

REPUBLIC OF DJIBOUTI
FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
THE REPUBLIC OF THE SUDAN
THE REPUBLIC OF SOUTH SUDAN

THE DATA COLLECTION SURVEY FOR DJIBOUTI CORRIDOR

FINAL REPORT

JANUARY 2018

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

YACHIYO ENGINEERING CO., LTD.
PADECO CO., LTD.

ET
JR
17-002

**REPUBLIC OF DJIBOUTI
FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
THE REPUBLIC OF THE SUDAN
THE REPUBLIC OF SOUTH SUDAN**

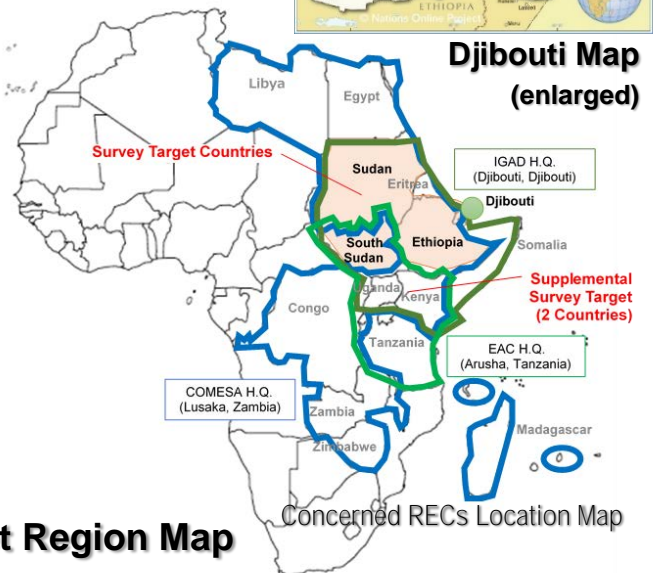
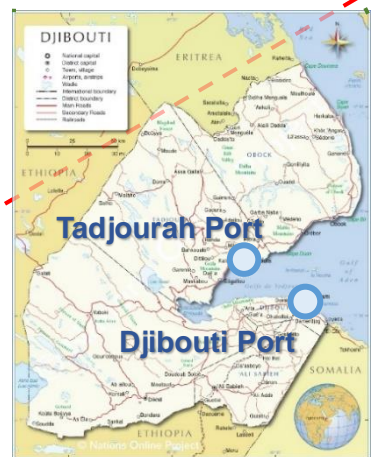
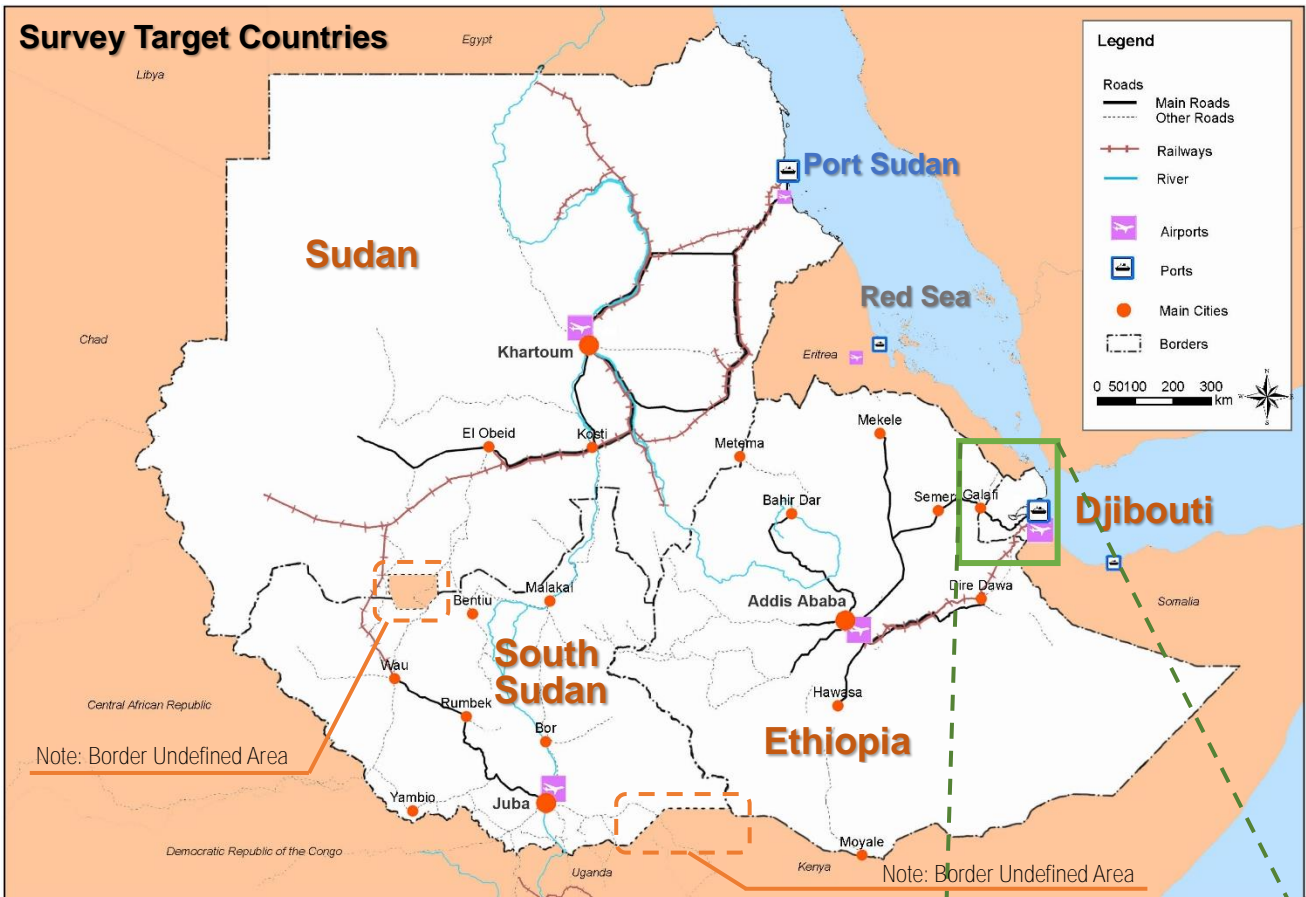
**THE DATA COLLECTION SURVEY
FOR DJIBOUTI CORRIDOR**

FINAL REPORT

JANUARY 2018

**JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)**

**YACHIYO ENGINEERING CO., LTD.
PADECO CO., LTD.**



Map Sources:
 Survey Target Countries: JICA Survey Team
 Africa Region Map: World Factbook, CIA
 Djibouti Map: National Online Project
 RECs Location Map: JICA Survey Team

Survey Target Region Map

Photos (1/9)

Official Meetings



Meeting with Ministry of Equipment and Transport, Djibouti (2017, Mar. 19)



Meeting with IGAD Trade, Industry and Tourism Program Manager, Djibouti (2017, Mar. 20)



Meeting with Ministry of Foreign Affairs, Djibouti (2017, Mar. 21)



Meeting with Ministry of Economy and Finance Director of Economy, Djibouti (2017, Mar. 20)



Meeting with Djibouti Customs and Indirect Tax, Djibouti (2017, May 23)



Meeting with Secretary General of Ministry of Equipment and Transport, Djibouti (2017, May 22)

Photos (2/9)

Official Meetings



Meeting with National Planning Commission, Ethiopia (2017, Apr. 7)



Meeting with Ministry of urban Development and Housing, Bureau Head, Urban Planning, Ethiopia (2017, Apr. 10)



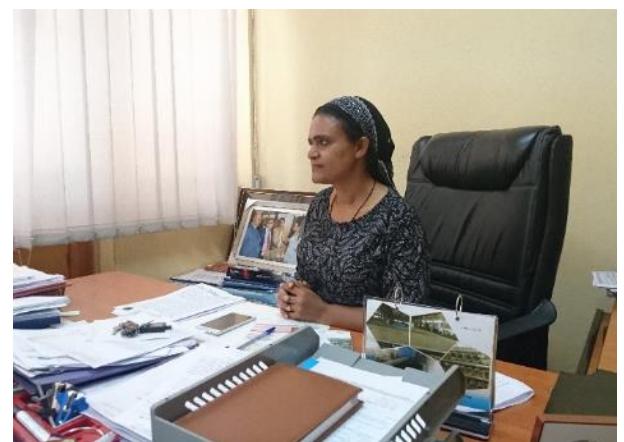
Meeting with Ministry of Agriculture and Natural Resources, Bilateral Cooperation Directorate Director, Ethiopia (2017, Apr. 4)



Meeting with Ministry of Public Enterprises and Human Resource Development, State Minister, Ethiopia (2017, Apr. 10)



Meeting with Ethiopian Shipping & Logistics Service Enterprise (ESLSE) , Ethiopia (2017, May 31)



Meeting with Leather Industry Development Institute, Marketing Support Director, Ethiopia (2017, Apr 5)

Photos (3/9)

Official Meetings



Meeting with South Sudan Delegation (1) (2017, Apr. 2)



Meeting with South Sudan Delegation (2) (2017, Apr. 3)



Workshop in Djibouti with concerned Government Agencies (1) (2017, May 23)



Workshop in Djibouti with concerned Government Agencies (2) (2017, May 23)



Meeting with ERCA, Ethiopia (2017, May 29)



OSBP Conference at Kigali, Rwanda (2017, Mar 15)

Photos (4/9)

Current Condition of the Target Countries



Container Terminal at the Old Port (Djibouti)



