased in recent years.

[3] According to Guide to the Namibian Economy 2013/14
[4] Debmarine Namibia and /are subsidiary of Debnamib Holdings which is a joint venture between GRN and De Beers.



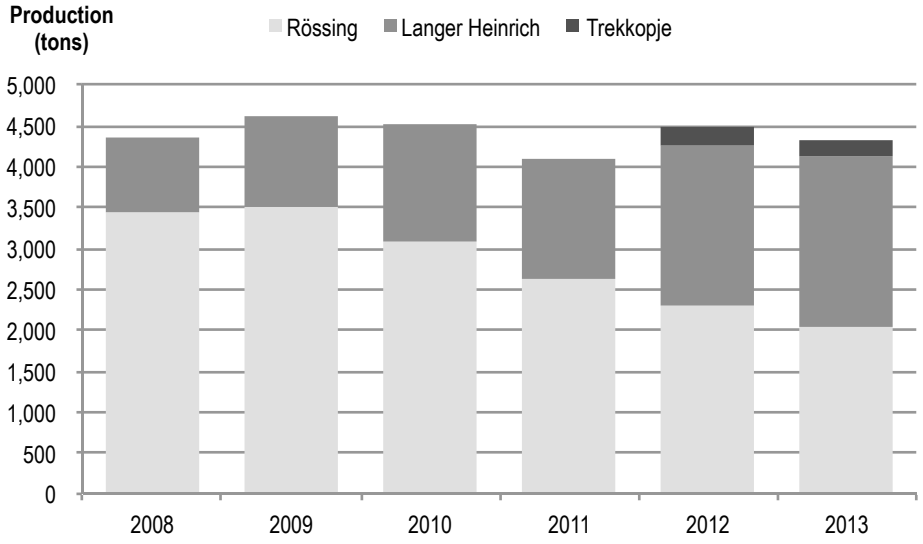
Source: Annual Review 2013, Chamber of Mines of Namibia

Figure 3.4: Change of diamond production

3.1.3.2 Uranium

Figure 3.5 shows uranium production in recent years. The annual uranium production has been constant between 4,000 and 4,500 tons per year from 2008 to 2013. Namibia's uranium production was in the 5th position in the world after Kazakhstan, Canada, Australia and Niger in 2012.

There are 3 uranium mines operating in Namibia, and a new mine (Husab Mine), which is one of the largest mines in the world will start operation in 2015. Production of the mine is going to reach 5,700 ton per year in 2017, therefore Namibia could be a one of top uranium producing countries in the near future.



Source: World Nuclear Association Website (http://www.world-nuclear.org/info/Country-Profiles/Countries-G-N/Namibia/)

Figure 3.5: Change in uranium production

Uranium concentrate (yellow cake) is transported to France, Canada, China and USA. It is expected that export to China will increase after commencement of production of the new mine in 2015.

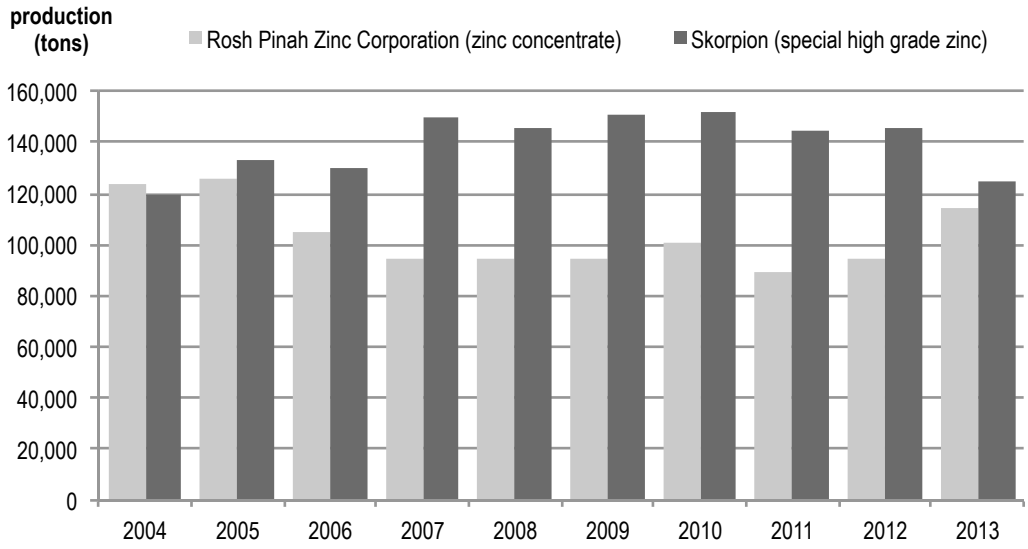
In order to produce uranium concentrate, called "yellow cake", sulphuric acid is necessary. Currently sulphur, the basic material required to manufacture sulphuric acid is imported from China, European countries and Japan, etc. The uranium mines are located between 50 and 100 kilometres from Swakopmund and Walvis Bay. Therefore, it is not difficult to transport inputs and outputs such as sulphur from/to Walvis Bay Port.

In 2013, Dundee Precious Metals located in Tsumeb (600 kilometres from Walvis Bay) had a contract with Rössing mine to provide 225,000 tons of sulphuric acid per year. The sulphuric acid is a by-product of the copper smelting process as described in the section 3.1.5. In order to be able to transport sulphuric acid effectively, it is important to rehabilitate the railway line and operate it efficiently.

3.1.3.3 Zinc

Figure 3.6 shows zinc production from 2004 to 2013. There are two zinc mines, Rosh Pinah Zinc Corporation and Skorpion Zinc in the southern part of Karas Region. Rosh Pinah Zinc Corporation produces zinc concentrate, and Skorpion Zinc produces special high-grade zinc. Both companies export the products to international markets. The zinc concentrate and smelted zinc was transported from mining site and smelting site to Lüderitz Port by railway, and handled at Lüderitz Port. In financial year of 2006/27, export zinc and zinc concentrate from Lüderitz Port amounted to 106,000 tons[5]. However, zinc and zinc concentrate have not been handled at Lüderitz Port during financial year of 2008/09 and 2012/13. Transportation of zinc and zinc concentrate has come back to Lüderitz Port in 2014[6].

[5] Namport Annual Report 2012
[6] according to an article of the Villager Lüderitz port records increase in business (http://www.thevillager.com.na/articles/7249/L-deritz-port-records-increase-in-business/).



Source: Annual Review 2013, Chamber of Mines of Namibia

Figure 3.6: Change in zinc production

3.1.3.4 Other mining

Table 3.5 indicates other mining activities. Exploration for gold and manganese could generate a demand for logistics regarding transporting mining machinery and equipment.

Demand for transport inputs and outputs will be generated if the mines come into operation. Exploration for oil and gas may also generate a logistics demand should deposits be found. Since survey vessels and oil rigs need maintenance, Walvis Bay has the opportunity to provide such a service.

Table 3.5: Impacts of other mining activities on logistics sector

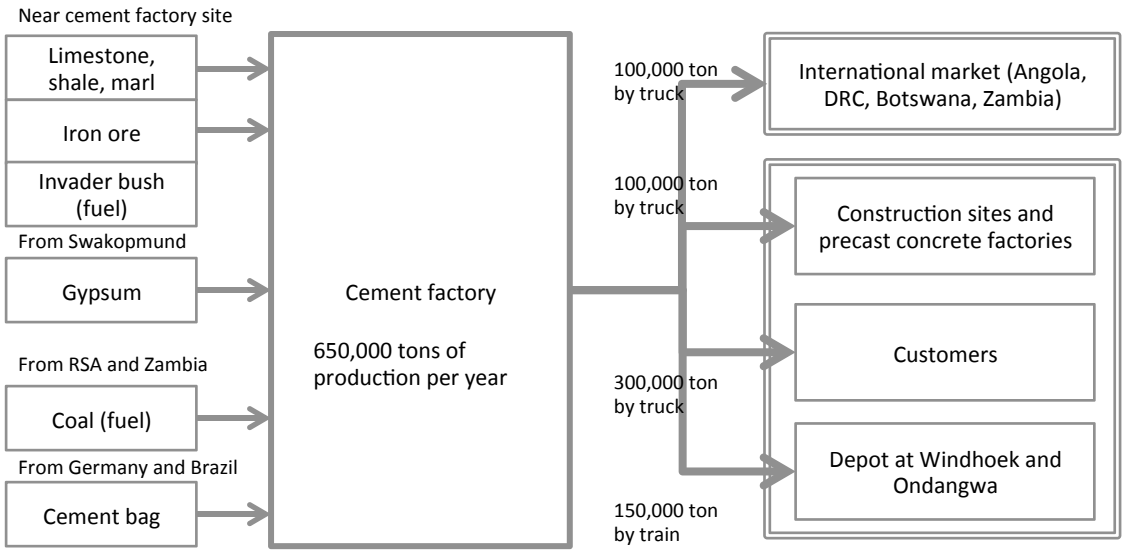
Kind of mine	Description
Salt	A salt & Chemical Company at Walvis Bay produces 700,000 tons of salt and the salt factory at Swakopmund produces 90,000 to 100,000 tons of salt. Salt is a major bulk handling cargo at Walvis Bay Port and exported to South Africa, Nigeria, DRC, Angola and Belgium
Gold	B2Gold (Canadian company) is developing Otjikoto mine near Otavi which is scheduled to commence production in 2014. It is expected that the annual production volume of gold will account for 170,000 ounces (4.8 tons) after 2016.
Manganese	Shaw River (Australian company) is developing a mining site at Otjozondu. This is still in the exploration stage but 17 million tons of manganese deposit exists according to the survey of 2013.
Fluorspar	Okorusu Fluorspar Mine, which is located 60km north of Otjiwarongo produced 120,000 tons of fluorspar concentrate annually. However, the operation was stopped in November 2014. The viable higher grade ore resources are depleted, according to the mining company
Oil and Gas	According to "Guide to the Namibian Economy 2013/14," 34 companies have received licenses to explore for oil and gas offshore from the Namibian coast.

Source: Annual Review 2013, Chamber of Mines of Namibia, Guide to the Namibian Economy 2013/14 and each company's website

3.1.4 Cement production

Ohorongo Cement located between Otavi and Tsumeb is Namibia's only cement-producing company and owns the most modern cement production plant in Africa. The company started operation in December 2010. It is a joint venture of Schwenk group (Germany), Industrial Development

Corporation of South Africa, Development Bank of Namibia and Development Bank of Southern Africa. The factory has the capacity to produce 700,000 tons of cement annually, and produced 650,000 tons annually in recent years. The factory employs 300 persons directly while indirect employment is around 2,100 persons according to the company.



Source: Interview from Oholongo Cement; Oholongo Cement Website (http://www.ohorongo-cement.com/ohorongo_products/the_process.php)

Figure 3.7: Value chain of Oholongo Cement

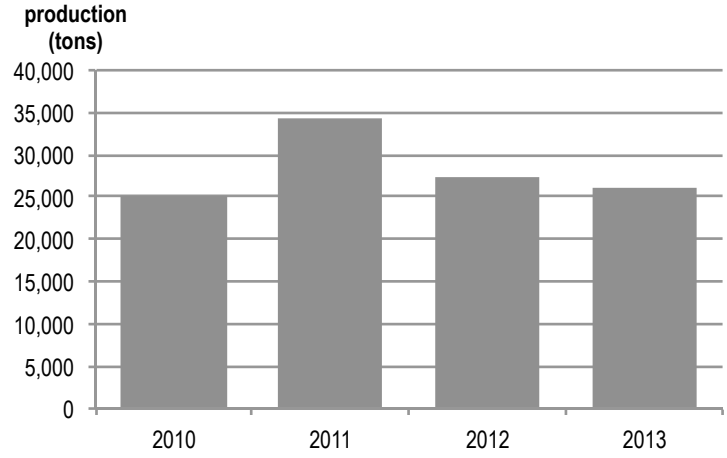
Figure 3.7 shows the value chain of Oholongo Cement. All raw materials are procured in Namibia. Major materials such as limestone, shale, marl, and iron ore are excavated near the cement factory site. Only gypsum is transported from Swakopmund. Coal used for fuel can be provided from South Africa and Zambia but the company is using invader bush as fuel. It generates local employment and makes importation of coal unnecessary. Cement bag is imported from Germany and Brazil.

Of 650,000 tons produced, 100,000 tons of cement is exported to international markets, Angola, DRC, Botswana and Zambia by trucks. 100,000 Tons of cement is transported to construction sites and precast concrete factories without packaging (bulk transport). 150,000 Tons is transported to the company's depots at Windhoek and Ondangwa and the rest of the 300,000 tons is transported to customers by truck.

3.1.5 Copper smelting

Dundee Precious Metals (Canadian company) bought the copper smelter at Tsumeb in 2010. The company transports copper concentrate from its mine in Bulgaria and third party mines to produce blister copper. The company then transports the blister copper to Germany. Production of blister copper since 2010 is between 25,000 to 35,000 tons annually as indicated in Figure 3.8, and 120,000 to 16,000 tons of copper concentrate is needed to produce such tonnage of copper. The company is expanding the production capacity to handle 240,000 tons of copper concentrate per year.

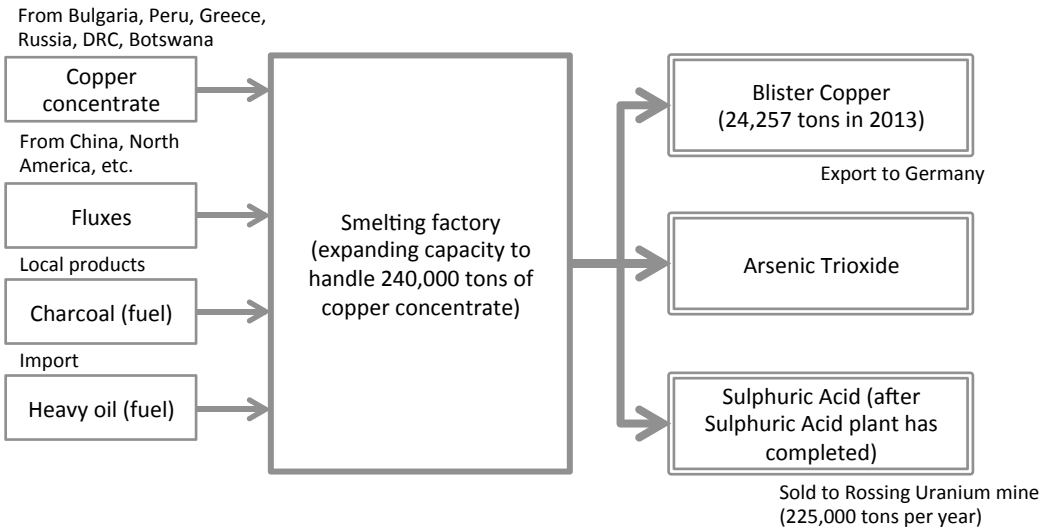
The company is also constructing an acid plant with a capacity of 340,000 tons per year to produce sulphuric acid from sulphur dioxide, which is a by-product of the copper smelting process. Dundee Precious Metals has an agreement with Rössing Mine to provide 225,000 tons of sulphuric acid annually.



Production in 2013 is estimated by JICA Study Team
Source: Annual Review 2013, Chamber of Mines of Namibia

Figure 3.8: Changes in blister copper production

Figure 3.9 shows the value chain of Dundee Precious Metals, Tsumeb. Inputs such as copper concentrate, fluxes and heavy oil are imported from foreign countries, and transported from Walvis Bay to Tsumeb by rail. Only charcoal for fuel is procured from Namibia. Blister copper produced is transported from Tsumeb to Walvis Bay by trucks, and exported to foreign countries. Sulphuric acid will be transported to Rössing Mine when the new sulphuric acid plant has been completed. It is expected that sulphuric acid will be transported by rail.



Source: Interview with Dundee Precious Metals Tsumeb; Dundee Precious Metals Website (http://www.dundeeprecious.com/English/operations/processing/tsumeb-smelter/overview/default.aspx)

Figure 3.9: Value chain of Dundee Precious Metals

3.1.6 Manufacturing around Windhoek

Some manufacturing takes place in Windhoek, and some companies are transporting raw materials from Walvis Bay. A typical example is beer production, where imported hops and malted barley is transported.