Doraleh Multi-purpose Port (Djibouti)



National Route 1 near Alta hill, Djibouti



National Route 1 West of Alta, Djibouti



Damaged Road Surface of National Route 1, Djibouti



Rural Area View of Desert Area along NR-1, Djibouti

Photos (5/9)

Current Condition of the Target Countries



Line of trucks near Galaffi of NR-1, Djibouti



Single track line between Adama and Djibouti, Ethiopia



Deteriorated Road on the Djibouti Corridor (Ethiopia)



Addis Ababa – Adama Expressway (Ethiopia)



Addis Ababa – Djibouti Railway (Ethiopia)



Modjo Dry Port (20ft Container Yard), Ethiopia

Photos (6/9)

Current Condition of the Target Countries



Modjo Dry Port Office (Single Window System is already in effective), Ethiopia



Modjo Dry Port Railway Connection Construction, Ethiopia



International Distribution Line from Ethiopia to Djibouti



Jaban As Substation, Djibouti



Boulaos Power Station (15 Diesel generators), Djibouti



Marabout Power Station (fuel: Gas-oil), Djibouti

Photos (7/9)

Current Condition of the Target Countries



Addis Ababa City Street View, Ethiopia



Traffic Congestion in Addis Ababa with LRT above, Ethiopia



Bole Lemi Industrial Park, Addis Ababa, Ethiopia



Power Station, Bole Lemi Industrial Park, Ethiopia



Water Treatment Facility, Bole Lemi Industrial Park, Ethiopia



Hydrant System, Bole Lemi Industrial Park, Ethiopia

Photos (8/9)

Current Condition of the Target Countries



Ethiopia Leather Industry Development Institute (Factory: Washing Drums)



Ethiopia Leather Industry Development Institute (Factory: Coloring Process)



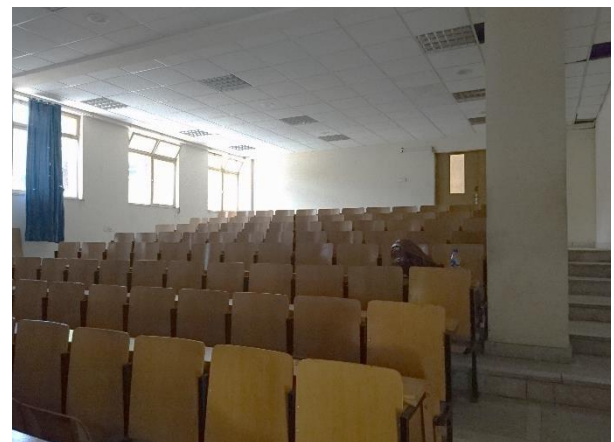
Ethiopia Leather Industry Development Institute (Factory: Sewing Classroom)



Ethiopia Leather Industry Development Institute (Factory: Skin Drying)



Ethiopia Leather Industry Development Institute (Factory: Cutting Machines)



Ethiopia Textile Industry Development Institute (Lectureroom)

Photos (9/9)

Current Condition of the Target Countries



Factory of Hiroki, Ethiopia



Factory of Hiroki, Leather Bag/Cloth Manufacturing, Ethiopia



Factory of Hiroki, Bag Manufacturing, Ethiopia



Factory of Hiroki, Color Checking, Ethiopia



Worker Transport Buses for Industrial Park, Ethiopia



Unpaved road of suburb of capital to Industrial park, Ethiopia

ABBREVIATIONS

AAE	:	Addis Ababa – Adama Expressway
ADR	:	Djiboutian Road Agency (French)
AEOs	:	Authorized Economic Operators
AfDB	:	African Development Bank
AGOA	:	African Growth and Opportunity Act
AIDA	:	Acceleration of Industrial Development
ASYCUDA	:	Automated System for Customs Data
ATF	:	Agreement on Trade Facilitation
AU	:	Africa Union Commission
C/P	:	Counterpart
CA	:	Customs Authority (Sudan)
CCECC	:	China Civil Engineering Construction Corporation
CET	:	Common External Tariff
CMRs	:	Customs Management Regulations
COMESA	:	Common Market for Eastern and Southern Africa
CPA	:	Comprehensive Peace Agreement
CREC	:	China Railway Engineering Corporation
CTN	:	Common Tariff Nomenclature
CVTFS	:	COMESA Virtual Trade Facilitation System
DCT	:	Doraleh Container Terminal
DMP	:	Doraleh Multi-purpose Port
DWT	:	Deadweight tonnages
EAC	:	East African Community
EACCMA	:	EAC Customs Management Act
EAE	:	Ethiopian Airport Enterprise
EFY	:	Ethiopian Fiscal Year
EIA	:	Environmental Impact Assessment
EIC	:	Ethiopian Investment Commission
EPZ	:	Export Processing Zone
ERA	:	Ethiopian Road Authority
ERC	:	Ethiopian Railway Corporation
ERCA	:	Ethiopian Customs and Revenue Authority
ESLSE	:	Ethiopian Shipping and Logistics Services Enterprise
ET	:	Ethiopian Airlines
ETRE	:	Ethiopian Toll Roads Enterprise
FDI	:	Foreign Direct Investment
FTA	:	Federal Transport Authority (Ethiopia)
FTZ	:	Free Trade Zone
GATT	:	General Agreement on Tariff and Trade
GDP	:	Gross Domestic Products
GDS	:	Gross Domestic Saving
GTP	:	Growth and Transformation Plan
HGVs	:	Heavy Goods Vehicles
IAIP	:	Integrated Agro-Industrial Park
IATA	:	International Air Transport Association

ICAO	: International Civil Aviation Organization
ICT	: Information Communication Technology
ICTSI	: International Container Terminal Service Inc.
IDPs	: Internally Displaced Persons
IFC	: International Finance Corporation
IGAD	: Inter-Governmental Authority on Development
ILO	: International Labor Organization
IMF	: International Monetary Fund
INDS	: National Initiative doe Social Development
IPDC	: Industrial Park Development Commission
IPRSP	: Interim Poverty Reduction Strategy Paper
IRIMP	: IGAD Regional Infrastructure Master Plan
IXPs	: Internet Exchange Points
JICA	: Japan International Agency
JRPA	: Juba River Transport Administration (South Sudan)
KDP	: Kosti Dry Port (Sudan)
L/C	: Letter of Credit
LAPSSET	: Lamu Port and Lamu-Southern Sudan-Ethiopia Transport
LNG	: Liquefied Natural Gas
LOA	: Length Overall
MDGs	: Millennium Development Goals
MET	: Ministry of Equipment and Transport (Djibouti)
MM	: Multimodal
MoFA	: Ministry of Foreign Affairs
MoFEC	: Ministry of Finance and Economic Cooperation
MoU	: Memorandum of Understanding
MRB	: Ministry of Roads and Bridges (South Sudan)
NEPAD	: New Partnership for Africa's Development
NHA	: National Highway Agency (Sudan)
NPC	: National Planning Commission
NPCA	: NEPAD Planning and Coordinating Agency
OSBP	: One Stop Border Post
P/C	: Public Consultation
PDSA	: The Port of Djibouti S.A
PIDA	: Programme for Infrastructure Development in Africa
PRSP	: Strategic Framework for Growth and Poverty Reduction
R&D	: Research and Development
RECs	: Regional Economic Communities
RISM	: Regional Support Mechanism
RKC	: Revised Kyoto Convention
RoRo	: Roll-on-Roll-off
RTC	: River Transport Corporation (Sudan)
S&T	: Science and Technology
SCAPE	: Strategy of Accelerated Growth and Promotion of Employment
SDAU	: Schéma Directeur d'Aménagement et d'Urbanisme
SDGs	: Sustainable Development Goals
SEA	: Strategic Environmental Assessment
S-M/P	: Strategic Master Plan
SME	: Small and Medium Enterprises

SNEV	:	National Strategy for a Green Economy
SPC	:	Sea Ports Corporation (Sudan)
SPS	:	Sanitary and Phytosanitary
SRC	:	Sudan Railway Corporation
SSA	:	Sub-Sahara Africa
SSCS	:	South Sudan Customs Services
SSIWNA	:	South Sudan Inland Water Navigation Authority
SSLC	:	South Sudan Land Commission
SSNBS	:	South Sudan National Bureau of Standards
TEU	:	Twenty-foot Equivalent Unit
TICAD	:	Tokyo International Conference on African Development
TOT	:	Turn Over Tax
TVET	:	Technical Vocational Education and Training
UAE	:	United Arab Emirates
UIC	:	International Union of Railways (French)
UM	:	Unimodal
UN	:	United Nations
UNDP	:	United Nations Development Programme
UNECA	:	United Nation Economic Commission for Africa
UNICEF	:	United Nations Children's Fund
UNOPS	:	United Nations Office for Project Services
USAID	:	United States Agency for International Development
VAT	:	Value Added Tax
WB	:	World Bank
WCO	:	World Customs Organization
WFP	:	World Food Programme
WTO	:	World Trade Organization