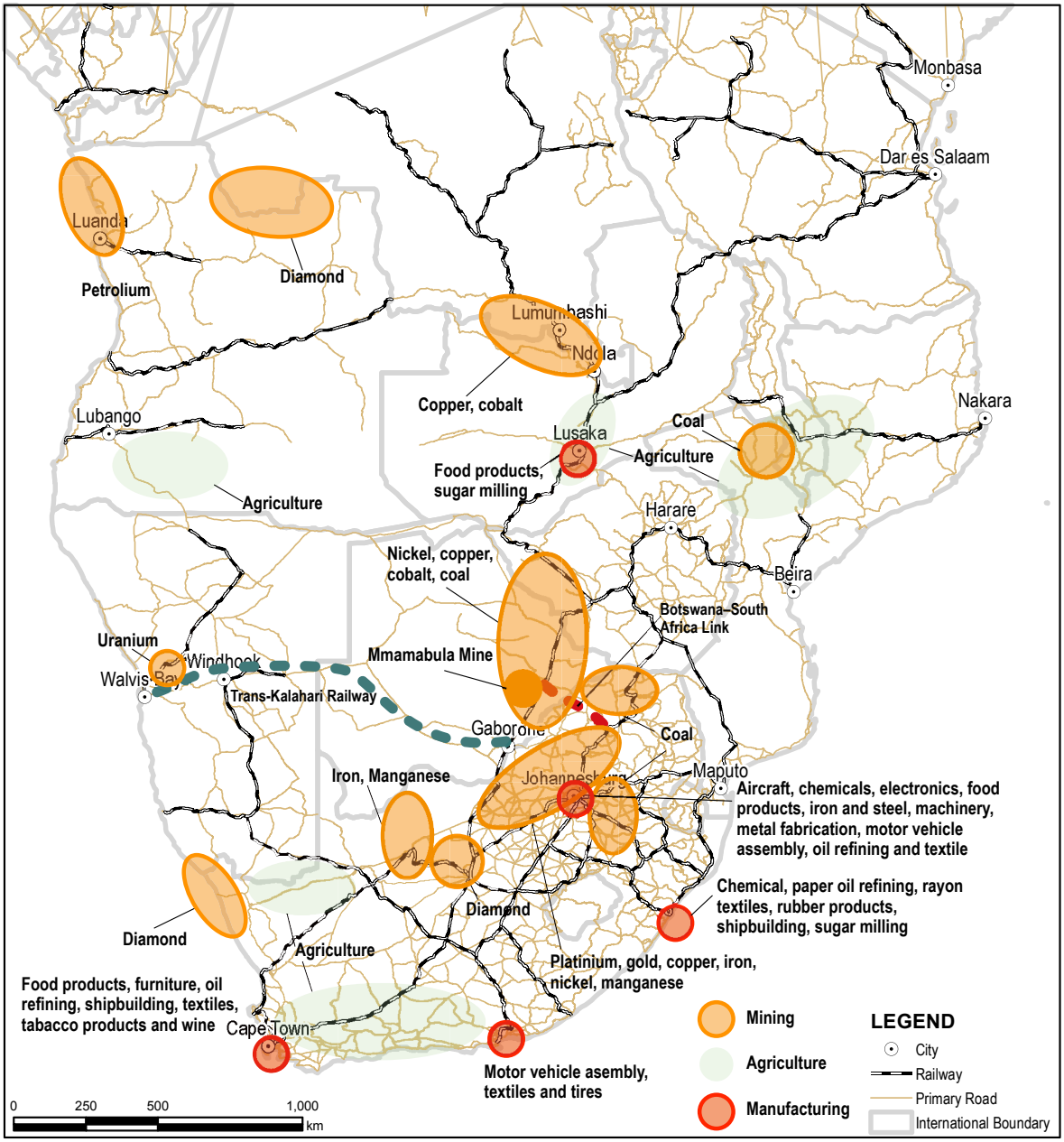
Beer is one of the few items that are internationally competitive. Namibian beer, which is known for not using preservatives, is of high quality carried over from the German colonial period and is exported to foreign countries. Namibian beer is very popular in the South African market as a premium beer. Production volume by Namibia Breweries accounted for 260 million litres, and 51% of the produced beer was exported to SADC member states excluding DRC[7].

Malted barley is stored at Windhoek Container Terminal (WINCON), and the necessary volume for production is transported to the brewery of Namibia Breweries daily.

3.2 Industrial activities in SADC and formation of value chains

Figure 3.10 shows major activities and the potential of industries/businesses in SADC, in particular, Angola, Botswana, DRC, Mozambique, South Africa, Zambia and Zimbabwe. Among these industries/businesses, copper production in the Copperbelt (Zambia and DRC), manganese production in Northern Cape Province of South Africa, manufacturing in Lusaka, and coal mining in Botswana are potential customers for Namibia's logistics industry in the future. Vigorous economic activities such as the automobile industry in South Africa and consumer markets are also reviewed in this section.

[7] Namibia Brewery's annual report in 2013



Source: Prepared by JICA Study Team based on site reconnaissance surveys and analyses of JICA's "Southern Africa Growth Belt Study Integrated Regional Transport Program," SADC's "Regional Infrastructure Development Master Plan Transport Sector Plan" and other information of each industry.

Figure 3.10: Major activities of industries/businesses in SADC

3.2.1 Copper production in the Copperbelt

The national border area between Zambia and the DRC has abundant copper mining resources and the area is called the "Copperbelt." The area is one of the major copper mining areas of the world. According to "World Copper Factbook 2013," prepared by the International Copper Study Group, the ranking of Zambia and DRC in production of mined copper were 7th and 9th, and ranking in refined copper production were 10th and 12th in 2012. Table 3.6 indicates that production in Zambia is

constant regarding both mining and refining; on the other hand, production in DRC has been rapidly increasing in recent years.

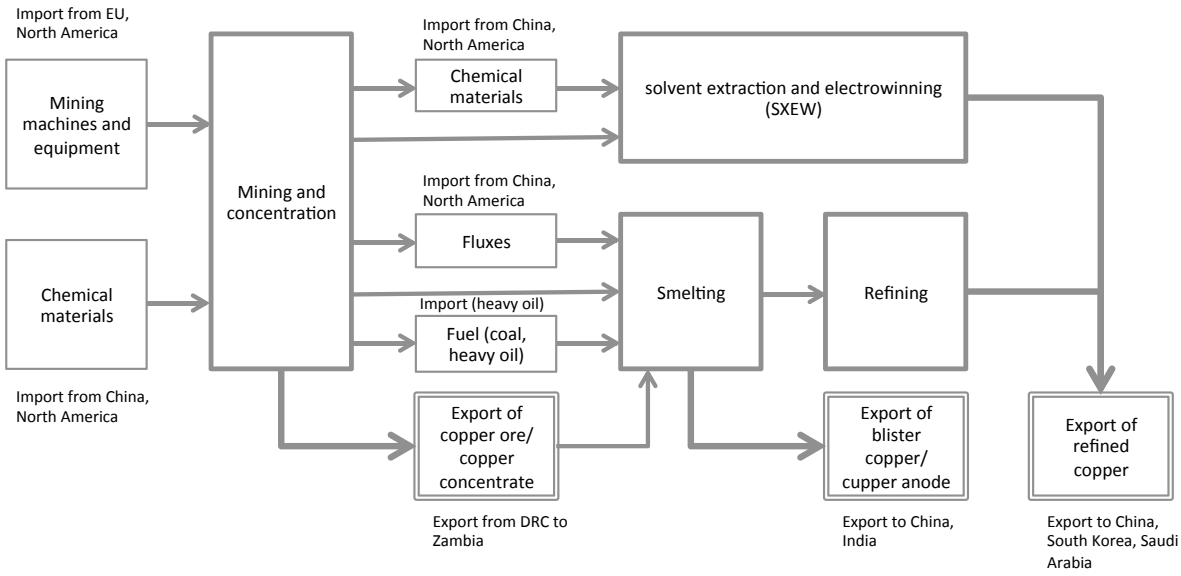
Table 3.6: Production and export of copper in Zambia and DRC

Unit: 000 tons

	2010	2011	2012
Zambia			
Mine production	731.7	784.1	781.6
Refined production	685.6	696.0	739.6
Export	663.3	711.1	775.8
DRC			
Mine production	378.3	480.0	608.4
Refined production	254.0	349.5	453.4
Export	NA	NA	NA

Source: Metal Mining Data Book 2013, Japan Oil, Gas and Metals National Corporation (JOGMEC)

The export volume of copper products has been increasing in Zambia gradually as indicated in Table 3.6. As for DRC, the export volume is not available in Table 3.6 but all of refined products seem to be exported. In 2012, 1.2 million tons of copper products were exported from both countries.



Source: Compiled by JICA Study Team from many information on copper industry

Figure 3.11: Value chain of copper production

Figure 3.11 shows the value chain of copper production in Zambia and DRC. Mining machinery and equipment is imported from South Africa, EU and North America. In April 2014, a "Mining Copperbelt Trade Expo and Conference" was organized at Kitwe, in northern Zambia. 91 Companies participated in the exhibition and set up booths in the exposition area. These companies are manufacturers of mining machinery, equipment for electrical power transmission and distribution, ventilation systems, wastewater treatment systems, clothes and fabrics from South Africa and EU countries. These companies showed off their technology, products and services to mining companies. In addition to mining equipment, chemical materials used for mining is imported from China, European countries and Japan.

In Zambia and DRC, two different refining technologies, fire refining and solvent extraction and

electro wining (SXEW) are utilized due to different properties of copper ore. Input of chemicals is required in both technologies as indicated in Figure 3.11.

Some of the copper ore and copper concentrate is exported from DRC to Zambia. A certain volume of blister copper and copper anodes from both countries is exported to Asian countries such as China and India, and refined copper is exported to China, South Korea, Saudi Arabia and European countries[8].

3.2.2 Manganese mining in Northern Cape Province

Manganese is a metal used for the production of batteries, manganese steel and desulphurization and deoxygenation of steel. South Africa is the second largest manganese ore producing country after China[9]. The World production of manganese ore amounted to 48.1 million tons, and South Africa produced 8.8 million tons in 2012. Of the 8.8 million tons, 6 million tons of manganese ore was produced in the Kalahari Basin of the Northern Cape Province.

Table 3.7: Production of manganese ore

Unit: 1000 tons

	2010	2011	2012
Production of manganese ore	7,172.2	8,693.0	8,788.2

Source: Metal Mining Data Book 2013, JOGMEC

There are 2 major manganese mining companies which have a production capacity of 3 million tons each in the Kalahari basin. The manganese ore is transported to Port Elizabeth, which has a capacity of 4 million tons per year, so the current capacity is fully utilized by the 2 companies. In addition, 1 million tons of manganese ore is transported to Durban Port.

Currently, 4 manganese mining companies are developing new mines that will start operation. Each mine has a production capacity of 2.7 to 3.0 million tons per year, and port capacity to export manganese is a problem. Some private companies in South Africa believe that the manganese ore can be transported to Lüderitz Port by the rail network of South Africa and Namibia and transported from there to foreign countries[10].

3.2.3 Potential of the agricultural processing and food industry in Zambia

As indicated in Table 2.14, Zambia has achieved an annual GDP growth rate of 6.1% from 2000 to 2014. Agricultural and manufacturing industries have developed as well as copper production during the period. In particular, these industries have been developed in Lusaka Province, which together

[8] Information on these destination countries is derived from UN ComTrade in recent years (2011, and 2012).
[9] Information from International Manganese Institute (http://www.manganese.org/)
[10] If manganese is transported directly from North Cape to Lüderitz with TransNamib rail, axel load should be upgraded from current 16.5 tons to 18.5 tons to accommodate Transnet's 34 class locomotives.

with Copperbelt Province represents 16.7% of the national population.

Grassland under sprinkler irrigation is found around Lusaka Province in particular between Lusaka City and Kabwe. The grassland is for breeding beef cattle, and a part of the beef produced is exported to foreign countries[11]. Under such circumstances, demand for fertilizer is increasing in line with agricultural production.

The Zambian Association of Manufacturers (ZAM) had 109 member companies in 2013. Major member companies are involved in agro processing (23), metal manufacturing (17), Plastics (12) and beverages (9). According to the CEO of ZAM, around 90% of production machinery and production materials for manufacturing are imported from foreign countries, and the manufacturing companies presently use Dar es Salaam Port or Durban Port. In the case of food processing, food additives and packaging materials are imported from European countries. Meanwhile, major goods in the manufacturing industry that are exported, are detergents to Australia and New Zealand, and steel cable, copper cable and snacks to South Africa.

Zambia also has a quota to export sugar to EU. According to UN ComTrade, the export quantity of sugar products to EU member states accounted for 67.6 million US dollar, 67% of total export in 2012[12]. Transport of sugar to EU member states is another promising business opportunity.

3.2.4 Mining development in Botswana

One of major economic activities in Botswana is the mining and polishing of diamonds, but development of other mining activities is limited at present. Diamond production represented 75% of export value, 50% of government revenue and 40% of GDP in 2011[13].

However, mining of minerals such as copper and nickel is increasing as indicated in Table 3.8, and many mining exploration projects for gold, copper, uranium and nickel are being conducted. These sites are located in the east of Botswana, near the national border with Zimbabwe and South Africa.

Table 3.8: Production of mineral ore in Botswana

Unit: 000 tons

Kind of mineral	2010	2011	2012
Copper	25.0	22.3	32.1
Nickel	22.1	15.6	17.6

Source: Source: Metal Mining Data Book 2013, JOGMEC

At Mmamabula a 2.4 billion tons unexploited deposit of coal is located. It is in the same area as the

[11] Estimated export value of Zambeef accounted for 137 Zambian Kwacha (30 million US dollar) in 2013 (http://www.lusakatimes.com/2013/08/28/zambeef-sets-to-generate-record-export-earnings/). Pick'n Pay, one of major general merchant supermarket store has an exclusive supply contract with Zambeef, and sells the beef through its distribution network.

[12] The export amount is calculated from total of import countries of sugar products.

[13] Metal Mining Data Book 2013, JOGMEC

prospecting mentioned above, is taking place. In order to transport the coal, on 20th of March 2014[14] GRN and the Government of Botswana has sighed the Minutes of Meeting on developing a railway network from Walvis Bay to the existing railway line in eastern Botswana (1,500 kilometres). It is estimated that the coal to be transported will amount to 65 million tons per year, and the total project cost will amount to 10 billion US dollars.

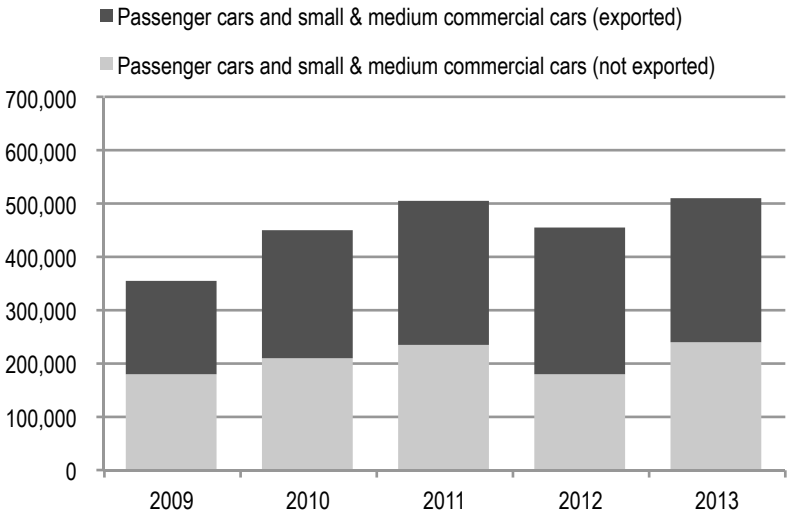
The railway development project and the transport of coal will make a significant impact on Namibia such as further development of Walvis Bay Port (North Port Development). However, an alternative rail route was proposed after the signing of the MOU. Transnet Freight Rail proposed to develop a 105 km rail link from the mining site to the existing railway network in South Africa (estimated project cost is 4 billion US dollar)[15].