Table of Contents

Map of the Survey Target Region	
Survey Record Photos	
Abbreviation	
Table of Contents	
List of Figures	
List of Tables	
Executive Summary.....	i
1. Overview of the Survey.....	i
2. Outlook of the Target Countries	ii
3. Regional and Industrial Development Plans of Target Countries.....	iv
4. Current International Trade Status of the Target Countries	vi
5. Current Condition and Development Plans by Infrastructure in each Target Country	viii
5.1. Transportation infrastructure	viii
5.2. Border Control Facility and Institutional System.....	xi
5.3. Energy, Power and Telecommunication Infrastructure.....	xii
6. Challenges regarding Regional Corridor Development	xiv
7. Recommendations for Formulating a Regional Corridor Development Strategic Master Plan	xviii
CHAPTER 1 Outline of the Survey and Current Condition of the Target Countries.....	1-1
1.1. Back Ground of the Survey	1-1
1.2. Corridor Development Approach by JICA.....	1-1
1.3. Purpose of the Survey and Target Countries	1-2
1.4. Survey Team Composition	1-2
1.5. Survey Schedule	1-3
1.6. Core Survey Method and Survey Output	1-5
1.7. Structure of the Report	1-7
1.8. Status of Necessary Data Collection in this Survey	1-8
CHAPTER 2 Current Condition of the Survey Target Countries.....	2-1
2.1. Natural Condition of the Survey Target Countries	2-1
2.2. Population of the Survey Target Region.....	2-3
2.3. Economic Condition of the Survey Target Region.....	2-4
2.3.1. GDP Growth of the Survey Target Region	2-4
2.3.2. Economic Performance Comparison of the Survey Target Region and other RECs Regions	2-5
2.3.3. GDP Share of Industrial Sector of each Country.....	2-7
2.3.4. Social Service and Employment Environment Conditions.....	2-9
2.4. Current Industrial Development and Investment.....	2-10
2.4.1. Primary Sector (Agriculture, Livestock, Fishery, Forestry)	2-10
2.4.2. Mining Industry	2-13
2.4.3. Manufacturing Industry	2-14
2.4.4. Tourism Industry.....	2-14
2.4.5. Other Sectors	2-15
2.4.6. Investment climate.....	2-15
2.4.7. Development Projects by Privates.....	2-16
2.4.8. Foreign Entrepreneurs' and Investors' Needs.....	2-16
2.5. General Infrastructure Development in the target Region.....	2-17
2.6. Political System and Government Organization of each Survey Target Country.....	2-18
2.6.1. Political and Government System of the Target Countries.....	2-19
2.6.2. Government Organization of each Survey Target Country.....	2-21
2.7. Land Use and Tenure	2-25
2.8. Current Status of Water Resource Management of the Target Countries	2-27

2.8.1. Water Resource management.....	2-27
2.8.2. Water Resource Utilization.....	2-28
2.9. Education Level and Human Resource.....	2-28
2.10. International Trade by Country.....	2-30
2.10.1. Djibouti.....	2-31
2.10.2. Ethiopia.....	2-33
2.10.3. Sudan.....	2-35
CHAPTER 3 Industrial and Regional Development Plans of each Survey Target Country.....	3-1
3.1. Regional Development and Industrial Promotion of Djibouti.....	3-1
3.1.1. Development Plan and Policy.....	3-1
3.1.2. Industrial Development Plan.....	3-2
3.1.3. Development of Industrial Parks and Other Facilities.....	3-3
3.1.4. Urban Development, Land Use and Environmental and Social Consideration.....	3-4
3.2. Regional Development and Industrial Promotion of Ethiopia.....	3-4
3.2.1. Development Plan and Policy.....	3-5
3.2.2. Industrial Development Plan.....	3-7
3.2.3. Development of Industrial Parks and Other Facilities.....	3-9
3.2.4. Urban Development, Land Use and Environmental and Social Consideration.....	3-10
3.3. Regional Development and Industrial Promotion of Sudan.....	3-12
3.3.1. Development Plan and Policy.....	3-12
3.3.2. Industrial Development Plan.....	3-13
3.3.3. Development of Industrial Free Zone.....	3-14
3.3.4. Urban Development, Land Use and Environmental and Social Consideration.....	3-14
3.4. Regional Development and Industrial Promotion of South Sudan.....	3-15
3.4.1. Development Plan and Policy.....	3-15
3.4.2. Industrial Development Plan.....	3-16
3.4.3. Development of Industrial Parks and Other Facilities.....	3-16
3.4.4. Urban Development, Land Use and Environmental and Social Consideration.....	3-16
3.5. Financial and Budget Condition of the Countries.....	3-17
3.5.1. Financial and Budget Condition.....	3-17
3.5.2. Budget Management System of Each Country.....	3-18
3.6. Study on Possible Development Implementation Structure of Each Country.....	3-19
3.7. Concerned RECs and Relationships to Corridor Development.....	3-20
3.8. Donor Activities.....	3-25
3.9. Concerned Program for the Region.....	3-28
CHAPTER 4 Current Trading Activities and Status of the Target Countries.....	4-1
4.1. Main Commodity and Partners of International Trade by Country.....	4-1
4.1.1. Djibouti.....	4-1
4.1.2. Ethiopia.....	4-5
4.1.3. Sudan.....	4-9
4.1.4. South Sudan.....	4-13
4.2. International Transactions among the Countries in the Target Region.....	4-13
4.3. Current Trading Activities in Ethiopia.....	4-16
4.3.1. Major Trading Route.....	4-16
4.3.2. Transport cost and time.....	4-20
4.3.3. Current Activities of International Donors in Ethiopia (example: WFP).....	4-23
CHAPTER 5 Infrastructure Sector Development Status and Future Plans considering Regional Corridor Development.....	5-1
5.1. Transport Infrastructure.....	5-1
5.1.1. Road Sector.....	5-2
5.1.2. Maritime (Seaport) Sector.....	5-17
5.1.3. Railway Sector.....	5-28

5.1.4. Aviation (Airport) Sector	5-35
5.1.5. Inland River Transport.....	5-48
5.1.6. Dry Port	5-50
5.1.7. Governmental Institutions relevant to Transport Sector	5-55
5.2. Soft Infrastructure.....	5-55
5.2.1. Customs	5-56
5.2.2. Immigration.....	5-58
5.2.3. Quarantine	5-60
5.2.4. Regional Trade Facilitation Instruments.....	5-61
5.2.5. Institutional Structure of Soft-Infrastructure Sector	5-68
5.3. Energy Infrastructure.....	5-69
5.3.1. Djibouti.....	5-69
5.3.2. Ethiopia	5-69
5.3.3. Sudan.....	5-70
5.3.4. South Sudan.....	5-71
5.3.5. Institutional Structure of Energy Infrastructure.....	5-73
5.4. Power Supply Infrastructure.....	5-74
5.4.1. Power Demand	5-74
5.4.2. Power Supply Facilities.....	5-76
5.4.3. Institutional Structure of Power Infrastructure.....	5-84
5.5. Telecommunication	5-87
5.5.1. Djibouti.....	5-87
5.5.2. Ethiopia	5-88
5.5.3. Sudan.....	5-89
5.5.4. South Sudan.....	5-89
5.5.5. Organization Structure of Telecommunication Infrastructure	5-89
CHAPTER 6 Current Condition and Challenges of the Survey Target Region	6-1
6.1. Current Situation of Regional and Industrial Development and Challenges	6-1
6.1.1. Djibouti.....	6-1
6.1.2. Ethiopia.....	6-2
6.1.3. Sudan	6-6
6.1.4. South Sudan.....	6-8
6.2. Current Condition of Infrastructure Development and Challenges	6-11
6.2.1. Transport Infrastructure	6-11
6.2.2. Cross-border Facilities and Soft Infrastructure.....	6-16
6.2.3. Power, Energy and Telecommunication	6-17
6.3. “Challenges in the Target Countries” towards Regional Corridor Development	6-20
CHAPTER 7 Recommendation to the Future Master Plan Formulation	
for the Regional Corridor Development	7-1
7.1. Lessons Learned from Other Corridor Development Projects	7-1
7.2. Issues toward Regional Corridor Development for the Target Region	
and Necessity of Regional Corridor Development	7-3
7.2.1. Development Issues of the Target Region	7-3
7.2.2. Necessity of Regional Corridor Development.....	7-4
7.3. Recommendation to the Regional Corridor Development Master Plan Formulation	7-5
Appendix	1
Appendix 1 List of Official Government Interviewees	1
Appendix 2 Concerned Organizations for Economic Development and Investment and their Roles	3
Appendix 3 Policies and National Plans for Regional and Urban Development	4
Appendix 4 Policies and National Plans for Economic Development and Investment.....	5
Appendix 5 Ministries for Land Use and Urban Development.....	5
Appendix 6 Organization Structure and Roles of Concerned Government Entities	6
Appendix 7 Trade Statistics.....	8

Appendix 8 Production Statistics	18
Appendix 9 Selected GTP-II Macroeconomic, Social and Economic Development Targets.....	22
Appendix 10 Tax Preferential Treatment Information of Sudan	26
Appendix 11 Consideration in possibility of input-output table utilization for the master plan formulation.....	27
Appendix 12 Meeting Record of Interim Reporting to Djibouti Government	28

List of Figures

Figure 1	Trend of GDP of target countries	ii
Figure 2	Comparison of GDP in RECs and target countries	ii
Figure 3	Map of Djibouti Free Zone development	v
Figure 4	Location of industrial parks development by IPDC	v
Figure 5	Location of Free Zone in Sudan	v
Figure 6	Distribution map of agriculture and livestock in South Sudan	vi
Figure 7	International transactions between target countries	vii
Figure 8	Alternative route between Ethiopia and Djibouti	viii
Figure 9	Main export routes from Ethiopia	viii
Figure 10	Road network in the target area	ix
Figure 11	Handled container volume at Djibouti port	ix
Figure 12	Current railway network in target area	ix
Figure 13	Main destinations of Ethiopian Airlines (Cargo)	x
Figure 14	Oil drilling sites in Sudan and South Sudan	xii
Figure 15	Current conditions and challenges in the target region (Industry development)	xv
Figure 16	Current conditions and challenges in the target region (Implementing organization) ..	xvi
Figure 17	Current conditions and challenges the target region (Logistics measures and infrastructure development)	xvii
Figure 1.2.1	JICA Corridor Development Approach	1-2
Figure 1.6.1	Data Collection Procedure Flow and Data Category	1-6
Figure 2.1.1	Climate Zone Map of Djibouti and Altitude Map of Ethiopia	2-1
Figure 2.1.2	Satellite Map of Sudan and Climate Zone Map of South Sudan	2-2
Figure 2.1.3	Climate Comparison in the Survey Target Countries (Djibouti and Ethiopia)	2-2
Figure 2.1.4	Climate Comparison in the Survey Target Countries (Sudan and South Sudan)	2-3
Figure 2.2.1	Comparison of Population in the Survey Target Region	2-3
Figure 2.2.2	Population Distribution and Growth Map	2-4
Figure 2.3.1	GDP Growth in each Country of the Survey Target Region	2-5
Figure 2.3.2	GDP Per Capita Growth in each Country of the Survey Target Region	2-5
Figure 2.3.3	Population growth of the Survey Target Countries (Target) and concerned RECs	2-6
Figure 2.3.4	GDP Comparison of the Survey Target Countries (Target) and other RECs	2-7
Figure 2.3.5	GDP per Capita Comparison of the Survey Target Countries (Target) and other RECs	2-7
Figure 2.3.6	Comparative Chart of Industrial Sector GDP Share of Djibouti	2-7
Figure 2.3.7	Comparative Chart of Industrial Sector GDP Share of Ethiopia	2-8
Figure 2.3.8	Comparative Chart of Industrial Sector GDP Share of Sudan	2-8
Figure 2.3.9	Industrial Sector Share of South Sudan	2-9
Figure 2.4.1	Recent FDI Net-inflow	2-16
Figure 2.5.1	Access to Electricity	2-18
Figure 2.5.2	Improved Water Access	2-18
Figure 2.6.1	Djibouti District Map	2-19
Figure 2.6.2	Ethiopia Administrative Divisions Map	2-20
Figure 2.6.3	Sudan Administrative Division Map	2-20
Figure 2.6.4	South Sudan Administrative Divisions Map	2-21
Figure 2.8.1	The Nile's Watershed	2-27
Figure 2.10.1	Inter- and Intra- Regional Trade Amount	2-30
Figure 2.10.2	Share of Export Partners of Djibouti	2-32
Figure 2.10.3	Share of Import Partners of Djibouti	2-32
Figure 2.10.4	Import and Export of Ethiopia	2-33
Figure 2.10.5	Share of Export Partners of Ethiopia	2-34

Figure 2.10.6	Share of Import Partners of Ethiopia.....	2-35
Figure 2.10.7	Import and Export of Sudan.....	2-35
Figure 2.10.8	Share of Export Partners of Sudan.....	2-36
Figure 2.10.9	Share of Import Partners of Sudan.....	2-37
Figure 3.1.1	Djibouti Free Zone Image.....	3-3
Figure 3.1.2	Djibouti Town Planning Zone Map.....	3-4
Figure 3.2.1	GDP Growth by Major Economic Sectors.....	3-5
Figure 3.2.2	Industry Structure Forecast.....	3-8
Figure 3.2.3	Location Maps of Industrial Parks and Integrated Agro-Industrial Parks.....	3-10
Figure 3.2.4	Cluster and Hinterland Linkage with Urban Development Centers.....	3-11
Figure 3.3.1	Sudan Free Zone Location Map.....	3-14
Figure 3.5.1	Balance between Revenue and Expenditure of Djibouti.....	3-17
Figure 3.5.2	Balance between Revenue and Expenditure of Ethiopia.....	3-17
Figure 3.5.3	Balance between Revenue and Expenditure of Sudan.....	3-18
Figure 3.5.4	Balance between Revenue and Expenditure of South Sudan.....	3-18
Figure 3.6.1	Approval Procedure of Plans in Djibouti.....	3-19
Figure 3.7.1	Tentative Organization Structure of Djibouti Corridor Authority.....	3-22
Figure 3.7.2	IGAD SUMMIT Structure.....	3-23
Figure 3.7.3	Vicious Cycle of Poverty that IGAD tries to avoid.....	3-23
Figure 4.1.1	Share of Export Partners of Djibouti.....	4-1
Figure 4.1.2	Main partner and trade value of export in Djibouti.....	4-2
Figure 4.1.3	Share of Import Partners of Djibouti.....	4-3
Figure 4.1.4	Main partner and trade value of import in Djibouti.....	4-4
Figure 4.1.5	Share of Export Partners of Ethiopia.....	4-5
Figure 4.1.6	Main partner and trade value of export in Ethiopia.....	4-6
Figure 4.1.7	Share of Import Partners of Ethiopia.....	4-7
Figure 4.1.8	Main partner and trade value of import in Ethiopia.....	4-8
Figure 4.1.9	Share of Export Partners of Sudan.....	4-9
Figure 4.1.10	Main partner and trade value of export in Sudan.....	4-10
Figure 4.1.11	Share of Import Partners of Sudan.....	4-11
Figure 4.1.12	Main partner and trade value of import in Sudan.....	4-12
Figure 4.2.1	Intra- and Inter-regional trading amount.....	4-13
Figure 4.2.2	Trade commodities among the Target Countries (over 10 thousand tons per year)....	4-16
Figure 4.3.1	Major trading routes in Ethiopia.....	4-17
Figure 4.3.2	Major import route to Ethiopia.....	4-18
Figure 4.3.3	Major export route from Ethiopia.....	4-19
Figure 4.3.4	Alternative routes between Ethiopia and Djibouti.....	4-20
Figure 4.3.5	Process of Multimodal import.....	4-21
Figure 4.3.6	Process of Unimodal import.....	4-21
Figure 4.3.7	Comparison of transportation time.....	4-22
Figure 4.3.8	Comparison of transportation cost.....	4-22
Figure 4.3.9	Entry Import Gate Map (part).....	4-24
Figure 5.1.1	Trunk Road Network in Djibouti.....	5-3
Figure 5.1.2	Road Condition on RN1 (Dikhil –Garafi Section).....	5-3
Figure 5.1.3	Truck Queue on RN1 (near Galafi border).....	5-4
Figure 5.1.4	The Length of Road Network in Ethiopia.....	5-5
Figure 5.1.5	Length of Federal Roads by Class.....	5-6
Figure 5.1.6	The Alignment of Addis Ababa-Adama Expressway.....	5-6
Figure 5.1.7	Addis Ababa-Adama Expressway.....	5-7
Figure 5.1.8	Major Trunk Road Network and Border Posts in Ethiopia.....	5-8
Figure 5.1.9	Trunk Road and Expressway Development Plan in Ethiopia.....	5-9
Figure 5.1.10	Traffic Volume in Ethiopia.....	5-10

Figure 5.1.11	Traffic Volume in 2012 in Ethiopia	5-10
Figure 5.1.12	Traffic Volume on the Addis Ababa-Adama Expressway	5-11
Figure 5.1.13	Road Network in Sudan	5-13
Figure 5.1.14	Road Network and Development Projects by Development Partner	5-15
Figure 5.1.15	Future Classified National Road Network (Draft)	5-16
Figure 5.1.16	Transshipment Hub Ports	5-17
Figure 5.1.17	Location of the Major Ports and Hinterland	5-18
Figure 5.1.18	Location Map of the Djibouti Port	5-19
Figure 5.1.19	Traffic Volume for Container Cargo at the Djibouti port	5-20
Figure 5.1.20	Traffic Volume for Non-containerized Cargo at the Djibouti Port	5-20
Figure 5.1.21	Major Port Development Projects in Djibouti	5-22
Figure 5.1.22	Map of Port Sudan and its Surroundings	5-23
Figure 5.1.23	Layout of the Port Sudan	5-24
Figure 5.1.24	Container Throughput in Port Sudan	5-25
Figure 5.1.25	Non-containerized Cargo Throughput in Port Sudan	5-25
Figure 5.1.26	The Current Layout of the Mombasa Port	5-26
Figure 5.1.27	Mombasa Port Development Plan (Target Year = 2032)	5-26
Figure 5.1.28	Image of the Lamu Port (Phase 1)	5-27
Figure 5.1.29	Layout of the Berbera Port	5-28
Figure 5.1.30	The Current Major Railway Network in the Target Countries	5-28
Figure 5.1.31	The Old and New Railway Alignment between the Djibouti port and Addis Ababa ..	5-29
Figure 5.1.32	Addis Ababa-Djibouti Railway	5-30
Figure 5.1.33	Passing Loop	5-31
Figure 5.1.34	Railway Network Plan in Ethiopia	5-32
Figure 5.1.35	Railway Development Plan in Sudan	5-35
Figure 5.1.36	Airport Location in Djibouti	5-36
Figure 5.1.37	Airport Locations in Ethiopia	5-39
Figure 5.1.38	Passenger and Freight Traffic at the Bole International Airport in 2005 ~ 2013	5-41
Figure 5.1.39	Airport Locations in Sudan	5-43
Figure 5.1.40	Airports in South Sudan	5-47
Figure 5.1.41	River Transport in the Nile Basin	5-48
Figure 5.1.42	Major River Ports on the Route	5-49
Figure 5.1.43	Juba Port Expansion Project	5-49
Figure 5.1.44	Terminal Area of Each Dry Port	5-50
Figure 5.1.45	The Existing and Planned Dry Ports in Ethiopia	5-51
Figure 5.1.46	Location of the Modjo Dry Port	5-51
Figure 5.1.47	Photographs on the Modjo Dry Port	5-52
Figure 5.1.48	Container Throughputs at the Dry Ports	5-52
Figure 5.1.49	Throughput Share of Each Dry Port	5-52
Figure 5.1.50	The Expansion Project on the Modjo Dry Port	5-53
Figure 5.1.51	Dry Port Locations in Sudan	5-54
Figure 5.2.1	Replication of Checks and Controls at a Two Stop Border Post	5-63
Figure 5.2.2	OSBP Flow Chart	5-64
Figure 5.2.3	Locations of Planned OSBPs with current Transport Infrastructure Layout	5-66
Figure 5.3.1	Petroleum concession map in Ethiopia	5-70
Figure 5.3.2	Oil development blocks in Sudan and South Sudan	5-70
Figure 5.3.3	Location of oil refineries in Sudan	5-71
Figure 5.3.4	Planned locations of oil refineries	5-73
Figure 5.3.5	Organization Structure of Ministry of Energy and Natural Resources	5-73
Figure 5.4.1	Share of diesel generation and import in total electricity supply	5-74
Figure 5.4.2	Trend of energy imported from Ethiopia	5-74
Figure 5.4.3	Monthly energy import from Ethiopia	5-75
Figure 5.4.4	Share of domestic consumption and export in total electricity sales	5-75
Figure 5.4.5	GDP growth rate of Sudan	5-76
Figure 5.4.6	Transmission network in Ethiopia	5-81