3.2.5 Automobile industry in South Africa

The mining industry has been dominating economic activities in South Africa, and the economy has been affected by the situation of the international commodity market for years. In order to diversify economic activities, the government of South Africa introduced an industrial policy for the motor sector called Motor Industry Development Program (MIDP) in 1995.

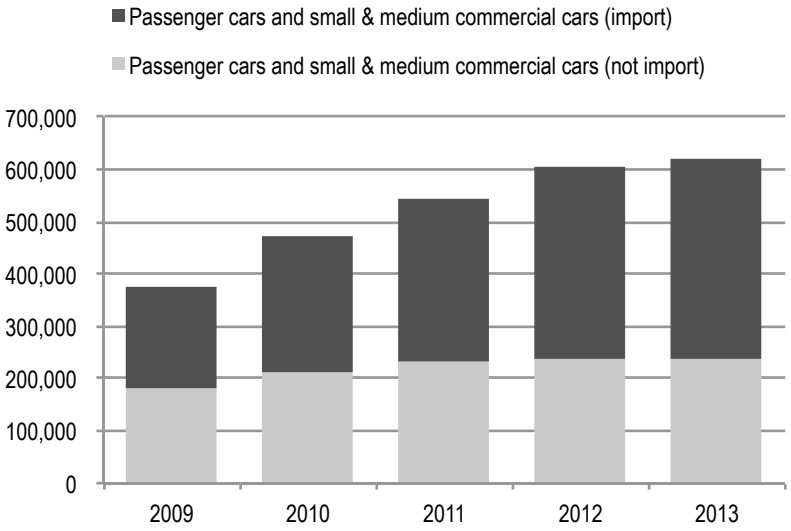
The MIDP introduced some intensives to promote assembly of cars in South Africa. For example, car assemblers could receive a credit amount which is calculated from its export amount. The credit could offset import tariffs for car parts and assembled cars. As a result, the production volume of passenger cars and small and medium commercial cars has increased from 354,000 in 2009 to 514,000 in 2012 (Figure 3.12). In addition, car sales have increased from 376,000 to 620,000 in the same period (Figure 3.13). Figure 3.12 and Figure 3.13 also indicates that more than 50% of the cars produced in South Africa were exported, while around 60% of cars sold in South Africa were imported from foreign countries in recent years. The government introduced a new industrial policy called "Automotive Production and Development Programme (APDP)" in 2013. Since incentives to promote exporting cars may conflict with WTO's most favoured nation (MFN) rule, incentives to car assemblers have changed from exporting assembled cars to domestic assembly.

[14] Brief alignment of Trans-Kalahari Railway is shown in Figure 3.10 (green dotted line).
[15] Brief alignment of Botswana–South Africa Link is shown in Figure 3.10 (red dotted line).



Source: National Association of Automobile Manufacturers of South Africa

Figure 3.12: Car production in South Africa



Source: National Association of Automobile Manufacturers of South Africa

Figure 3.13: Car sales in South Africa

Seven international major automobile manufacturers have factories at Johannesburg/Pretoria, Durban, Port Elizabeth and Cape Town, and around 300 automobile suppliers and 150 component suppliers provide automobile parts to the factories/assembly plants[16]. Development of parts suppliers is still limited and it seems to take time to devolve the parts suppliers to the surrounding countries as is observed in Thailand and the neighbouring countries.

[16] Japan Automobile Manufacturers Association (JAMA) website (http://www.jama.or.jp/lib/jamagazine/200806/05.html)

3.2.6 Consumer market

In accordance with economic development and concentration of the population into urban areas, the consumer market is getting bigger in southern Africa. Shoprite, one of major supermarket chains in South Africa, expanded its retail network to neighbouring countries from the end of the 1990s. After expansion of the retail network to the neighbouring countries, it expanded to Angola in 2003 and DRC in 2013. Table 3.9 indicates Shoprite's starting year of business and location and number of stores in each country. Pick'n Pay, a rival of Shoprite, also has stores in Botswana, Namibia, Zambia and Zimbabwe. It started business in Zambia and Mozambique in 2010 and 2011, respectively.

Table 3.9: Shoprite stores in Southern Africa in 2014

Country	Starting year of business	Location and no of stores
Angola	2003	Luanda, Lubango, Lobito (5)
Botswana	1998	Francistown, Gaborone, Kgale, Maun, Molepolole (5)
Mozambique	1997	Maputo, Chimoyo, Beira, Nampula (5)
DRC	2013	Kinshasa (1)
Namibia	1990	Gobabis, Katima Mulilo, Mariental, Ondangwa, Ongwediva, Oshakati, Otjiwarongo, Okahandja, Rundu, Swakopmund, Tsumeb, Walvis Bay, Windhoek (14)
South Africa	1979	Eastern cape (74), Free State (17), Gauteng (100), Kwazulu-Natal (60), Limpopo (20), Mpumalanga (40), North West (25), Northern Cape (14), Western Cape (74)
Zambia	1995	Lusaka, Chilenje, Mansa, Chingola, Matero, Chipata, Mazabuka, Kabwe, Mongu, Kasama, Livingstone, Kitwe, Mufulira, Ndola, Luanshya, Solwezi (19)

Source: Soprite Website

These supermarket chains have their own distribution centres or contracts with logistics companies for dedicated service, and they have developed centralized distribution systems. These distribution centres are located at South African consumer markets such as Johannesburg, Pretoria, Durban and Cape Town.

3.3 Policies on industrial development and investment promotion

3.3.1 Industrial development policy

The first industrial policy of Namibia was formulated in 1992 just after independent. In 2007, MTI drafted the "Private Sector Development Plan" to replace the industrial policy but the plan has not been finalized. After that "Namibia's Industrial Policy" had been formulated with the support of a German technical cooperation program, "Partnership for Economic Growth Program (PEG)" in 2012[17].

The "Namibia's Industrial Policy" compiles principles for industrial promotion policies to achieve Vision 2030. A detailed industrial promotion policy which will be conducted during the period of NDP4 will be compiled into a policy document, "Industrial Policy Implementation and Strategic Framework."

[17] The document is downloadable from the following link.
http://www.mti.gov.na/downloads/namibian%20industrial%20policy.pdf

The "Namibia's Industrial Policy" follows policy objectives and strategic elements of Vision 2030[18], and set the following targets for industrialization.

- The manufacturing and services sectors constitute about 80% of the country's gross domestic product (GDP)
- The country largely exports processed goods, which account for not less than 70% of total exports
- Namibia has an established network of modern infrastructure that includes railways, roads, telecommunications and port facilities, and
- Namibia has a critical mass of knowledgeable workers, and the contribution of SMEs to GDP is not less than 30%.

"Namibia's Industrial Policy" describes necessary principles, roles of the government and stakeholders, major development issues in order to achieve the targets mentioned above.

"Namibia's Industrial Policy" also analyses the characteristics of natural conditions and socio-economy (vast national territory and small domestic market with a population of 2 million), and points out the necessity for openness and competitiveness of the economy, which is not now the case in Namibia.

3.3.2 Changes to legislation and organizations for industrial promotion

Based on Namibia's Industrial Policy, MTI is starting to change legislation and institutions for industrial promotion. Those include the preparation of a new Investment Act replacing the existing Foreign Investment Act, Economic Processing Zone (EPZ) System, integration of the Namibia Development Corporation (NDC) and Offshore Development Corporation (ODC) which are both bodies for implementation of industrial policies under MTI.

Among MTI's changes, drafting of the new Investment Act is at the most advanced stage. The Investment Act is being prepared to address the following issues of the existing Foreign Investment Act, which was enacted in 1990 and revised in 1993:

- Covering not only foreign investment but also domestic investment,
- Protecting the domestic industry by setting industries to which foreign investors are prohibited or restricted from investing[19],

[18] Refer to section 2.2 (1) about policy objectives and
[19] For example, public transport (inter-city transport) would be a candidate of prohibited/restricted businesses from the point of provision of the service to poor people.