Figure 5.4.7	Transmission network in Sudan	5-83
Figure 5.4.8	Organization Structure of Electricite de Djibouti.....	5-85
Figure 5.4.9	Organization Structure of Ministry of Water, Irrigation and Electricity (Ethiopia)	5-85
Figure 5.4.10	Organization Structure of Ethiopian Electric Power	5-86
Figure 5.4.11	Organization Structure of Ministry of Energy and Dams (South Sudan).....	5-87
Figure 5.5.1	Submarine optical fiber network.....	5-87
Figure 5.5.2	Development plan of backbone optical fiber network (2012).....	5-88
Figure 6.1.1	Potential Transport Route of Natural Gas and Petrol in the Target Countries.....	6-2
Figure 6.1.2	Major Agricultural Production	6-4
Figure 6.1.3	Livestock Distribution Map (Cattle and Sheep).....	6-4
Figure 6.1.4	Consolidated Scenario for 2035 (Urban Clusters and Development Corridors)	6-5
Figure 6.1.5	Geographical Location of the Projects and Concepts Envisaged.....	6-7
Figure 6.1.6	Potential Agro-Production and Mineral Resource Map	6-10
Figure 6.1.7	Planned Refinery and Fuel Depot Locations.....	6-10
Figure 6.2.1	Photos on Road Condition on the Djibouti Corridor near Addis Ababa	6-12
Figure 6.2.2	Number of Accidents on Addis Ababa – Adama Expressway.....	6-12
Figure 6.2.3	Container Throughputs at the Djibouti Port.....	6-13
Figure 6.2.4	Ratio of Empty Container at the Djibouti Port.....	6-13
Figure 6.2.5	The Triangle Operation by the Ethiopian Airlines	6-14
Figure 6.2.6	Transit Time of Container and Bulk Cargos on Addis Ababa-Djibouti section	6-15
Figure 6.3.1	Current Status and Challenges regarding Regional and Industrial Development	6-20
Figure 6.3.2	Current Status and Challenges regarding Development Implementation Organization Structure	6-21
Figure 6.3.3	Current Status and Challenges regarding Infrastructure Development.....	6-22
Figure 7.3.1	Master Plan Formulation Executing Organization Structure (tentative).....	7-6

List of Tables

Table 1	Trade balance in target countries	iii
Table 2	Trade balance in the target countries	iii
Table 3	International Trade Characteristics and Items in the Target Countries	vii
Table 4	Changes in peak demand and electricity supply(Ethiopia).....	xiii
Table 5	Changes in peak demand and electricity supply(Sudan)	xiii
Table 6	Relations between Comprehensive Development Issues and Regional Challenges	xviii
Table 1.3.1	Definition of Survey Target Countries and Region.....	1-2
Table 1.4.1	Survey Team Member List.....	1-2
Table 1.5.1	First Site Survey Schedule.....	1-3
Table 1.5.2	Second Site Survey Schedule	1-5
Table 1.6.1	Stakeholder Analysis.....	1-7
Table 1.8.1	Status of Data Collection	1-8
Table 2.3.1	Selected RECs for Socio-Economic Performance Comparison	2-6
Table 2.3.2	Target Countries' Social Development Trend Comparison	2-9
Table 2.3.3	Employment Rate of the Survey Target Countries	2-10
Table 2.4.1	Comparison of Target Countries' Agriculture Productivity	2-12
Table 2.4.2	Comparison of Land based Productivity of Products in Ethiopia and Sudan	2-12
Table 2.4.3	Comparison of Agriculture Productivity by Labor Force in Target Countries (Quantity)	2-13
Table 2.4.4	Comparison of Agriculture Productivity by Labor Force in Target Countries (Value)	2-13
Table 2.4.5	Tourist Spots in Ethiopia and Sudan.....	2-15
Table 2.6.1	Djibouti Government Organization	2-22
Table 2.6.2	Ethiopia Government Organization	2-22
Table 2.6.3	Sudan Government Organization.....	2-23
Table 2.6.4	South Sudan Government Organization	2-24
Table 2.7.1	Land Area and Use Comparison	2-25
Table 2.8.1	Draught Impairment in current Draught History	2-27
Table 2.8.2	Ministries for Water Resource Management.....	2-28
Table 2.9.1	Comparison of Literacy Ratio and School Enrolment Ratio of each Country.....	2-29
Table 2.10.1	Trade Balance of Countries in the Region	2-30
Table 2.10.2	Import and Export of Djibouti	2-31
Table 2.10.3	Top 10 Export Commodities in Value of Djibouti	2-31
Table 2.10.4	Top 10 Import Commodities in Value of Djibouti	2-31
Table 2.10.5	Top 10 Export Commodities in Value of Ethiopia	2-33
Table 2.10.6	Top 10 Import Commodities in Value of Ethiopia	2-34
Table 2.10.7	Top 10 Export Commodities in Value of Sudan.....	2-35
Table 2.10.8	Top 10 Import Commodities in Value of Sudan.....	2-36
Table 3.1.1	GDP Growth Pattern Forecast in Djibouti Vision 2035	3-1
Table 3.2.1	GDP Growth Rate under Base Case Scenario Valued at 2010/11 Price.....	3-6
Table 3.2.2	Share of Major Economic Sectors in GDP under Base Scenario.....	3-7
Table 3.2.3	Projected Share of Merchandise Export Value in GDP	3-7
Table 3.2.4	Current Industrial Park Development Status	3-9
Table 3.3.1	GDP Forecast at Current Prices under <i>the Programme</i>	3-12
Table 3.8.1	List of Donor Projects.....	3-25

Table 4.1.1	Top 10 Export Commodities in Weight of Djibouti.....	4-1
Table 4.1.2	Main partner and Top 3 Trade Commodities (over 1,000ton) of export in Djibouti....	4-2
Table 4.1.3	Top 10 Import Commodities in Weight of Djibouti.....	4-3
Table 4.1.4	Main partner and Top 3 Trade Commodities (over 1,000ton) of import in Djibouti .	4-4
Table 4.1.5	Top 10 Export Commodities in Weight of Ethiopia.....	4-5
Table 4.1.6	Main partner and Top 3 Trade Commodities (over 1,000ton) of export in Ethiopia .	4-6
Table 4.1.7	Top 10 Import Commodities in Weight of Ethiopia.....	4-7
Table 4.1.8	Main partner and Top 3 Trade Commodities (over 1,000ton) of import in Ethiopia...	4-8
Table 4.1.9	Top 10 Export Commodities in Weight of Sudan	4-9
Table 4.1.10	Main partner and Top 3 Trade Commodities (over 1,000ton) of export in Sudan	4-10
Table 4.1.11	Top 10 Import Commodities in Weight of Sudan	4-11
Table 4.1.12	Main partner and Top 3 Trade Commodities (over 1,000ton) of import in Sudan	4-12
Table 4.2.1	Transaction from Ethiopia to Djibouti (over 1,000 ton/year)	4-14
Table 4.2.2	Transaction from Djibouti to Ethiopia (over 1,000 ton/year)	4-14
Table 4.2.3	Transaction from Ethiopia to Sudan (over 1,000 ton/year).....	4-14
Table 4.2.4	Transaction from Sudan to Ethiopia (over 1,000 ton/year).....	4-14
Table 4.2.5	Transaction from Ethiopia to South Sudan (over 1,000ton/year)	4-15
Table 4.2.6	Transaction from Sudan to South Sudan (over 1,000 ton/year).....	4-15
Table 4.2.7	Transaction from Ethiopia to Kenya (over 1,000 ton/year)	4-15
Table 4.2.8	Transaction from Kenya to Ethiopia (over 1,000 ton/year)	4-15
Table 4.2.9	Transaction from Uganda to Sudan (over 1,000 ton/year).....	4-15
Table 4.3.1	Comparison of alternative routes between Ethiopia and Djibouti	4-20
Table 5.1.1	Major Characteristics of Each Transport Sector	5-1
Table 5.1.2	Road Network managed by ADR as of August 2015	5-2
Table 5.1.3	The Length of Road Network in Ethiopia.....	5-5
Table 5.1.4	Daily Average Traffic Volume on Addis Ababa-Adama Expressway by Month from July 2016 to March 2017	5-11
Table 5.1.5	Relevant Laws and Regulations in Road Sector in Ethiopia	5-12
Table 5.1.6	Design Standards in Road Sector in Ethiopia	5-12
Table 5.1.7	Budget Plan for Trunk Roads according to RSDP V	5-12
Table 5.1.8	Road Length in Sudan.....	5-13
Table 5.1.9	Outline of Project Costs in Road Sector in Sudan	5-14
Table 5.1.10	Development Target set by SSDP (Accumulated)	5-16
Table 5.1.11	Overview of Major Port Development Projects in Djibouti	5-21
Table 5.1.12	Outline of the Addis Ababa-Djibouti Railway Line	5-30
Table 5.1.13	Relevant Laws and Regulations in Railway Sector in Ethiopia.....	5-32
Table 5.1.14	Outline of Railway Network in Sudan and South Sudan.....	5-33
Table 5.1.15	Construction Year of Each Section	5-33
Table 5.1.16	Major Specifications on Standard Gauge Railway in Sudan.....	5-34
Table 5.1.17	Rough Estimates for Railway Development in Sudan.....	5-35
Table 5.1.18	Airport in Djibouti	5-36
Table 5.1.19	Outline of Djibouti-Ambouli International Airport	5-37
Table 5.1.20	Airlines and Routes for the Djibouti International Airport	5-37
Table 5.1.21	Airports in Ethiopia	5-38
Table 5.1.22	Outline of the Addis Ababa Bole International Airport	5-39
Table 5.1.23	Outline of the Dire Dawa International Airport.....	5-40
Table 5.1.24	Airlines and Routes for the Addis Ababa Bole International Airport	5-40
Table 5.1.25	Airlines and Routes for the Dire Dawa International Airport.....	5-41
Table 5.1.26	Relevant Laws and Regulations in Aviation Sector in Ethiopia	5-42
Table 5.1.27	Airports in Sudan.....	5-42
Table 5.1.28	Outline of the Kassala Airport	5-43
Table 5.1.29	Outline of the Khartoum International Airport	5-44
Table 5.1.30	Outline of the Port Sudan New International Airport	5-44
Table 5.1.31	Airlines and Routes for the Khartoum International Airport.....	5-44

Table 5.1.32	Airlines and Routes for the Port Sudan New International Airport	5-45
Table 5.1.33	Airports in South Sudan.....	5-46
Table 5.1.34	Outline of the Juba International Airport.....	5-47
Table 5.1.35	Airline and Route for the Juba International Airport.....	5-47
Table 5.1.36	Average Dwell Time at Djibouti Port and Dry Port with Multi-modal Transport	5-53
Table 5.1.37	Relevant Laws and Regulations for Dry Port in Ethiopia.....	5-54
Table 5.1.38	Relevant Organizations in Transport Sector	5-55
Table 5.2.1	Implementation Status of COMESA Transport Facilitation Programmes	5-61
Table 5.2.2	COMESA Harmonised Axle Load Limits	5-62
Table 5.2.3	Current Status of Planned OSBPs.....	5-64
Table 5.2.4	Action Plan for IGAD OSBPs	5-66
Table 5.2.5	Institutional Structure of Soft-Infrastructure Sector in each Target Country.....	5-68
Table 5.3.1	Oil refining plants in Sudan	5-71
Table 5.3.2	Strategic oil products depots.....	5-72
Table 5.3.3	Construction plans of oil refineries.....	5-72
Table 5.4.1	Trend of peak demand and electricity supply (Djibouti)	5-74
Table 5.4.2	Trend of peak demand and electricity supply (Ethiopia)	5-75
Table 5.4.3	Trend of peak demand and electricity supply (Sudan).....	5-76
Table 5.4.4	Trend of electricity supply (South Sudan).....	5-76
Table 5.4.5	Generators at Boulaos power station	5-76
Table 5.4.6	Generators at Marabout power station.....	5-77
Table 5.4.7	List of transmission lines	5-77
Table 5.4.8	List of substation equipment.....	5-78
Table 5.4.9	List of existing hydro power stations.....	5-78
Table 5.4.10	List of existing power plants other than hydro	5-79
Table 5.4.11	Hydro power plants under construction	5-79
Table 5.4.12	Committed generation project (Other than hydro).....	5-79
Table 5.4.13	Length of transmission lines in Ethiopia with voltage classes.....	5-80
Table 5.4.14	List of power plants in Sudan	5-82
Table 5.4.15	Length of transmission lines with voltage classes	5-82
Table 5.4.16	List of power plants in South Sudan.....	5-84
Table 5.4.17	List of distribution lines in South Sudan.....	5-84
Table 5.4.18	Electric utility companies in Sudan	5-86
Table 5.5.1	Submarine optical fiber cables connected to Djibouti	5-88
Table 5.5.2	Domestic optical fiber cables for internet in Djibouti.....	5-88
Table 6.1.1	Company Name List in Operating Industrial Parks	6-6
Table 6.1.2	Agro-Production Location	6-7
Table 6.1.3	Major Products and Production Areas in South Sudan.....	6-9
Table 6.1.4	Potential Mineral Resources and Location	6-9
Table 6.1.5	Major International Trade Items and Destinations of South Sudan.....	6-10
Table 6.2.1	Comparison of power demand and supply facilities among the target countries.....	6-18
Table 6.2.2	Priority projects in EAPP's Strategic Plan 2016-2026	6-18
Table 7.1.1	Study on Other Corridor Development Projects	7-1
Table 7.3.1	Options of regional corridor development.....	7-8

Executive Summary

Executive Summary

1. Overview of the Survey

(1) Background of the Survey and JICA's Corridor Development Approach

Japanese government announced the formulation of 10 strategic master plans¹ in five priority regions², to support Africa's economic growth and Japanese private sector's participation and involvement in Africa during TICAD V held in Yokohama in 2013. "Djibouti Corridor" is positioned in the five priority regions and is the candidate as the tenth strategic master plan study. The Djibouti Corridor is an international corridor connecting the four countries namely, Republic of Djibouti (hereinafter referred to as "Djibouti"), Federal Democratic Republic of Ethiopia (hereinafter referred to as "Ethiopia"), the Republic of the Sudan (hereinafter referred to as "Sudan") and the Republic of South Sudan (hereinafter referred to as "South Sudan"). The logistics network connecting Addis Ababa, Khartoum and Juba starts from Djibouti port. Due to insufficient infrastructure and inefficient cross border service and systems, the transportation cost is quite high. This has created obstacles to economic growth in the whole survey target region³. The Japan International Corporation Agency (hereinafter referred to as "JICA") organized a workshop on the development of the Djibouti Corridor in March 2016 which was attended by the four target countries and the Common Market for Eastern and Southern Africa (hereinafter referred to as "COMESA"⁴). At this workshop, positive opinions were exchanged towards the formulation of the Djibouti Corridor master plan. COMESA has been preparing a strategic plan for the Djibouti corridor development together with the establishment of "Djibouti Corridor Authority". In response to this, JICA decided to conduct the data collection survey (hereinafter referred to as "the Survey") in order to necessarily collect the basic information of the target region.

(2) Objectives of the survey and the survey target countries

The aim of the Survey is to confirm the presence or absence of baseline data and competent management agencies necessary for the future implementation of the regional corridor development master plan formulation. This will help to picture development issues and possibilities of the survey target region. The target countries of this Survey are Djibouti, Ethiopia, Sudan and South Sudan (hereinafter referred to as "the target countries"). In addition, in order to grasp the current situation of logistics and the markets in the vicinity of the target countries, the related information of the Republic of Kenya (hereinafter referred to as "Kenya") and the Republic of Uganda (hereinafter referred to as "Uganda") was also sought. Therefore, the area including the target countries and neighboring Kenya and Uganda is considered as a "target region." The survey is designed to identify development issues and potentials through the study of socio-economic condition, infrastructure development, customs and immigration management, international relations, etc. of the target countries and region. Uganda and Kenya are included in the Survey because of their relationship with South Sudan and Ethiopia and Northern Corridor development.

(3) Scope and schedule of the survey

Field and in-house surveys were carried out for the areas of; integrated regional development plan / industrial promotion, transportation infrastructure, industrial development / logistics plan, energy / power / communication infrastructure, soft-infrastructure (customs, immigration and quarantine). The field survey

¹ The Strategic Master Plan under the TICAD V commitment for 10 candidate areas mainly targets urban development, transportation and infrastructure development. There are five Transport and Comprehensive Corridor Development areas are identified: 1. The North Corridor in East Africa, 2. The Central Corridor in East Africa, 3. The Nacala Corridor in South East Africa, 4. West Africa Growth Ring, and 5. Infrastructure development plans in Algeria, Morocco, and Tunisia, and there are two energy and two natural gas development areas are identified: 6. Geothermal development in the Rift Valley in East Africa, 7. Regional power network in Southern Africa, 8. Natural Gas Value Chain in Northern Mozambique, and 9. Gas Utilization around the Mtwara Port Region in Tanzania. (Source: JICA's Activities in Africa TICAD V Five-Years Assistance 2013-2017)

² Five main candidate areas include ①area which comprehends western part of Trans-Maghreb Corridor including Morocco, northern part of Algeria, Tunisia, and northwestern part of Libya, ②area which comprehends West Africa Growth Ring including Cote d'Ivoire, Ghana, Togo, Benin, Burkina Faso and southern part of Mali, ③area which comprehends Central Corridor and eastern part of Northern corridor including Kenya, Uganda, and Tanzania, ④area which comprehends part of Nacala Corridor and Southern Corridor including Nacala, Malawi, Zambia, Zimbabwe, Mozambique, eastern part of Botswana, and Northern part of the Republic of South Africa, and ⑤area which comprehends survey target area including Ethiopia, Djibouti, Sudan, South Sudan, and northern part of Kenya and Uganda. (Source: JICA's support in Africa (2016.7))

³ Further data collection and study are necessary in order to identify the relationship between the transportation cost and economic growth in the survey target region and countries.