- Requesting investor performance requirements, such as minimum investment amount,
- Preparing transparent investment procedures,
- Enhancing data and information collection by Namibia Investment Centre (NIC) in application for investment and after commencement of businesses, and
- Preparing clear guidelines for settlement of disputes between the government and investors.

A draft of the new Investment Act has not been published. The points mentioned above may change during the process of preparation and discussion of the bill.

Table 3.10: On-going Incentives for private business

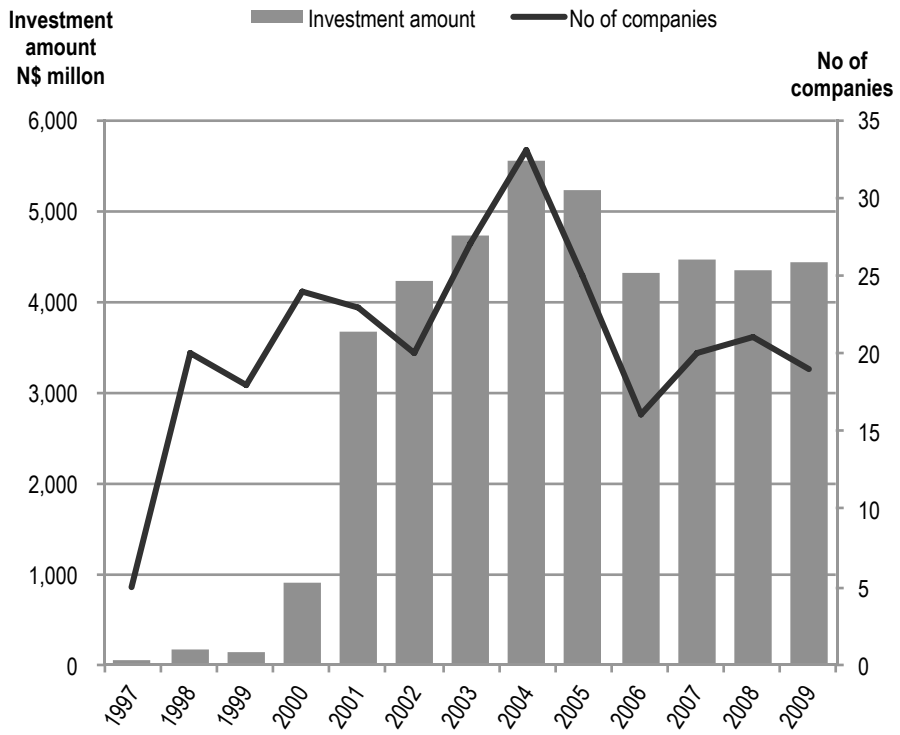
	Registered manufacturers	Exporters of manufactured goods	Export Processing Zone enterprises
Eligibility and registration	- Enterprises engaged in manufacturing. - Application to the Ministry of Trade and Industry and approval by the Ministry of Finance	Enterprises that export manufactured goods whether produced in Namibia or not. Application and approval by the Ministry of Finance	- Enterprises engaged in manufacturing, assembly, packaging or break-bulk and exporting mainly to outside of SACU markets. - Application to the EPZ Committee through the ODC or EPZMC
Corporate tax	Set at a rate of 18% for a period of 10 years, where after it will revert to the general prevailing rate	80% allowance on income derived from exporting manufactured goods	Exempt
VAT	Exemption on purchase and import of manufacturing machinery and equipment.	Normal treatment.	Exempt
Stamp & transfer duty	Normal treatment.	Normal treatment.	Exempt
Establishment tax package	Negotiable rates and terms by special tax package	Not eligible	Not eligible
Special building allowance	Factory buildings written off at 20% in first year and balance at 8% for 10 years	Not eligible	Not eligible
Transportation allowance	Allowance for land-based transportation by road or rail of 25% deduction form total cost	Not eligible	Not eligible
Export promotion allowance	Additional deduction from taxable income of 25%	Not eligible	Not eligible
Incentive for training	Additional deduction from taxable income of between 25% and 75%	Not eligible	Substantial, issued by Government on implementation of approved training programme
Industrial studies	Available at 50% of cost	Not eligible	Not eligible
Cash grants	50% of direct cost of approved export promotion activities	Not eligible	Not eligible

Source: Special Incentives For Manufacturers and Exporters, MTI

Regarding the EPZ system, Namibia has a very advanced system. Physical space for manufacturing and export processing has not been designated as a "special zone" but a status to receive incentives such as exemption from taxes (corporate tax and VAT) is provided to companies. MTI and MOF prepared some incentive systems as indicated in Table 3.10.

However, the number of companies that have EPZ status is limited. It accounted for 33 companies in

2004 but decreased to 19 companies in 2009[20] because the target of these incentive systems is limited to manufacturing companies. MTI intends to introduce a free economic zone concept instead of the existing EPZ system and widen target industries from manufacturing only, to the Economic Priorities in NDP4. However, details of the revision of the EPZ system have not been decided yet.



Source: ODC (Final Report of Data Collection Survey on the Namibia – Japan High-level Forum on Economic Development in Republic of Namibia, JICA, 2011)

Figure 3.14: Number of companies having EPZ status and investment amount

The role of NDC and ODC, which are state-owned enterprises under MTI is to support the local economy by constructing and operating industrial estates, incubation centres, etc. NDC is responsible for the promotion of domestic industry and ODC is responsible for the promotion of export respectively, but activities of both corporations are very similar now. Therefore, integration of the two companies and creation of a new organization is being considered by MTI.

These changes to legal frameworks and organizations necessitated by a high-level strategy for improvement of the institutional environment in NDP4, "reform the business environment by making it easier for existing and new business to register." The due date was set at 2013, and progress in these changes is slow. It is necessary to speed up the changes.

3.3.3 Public Private Partnership

Introduction of public private partnership (PPP) is mentioned in the 2 high-level strategies and

[20] After 2009, one company have received EPZ company status, therefore, 20 companies have EPZ status now.

positioned as one of important activities in NDP4. The first strategy is "strengthen and institutionalise public–private sector dialogue, and strengthen" in the institutional environment, and the second strategy is "put in place a public–private partnership funding framework to create synergies and funding for the logistics hub".

In 2010, the Ministry of Trade and Industry appointed an Indian consulting company to undertake a comprehensive review of the legal and institutional framework in Namibia, and based on the study results, to evolve a policy and institutional framework for PPPs in Namibia. The consultant submitted a report titled "Namibia PPP Policy Final Policy Document" which should be a prototype of PPP legislation. The document set the following items regarding PPP.

- Objectives and key principles,
- Scope and coverage of PPP policy,
- Definition, features and benefits,
- Identification of projects and forms of PPP arrangements,
- Organizational setting and role of line ministries and agencies, and
- Procurement process of PPP projects.

Regarding an organization to promote PPP, the report proposes to organize the Public Private Partnership Committee (PPP Committee) under the Ministry of Finance (MOF). The report proposes that representatives of MTI, MWT, NPC, Ministries that are involved with PPP projects, Attorney-General's Office and at least two members from lead industrial bodies, multilateral agencies or specialists in PPP be members of the committee, and the Permanent Secretary of MOF should chair the committee. The report also proposes the establishment of a Central PPP unit under MOF to support Line Agencies or State Owned Enterprises (SOEs) in developing robust PPP proposals.

On the other hand, the report does not analyse the consistency of PPP with existing legislation. It is not certain who is to be regulators in PPP projects either. According to the report, MOF is to act as regulator of the PPP policy. In addition to the regulator of the PPP policy, regulators for each project that monitor and evaluate performance of the PPP projects are also needed in each sector. In principle, Line Ministries should work as regulators in their respective sectors, and SOEs should be positioned as players in the PPP projects.