⁴ It is a regional organization involving 19 countries in the Southeast Africa including the target four countries. It was established in 1994 with the aim of forming a stable economic and trade cooperation in the region. The headquarters is in Zambia.

was conducted in two stages: The first stage was from March 12 to April 12, 2017, and the second from May 21 to June 7, 2017. In the first field survey, the team visited Djibouti, Ethiopia and Sudan for data collection and interviews, and in the second field survey, the team gave an interim report in Djibouti and Ethiopia and conducted additional information collection and interviews at the same time. South Sudan government delegations were invited to Ethiopia for data collection and interviews.

2. Outlook of the Target Countries

(1) Condition of nature, society and economy

The target countries are located in the area referred to as the Horn of Africa. They are geographically divided into Djibouti and Sudan facing the Red Sea, and the landlocked countries, Ethiopia and South Sudan. The climate classifications are dry and semi-arid making the region susceptible to droughts. There are natural resources, such as crude oil in Sudan and South Sudan as well as natural gas in Ethiopia etc., in the target countries.

Ethiopia has the largest population of about 99 million in 2015, followed by Sudan with about 40 million, South Sudan with about 12 million, and Djibouti with about 1 million. The five year average population growth between 2010 and 2015 in Djibouti is 1.33%, in Ethiopia, 2.56%, in Sudan, 2.18% and in South Sudan, 4.17%.

The trends of average growth of the target countries, in the past fifteen years are shown in Figure 1. The GDP is steadily growing at about 8% per year in Djibouti and about 14% per year in Ethiopia, while South Sudan shows negative growth⁵.

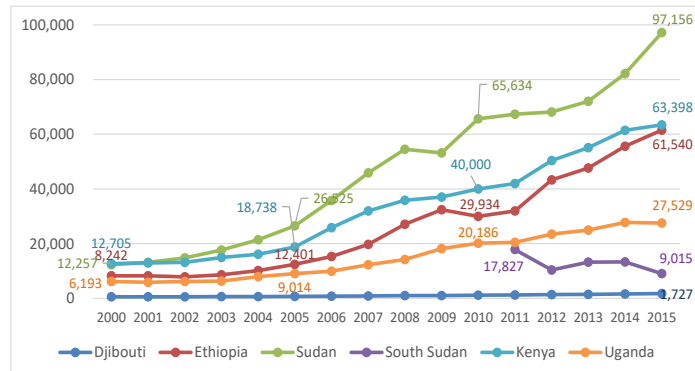
In terms of GDP per capita, Sudan is the highest and Djibouti is the second followed by South Sudan. These are higher than the average in Sub-Saharan Africa region. GDP per capita in 2015 for each country are 1,945 USD/Cap/year in Djibouti, 619USD/ cap/year in Ethiopia, 2,415USD/cap/year in Sudan and 731USD/cap/year in South Sudan.

The GDP comparison between RECs⁶ and the target countries (Figure 2) indicates that the target countries (noted as “Target”) has the highest growth rate of 14.9%, which is higher than COMESA at 8.4% and IGAD at 13.4%.

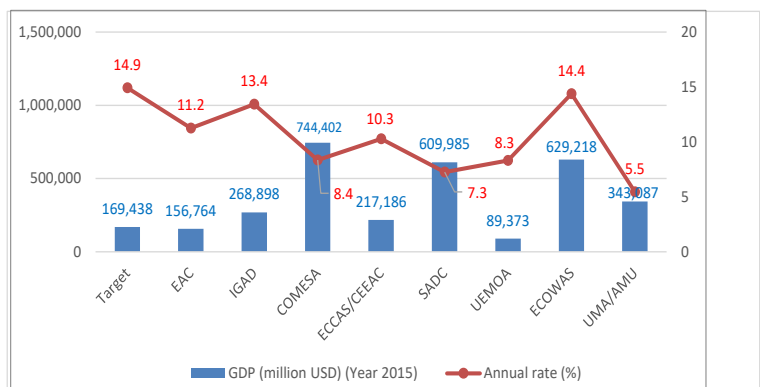
In terms of GDP share by industry in each country, the 2015 figures shows that service industry has the largest share in all four countries, Djibouti with 80%, Ethiopia with 43%, and Sudan with 58%. Especially, in Djibouti port cargo handling service / logistics industry have a high share, and it relies heavily on trade services to Ethiopia as an intermediate trade country. In South Sudan, the share of crude oil-related industry accounts for over 60% of GNI (2012~2014) according to the data obtained from the Ministry of Trade and Industries⁷.

(2) Trade balance

In terms of trade value, Ethiopia has the largest in the region, exceeding that of Kenya, then followed by Sudan, and Djibouti⁸. Regarding the trade balance, imports exceeded exports in all target countries⁹, and the



Source: World Development Indicator (current price)
Figure 1 Trend of GDP of target countries (unit: mil. USD)



Source: World Development Indicator (2015)
Figure 2 Comparison of GDP in RECs and target countries

⁵ Figure 1 shows South Sudan’s negative growth, and this could be caused by its unstable political condition in the country after its independence in 2011. However, more detailed study and data collection is necessary to identify actual GDP trends.

⁶ The Regional Economic Communities: There are total 8 RECs in Africa.

⁷ The source is Draft South Sudan Trade Policy Framework 2014.

⁸ Ethiopia and Sudan data are in 2015, Kenya’s is in 2013, Djibouti’s is in 2009. South Sudan’s data is not available.

⁹ The imports and exports is almost balanced in Djibouti, when the re-export value is excluded, the balance come to negative.

trade balance was negative¹⁰. In Djibouti, re-export accounts for more than half of the total export price value, portraying Djibouti's characteristics as an intermediate trade country¹¹ (Table 1). Furthermore, the intra-regional trade value (price) of the four countries is only 1.2% of the total, where all the others are foreign trade with countries outside of the target countries. Table 2 shows the top three items of import and export¹². Ethiopia and Sudan export primary products such as agricultural products and mineral resources and import industrial products such as motor vehicles, aircraft and others. On the other hand, since Djibouti is an intermediate trade country, the majority of both exports and imports are secondary products, excluding imported crude oil. The share of trade with Japan, though there are exports of coffee from Ethiopian and Kenya, is quite small. Imports from Japan shares about 5% in each target country, and motor vehicles are major imported items.

According to the trade study, it is obvious that most local materials are exported unprocessed at low price without much added value. Therefore, regional corridor development is highly necessary in the target region in order to add value to the products through industrial development and to improve regional transport network for effective material recourse transportation.

(3) Industrial development and Investment condition

The primary industry is the main industry of the target country excluding Djibouti. Focusing on the agricultural sector, according to the interview to government officials, 85% of the labor force in Ethiopia is engaged in agriculture, mostly small-scale¹³ that mainly produce maize, sorghum, wheat, etc. Coffee and vegetables are exported. Sudan has irrigated farms in the Nile River basin¹⁴ although the suitable land for agriculture is limited. South Sudan cultivates peanuts, Arabic-gum¹⁵, sugarcane, mango etc., though the production method is not modernized. The target countries have low agricultural productivity, and it is necessary to improve it by mechanization, technology improvement, regional cooperative production etc. Livestock industry covers cattle, sheep, goat etc., and it is also an industry for export.

Regarding the secondary industries, although each government has its own resource development plan, the production is still small, excluding the oil industry of Sudan and South Sudan. In the manufacturing industry, Djibouti is developing a Free Zone in the port area and Sudan is also developing one. Ethiopia is developing numerous industrial parks for food processing, leather and clothing industries. In South Sudan, it is difficult to change the economic structure that relies on crude oil exports. Foreign Direct Investment in the target area comes mainly from China (oil export, infrastructure development, textile industry), Arab countries (primary industry), India (textile industry).

In the tertiary industry, especially the tourism industry, there are tourism resources registered in the World

Table 1 Trade balance in target countries (unit: mil. USD)

	Djibouti	Ethiopia	Sudan	Kenya	Uganda
Year	2009	2015	2015	2013	2015
Import	648	25,815	8,413	16,394	5,528
Export	364	5,028	5,588	5,537	2,267
ReExport	206	834	1	246	523

Source: UN Comtrade Database (Unit : milUSD)

Table 2 Trade balance in the target countries

	EXPORT	IMPORT
Djibouti	Motor vehicles for the transport of goods (14.8%)	Petroleum oils and oils obtained from bituminous minerals, other than crude (6.3%)
	Conveyor or transmission belts or belting (12.4%)	Motor cars principally designed for the transport of persons (5.8%)
	Agricultural or forestry machinery (8.7%)	Radar apparatus, radio navigational aid apparatus and radio remote control apparatus (5.2%)
Ethiopia	Coffee (20.3%)	Petroleum oils and oils obtained from bituminous minerals, other than crude (9.0%)
	Petroleum oils and oils obtained from bituminous minerals, other than crude (13.8%)	Motor vehicles for the transport of goods (4.1%)
	Cut flowers and flower buds (13.2%)	Telephone sets, including telephones for cellular networks (4.1%)
Sudan	Petroleum oils and oils obtained from bituminous minerals, crude (53.2%)	Other aircraft (for example, helicopters, aeroplanes) (7.9%)
	Other oil seeds and oleaginous fruits (15.1%)	Cane or beet sugar (6.4%)
	Gold (including gold plated with platinum) (12.2%)	Motor vehicles for the transport of goods (3.3%)

Source : UN Comtrade Database (Price based, data year: same as table1)

¹⁰ Regarding approach to tackle trade balance issues, more data and information should be obtained to identify its mechanism.