In South Africa, development of laws and organizations for PPP has already been completed and 22 PPP projects have been implemented as of February 2013[21]. The experience of South Africa would be useful for Namibia in terms of the development of legislation and an organizational framework and

[21] http://www.ppp.gov.za/Documents/Signed%20PPP%20Project%20List%202013.pdf

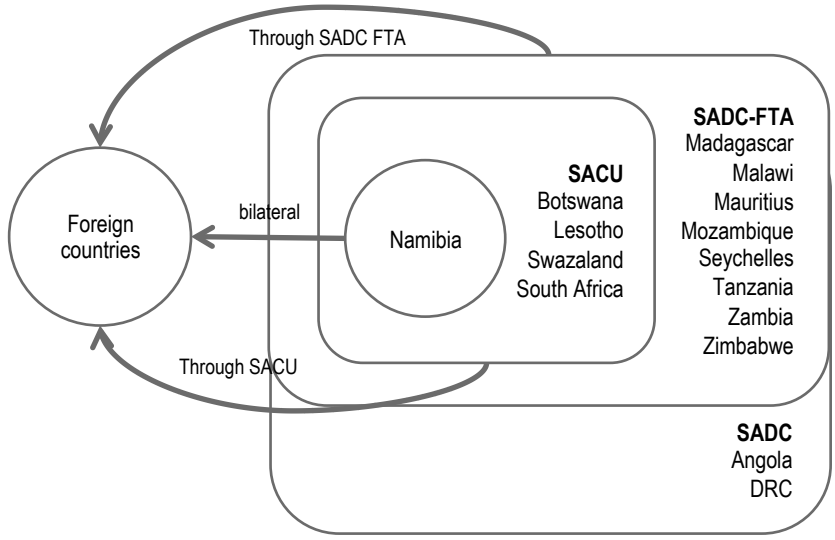
preparation of guidelines and a manual for PPP projects.

After this report was submitted to MTI, responsibility to prepare PPP legislation has moved to MOF. However, the preparation of PPP legislation has not been completed yet.

3.4 Trade facilitation and border crossing within SADC

3.4.1 Trade policy

Namibia has 3 channels for international trade negotiation with foreign countries, bilateral, SACU and SADC as shown in Figure 3.15.



Source: JICA Study Team

Figure 3.15: 3 Channels for international trade negotiations

With regard to bilateral relations, Namibia and Zimbabwe signed a Preferential Trade Agreement (PTA) in 1992. The Agreement provides for the exclusion of customs duty for goods containing 25% of local content. However, it is not easy for Namibia to make such bilateral trade agreements with foreign countries because the 2002 SACU agreement states that no member state shall enter into new preferential trade arrangements with third parties or amend existing arrangements without the consent of other member states. Therefore, Namibia's major channels for international trade negotiations are limited to SACU and SADC (SADC FTA).

Namibia, Botswana, Lesotho, Swaziland and South Africa, belong to a customs union, the "Southern African Customs Union (SACU)." It was established in 1910, and is the oldest customs union in the world. Its secretariat is located in Windhoek.

Goods produced by SACU member states are exempt from customs and excise when moved within SACU. In addition, SACU member states apply a common customs and excise duty to goods

imported from non-member states. Allocation of revenue from this customs and excise is an important source of fiscal revenue for Namibia.

SACU also negotiates Free Trade Agreements (FTA)/Economic Partnership Agreements (EPA) with foreign countries and regional economic cooperation organizations as indicated in Table 3.11.

Table 3.11: Progress of trade negotiations by SACU

Partner	Name of agreement	Status
European Free Trade Association (EFTA)	Economic Partnership Agreement (EPA)	Effective from May 2008
USA	Trade, Investment and Development Cooperation Agreement (TIDCA)	Agreed in July 2008
Mercosur	Preferential Trade Agreement (PTA)	Agreed in December 2008 but not effective yet
European Union	Economic Partnership Agreement	Negotiation
India	Free Trade Agreement (FTA)	Negotiation
China	Free Trade Agreement (FTA)	Negotiation

Source: SACU Website, interview to Directorate of International Trade, MTI

SADC consists of 15 countries and prepared a Regional Indicative Strategic Development Plan (RISDP) and Strategic Indicative Plan for the Organ (SIPO), which are frameworks for regional economic integration. SADC also has initiatives for developing a regional financial institution (SADC Development Finance Resource Centre) and a regional infrastructure development master plan such as a "Regional Infrastructure Development Master Plan (RIDMP) 2012," and development of One Stop Border Posts and an economic corridor in the member states.

Table 3.12: Progress regarding trade negotiations by SADC

Partner	Name of agreement	Status
European Union	Economic Partnership Agreement (EPA)	Negotiation
East African Community (EAC) and Common Market for Eastern and Southern Africa (COMESA)[22]	Free Trade Agreement (FTA)	Negotiation

Source: SACU Website, interview to Directorate of International Trade, MTI

Of the 15 member states of SADC, 12 member states excluding Angola, DRC and Seychelles formed the SADC Free Trade Area in 2008 by expanding the SADC Trade Protocol. Based on the agreement, import into SACU member states from other SADC FTA member states (Zambia, Zimbabwe, Mozambique, Tanzania, etc.) are largely tariff free while SADC FTA member states still charge a tariff on imports from SACU member states. In the case of Mozambique, a tariff reduction process will be completed in 2015 regarding imports from South Africa. SADC is also negotiating a FTA/EPA with foreign countries and regional organizations. Table 3.12 indicates progress of the negotiations.

[22] The East African Community (EAC) is the regional intergovernmental organisation of the Republics of Burundi, Kenya, Rwanda, the United Republic of Tanzania, and the Republic of Uganda, with its headquarters in Arusha, Tanzania. Common Market for Eastern and Southern Africa (COMESA) is also a regional intergovernmental organisation, and consists of 19 countries, Republic of Brundi, Union of Comoros, DRC, Republid of Djibouti, Arab Republic of Egypt, State of Eritoria, Federal Democratic Republic of Ethiopia, Republic of Kenya, Libya, Republic of Madagascar, Republic of Malawi, Republic of Mauritius, Republic of Rwanda, Republic of Seychelles, Republic of Sudan, Kingdom of Swaziland, Republic of Uganda, Republic of Zambia, Republic of Zimbanwe.

3.4.2 Trade facilitation

As indicated in Table 3.12, SADC intends to strengthen economic relations with the neighbouring regional cooperation organizations, EAC and COMESA (COMESA-EAC-SADC Tripartite). The member states of SADC, COMESA, EAC made some efforts to lower the costs of doing business and improve the competitiveness of products from eastern and southern African. The UK's Department for International Development (DFID) funded a five-year program called TradeMark Southern Africa (TMSA) that promotes regional integration in eastern and southern Africa.

One of the components of the TMSA is called "Tripartite Trade and Transport Facilitation Programme (TTTFP)." The TTTFP has the following sub-components.

- A Mechanism for Reporting, Monitoring and Eliminating Non-Tariff Barriers (NTBs)
- Border and customs procedures for one-stop border posts, coordinated border management, regional customs bonds, and transit management systems
- Immigration procedures
- Transport procedures (regional third-party insurance; vehicle standards and regulation; self-regulation of transporters; overload control; harmonised road user charges; regional corridor management systems)
- Establishment of the Joint Competition Authority linked to the liberalisation of air transport.

Of 5 sub-components, efforts of "border and customs procedures for one-stop border posts, coordinated border management, regional customs bonds, and transit management systems" by SADC member states are described in the following sections.

3.4.3 Transit management system

Both SADC and COMESA have developed measures to address the Customs bond requirement, by adopting Transit Management Systems (TMS) that provide for a single bond throughout the transit period in place of multiple bonds. In SADC, customs bond guarantees were executed nationally by each member state and there was need to eliminate the administrative and financial cost burdens associated with the practice of nationally executed bonds that have limited jurisdiction on transit traffic. The traditional Customs bond systems did not lend themselves to effective trans-border control of transit goods and they increased the cost of doing business. In order to eliminate administrative and financial costs, SADC finalized their provisions for the TMS in 2008.

Since then, pilot operations of the TMS have been undertaken within SADC and a number of issues have been revealed. In SADC, for example, there was concern by the SME clearing and forwarding sector regarding loss of business and some stakeholders expressed concern that there was a lack of

follow up instructions from SADC on the next stage of the TMS implementation program. The trial also had some positive outcomes regarding transit times. For instance, transit times from Malawi to South Africa showed an improvement from about 9 days to 3-4 days and from DRC to South Africa from about 15 days to 4-5 days. However, none of the SADC member states has put the provisions of TMS into national legislation or regulations, because the Secretariat of SADC has not advised that they should start implementing the scheme.

Looking at the key provisions of the TMS, almost of all provisions of SADC and COMESA such as basic Customs documentation, application and use of ICT in the exchange of Customs data and management information systems, and risk management tools are similar. The two systems are different in terms of bond provision. On the one hand, the SADC scheme is a bond taken by the principal bond holder who creates his own network of designated representatives through an inter-agency agreement across the transit chain and who are collaterally party to the bond guarantee respectively in each transit country. On the other hand, the COMESA scheme is based on the "Transports Internationaux Routiers (International Road Transporters) principle" of use of Carnet as evidence of a bond and a network of sureties across the Regional Customs Transit Guarantee member states. The SADC system is simple, but appears to hold practical problems of extra territorial liability between a bondholder and his designated representatives who might not have evidence of the purchase of the bond measure. According to forwarders in Namibia, they borrow money from banks to pay the customs bond. Since a certificated system for credibility like Authorized Economic Operator (AEO) certificated system is not available, they have to pay 100% of taxes to purchase customs bonds. It is one of obstacles of transit transportation.

The COMESA scheme uses a well-structured organization of sureties, but is not clear about the scale of financial costs of running the structures and the cost of re-insurance.

3.4.4 Coordinated border management

In 2011, the "Draft SADC Guidelines for Coordinated Border Management" were prepared by the EU-funded Customs Modernization and Trade Facilitation project as one of the deliverables that will contribute to the integration agenda of the region. The implementation of Coordinated Border Management (CBM) is an important factor for the regional integration agenda to improve management of borders and cross-border cooperation. In general, each border management agency carries out its own border management policies and each agency's border office tends to attend to its own processes, but CBM involves all the agencies at the borders equally to lead to integration of actions, activities and processes. The SADC CBM guidelines discuss the following six key management areas of border management where improvement would be essential for CBM to succeed:

- Legal and regulatory framework describes the necessary legal basis for cooperation and information exchange,
- Institutional framework provides the recommended organisational setting for introducing CBM
- Procedures for cooperation,
- Human resources and training deals with recruitment and educational/training issues in the framework of coordination and cooperation,
- Communication and information exchange provides guidance on how best to create standardised and efficient flow and exchange of information, and
- Infrastructure and equipment complements each chapter by recommending how equipment and facilities can support cooperation and coordination at all levels.

The guidelines also discuss the concept of a One Stop Border Post (OSBP).

3.4.5 One Stop Border Post programme

One Stop Border Post (OSBP) is defined as "a border post that combines two stops for national border control processing into one and consolidates border control functions in a shared space for exiting one country and entering another. It uses simplified procedures and joint processing wherever appropriate[23]". The OSBP have the following objectives.

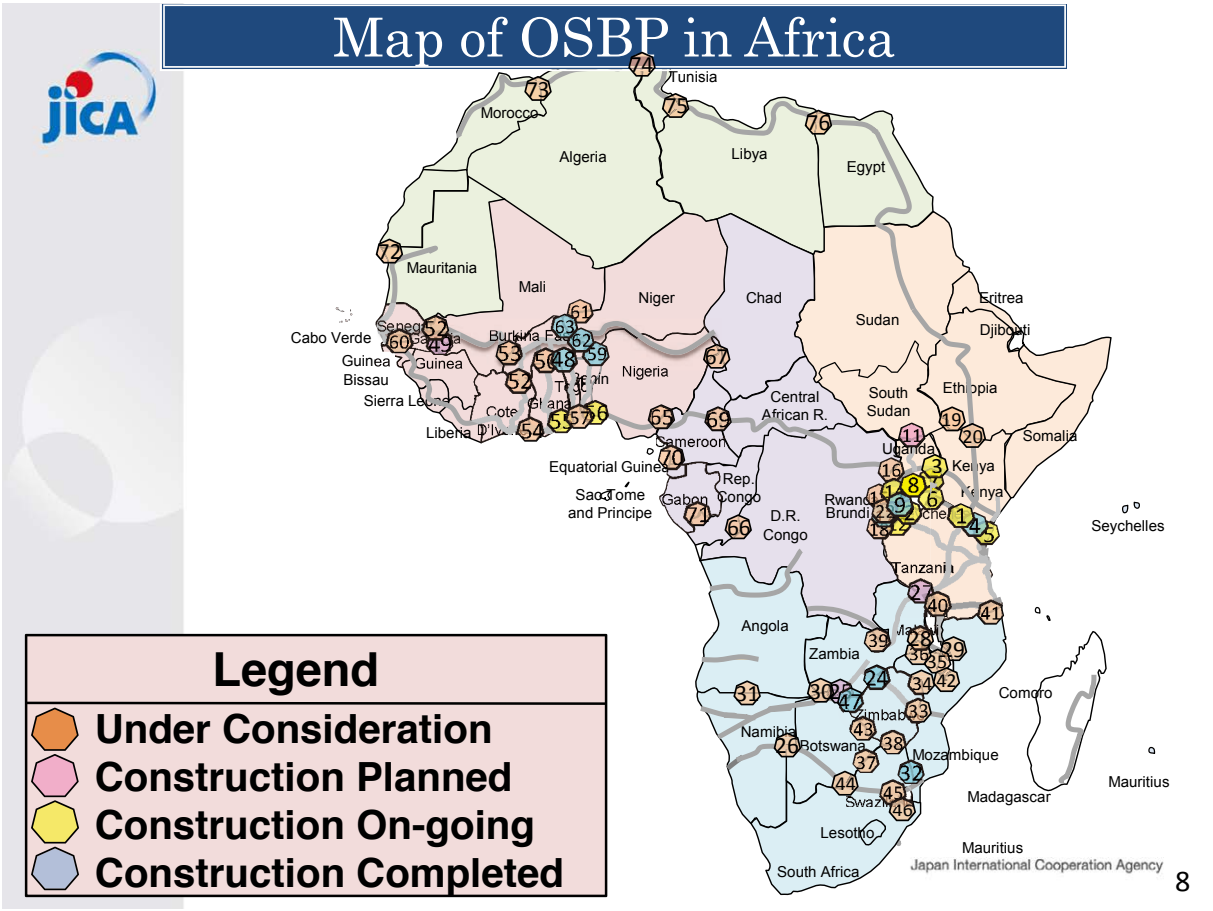
- To achieve greater trade facilitation by combining border clearance activities in a single location so as to benefit from economies of scale, reduce transit delays, simplify clearance procedures, increase cooperation and coordination of controls, foster data and intelligence sharing and to improve risk management and control over fraud.
- To foster optimal utilization of available resources like scanning equipment, weighbridges and office accommodation.

Currently, 76 OSBP projects have been completed, are in the process, are planned or considered on the African Continent as shown in Figure 3.16. Around 25 projects are in SADC member states.

JICA conducted a technical corporation project titled "Project for the Establishment of the One Stop Border Post (OSBP) between Botswana and Namibia at Mamuno/Trans Kalahari Border Post" from October 2010 to October 2013. The project was to develop an operational model of OSBP, provide necessary equipment such as an X-ray scanner and train Customs officers of Namibia and Botswana.

[23] Referred from presentation material of "High Level Side Event At the 1st TICAD V Ministerial Meeting Innovative Approaches for Accelerating Connectivity in Africa -One Stop Border Post (OSBP) development-" May 2014

After the project, Botswana has already completed preparation of legislative measures but the "Control OSBP bill" has not been completed in Namibia. Therefore, a bilateral agreement has not yet been signed as of January 2015. Both countries have already agreed on the contents of the bilateral agreement. An operation manual for the OSBP has already been drafted. After signing of the bilateral agreement, both countries are going to review the manual.



Source: presentation material of "High Level Side Event At the 1st TICAD V Ministerial Meeting Innovative Approaches for Accelerating Connectivity in Africa - One Stop Border Post (OSBP) development –, JICA 2014

Figure 3.16: Map of OSBP in Africa