¹¹ Definition of "Re-Export" is to export imported commodities directly to the next country.

¹² The names of traded items are indicated according to four (4) digit HS Code set under the Harmonized Commodity Description and Coding System (HS Convention).

¹³ According to the information referred to "3. Crop production in Ethiopia" of "Food and Agriculture in Ethiopia" (University of Pennsylvania, 2012) found in International Food Policy Research Institute web page, "South Sudan" (AfDB, 2013), "Sudan Plan of Action 2015-2019" (FAO), etc.

¹⁴ Major irrigation system was developed in the area between the White Nile and the Blue Nile, and Gezira Scheme by England (1925) is the most major development in the region.

¹⁵ It is also called as Gum Arabic, Arabica-Gum, etc. and this is Acacia Genus Senegal species plant cultivated as raw material of polysaccharide. The plants widely grow in northern African region between north latitude 10 to and 20 degree.

Heritage List of UNESCO, such as Rock-Hewn Churches in Lalibela, Ethiopia and the Island of Meroe in Sudan that are promoted for development.

(4) Political system and government structure

Djibouti is a republic country with presidential system. It is divided into 5 regions and the capital city, and these are further subdivided into 20 districts. Ethiopia is a democratic federal parliamentary republic. The administrative division is divided into 2 special municipalities and 9 regions. Sudan is a federal republic country with presidential system with a dominant-party. The administration is divided into 18 provinces. South Sudan accomplished independence in 2011, and adopted a federal presidential constitutional republic system. The administrative district is divided into 3 areas and further subdivided into 32 provinces.

(5) Land use and ownership

When considering the future regional corridor development, land use and land tenure could be major concerns in each target country. The current condition of land use and ownership are summarized hereafter: The land in Djibouti is generally governed and managed by the government by the land law for use and development including urban areas; Ethiopian land is basically owned by the government, however there are some traditional tribal owned land. Although Sudan's land is under government control, there are distinctive customary land ownerships by tribes; South Sudan abolished the system related to customary land ownership, the right, use, management, etc. are stipulated in the Land Act, Local Government Act, Investment Promotion Act, Mining Act etc. in 2009. About 36% of Ethiopian land, about 29% of Sudan's land and about 46% of South Sudan's land are used in agriculture and livestock breeding.

(6) Water resource

Water resource management is an important issue in Djibouti, the desert country. Ethiopia as a mountainous country has a potential in water power generation, however irrigation development is still limited. Sudan has an irrigated area for agricultural production between the White Nile and the Blue Nile. Urban water demand is also concentrated in the same area. Although the amount of the Nile water is abundant, cooperation among the countries in the Nile basin is important. Especially for the development of a mega hydro dam, the relationship between Ethiopia, Sudan and Egypt is crucial. On the other hand, frequent occurrence of drought in the target region results in food shortage and affects the access to water.

(7) Educational level and human resources

The primary education enrolment rate in Djibouti is about 64%, in Ethiopia about 54%, in Sudan about 57%, and in South Sudan about 61%, and they could be improved. The adult literacy rate in the target countries is lower than the average (about 61%) in Sub-Saharan Africa region (Note: Djibouti data not yet acquired). Improvement of access to basic education is necessary for developing various industries and securing human resources.

3. Regional and Industrial Development Plans of Target Countries

Policies of the target countries, especially, regional and industrial development under national development plans (development trend, development policy and plan, law of urban development and environmental and social consideration), possible development executing organization structure, financial and budget situation are described hereafter.

(1) Policy of regional development and industrial promotion

- The Djibouti government has development plans, Vision 2035 and SCAPE¹⁶, and aims for poverty reduction through food security and diversification of economic activities as the main pillar. For industrial development, promotion of private sector development, establishment of new business environment, strengthening market competitiveness are planned. Investment promotion and more efficient logistics are expected from mainly developing Free Zone in the port area (Figure 3), together

¹⁶ Strategy of Accelerated Growth and Promotion of Employment 2015-2019 (French title: Stratégie de croissance accélérée et de promotion de l'emploi)

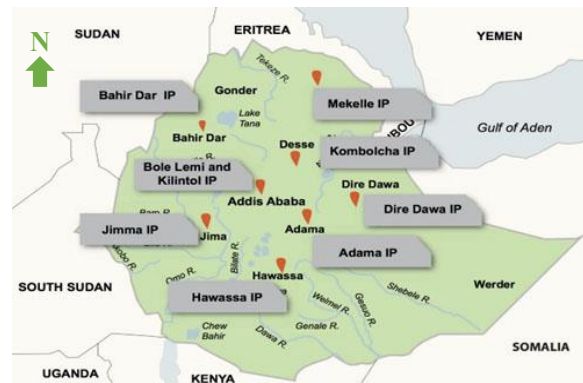
with the development of Doraleh Port. In urban development, based on SDAU 2014¹⁷, the capital and its peripheral development districts are developed and managed. Development control by an environmental law is assured and, especially when formulating a master plan, a Strategic Environmental Assessment (hereinafter referred to as “SEA”)¹⁸ should be conducted.

- The Ethiopian government has the Growth and Transformation Plan II (GTP-II) which aims to “join the middle income countries by 2025.” The country aims to expand industries and exports with a focus on agriculture and manufacturing industry development. Based on the National Urban Development Spatial Plan 2016, urban development is planned including industrial cluster development, industrial park development (Figure 4), infrastructure development and others. In terms of environmental and social consideration, the Environmental Law established in 2000, EIA regulations and guidelines are to be applied, and SEA is required to be applied to regional corridor development plans.
- The Government of Sudan aims to develop based on the Economic Reconstruction Five-Year Plan 2015-2019, in order to achieve stability and expansion of domestic production, secure livelihood for the people, and a socially stable national development. Industrial development, expansion of agriculture and manufacturing, development of meat industry etc. are included in the plan. Currently, two Free Zones¹⁹ are operated and there are four (Orange areas in Figure 5) other development plans. For urban development, plans integrated with industrial development are formulated. In terms of environmental and social consideration, environmental health law, wild life law, water resources law, forest protection law, etc. are effective, and these are applied for the development plans including the EIA guidelines of IGAD, which also includes SEA procedure.
- The South Sudanese government aims to improve governance, improve living environment and expand employment opportunities, improve social services, build peace and security in accordance with South Sudan Vision 2040 and South Sudan Development Plan. In these plans, departing from crude oil-centered industrial structure by diversifying industries with agriculture, forestry and livestock development (green / brown part in Figure 6), road maintenance, mining development, water resources development,



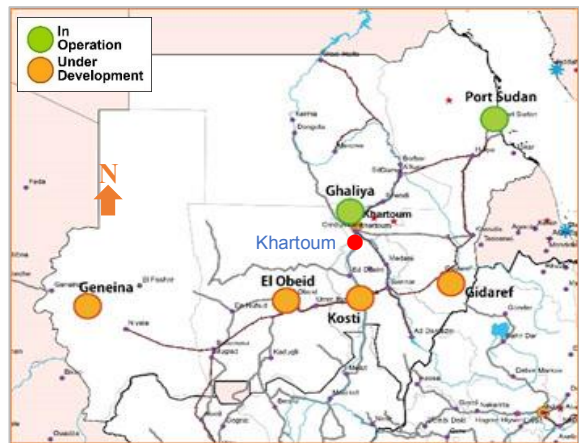
Source : Djibouti Port Free Zone Authority
Note : Free Zone development is on-going at No.5 location. (others are for port and urban developments)

Figure 3 Map of Djibouti Free Zone development



Source : Ethiopian Industrial Parks Development Corporation and UNIDO

Figure 4 Location of industrial parks development by IPDC



Source : Prepared by JICA survey team based on the information provided by government of Sudan

Figure 5 Location of Free Zone in Sudan

¹⁷ Schéma Directeur d’Aménagement et d’Urbanisme (December, 2014): Especially focuses on the urban planning for Farah Had Zone, Balbala Sud Zone and Nagad Zone.

¹⁸ Regulations and rules for SEA implementation concerned of types and sizes of development plans should be further obtained in Djibouti and South Sudan during the next study stage for more analysis.

¹⁹ Although the concept of industrial parks are different in each country, it is the development focusing on attracting manufacturing industry basically.

and hygiene related facilities development are also included. There are two development plans for manufacturing special zones for export (EPZ). In urban development, the state government controls urban development and land use. In terms of environmental and social consideration, for all development plans, environmental impact protection law and the land ownership regulation are applied. SEA related regulations over the development plans should be further studied in the next study stage.

(2) Condition of finance and budget of the Target Countries

National debts are increasing in each target country. Each country shows over 50% of debt ratio to GDP.²⁰ The Ministry of Economy and Finance is responsible for planning and managing the national budget in Djibouti.

The budget is utilized based on the plan of each agency and monitored by the Ministry of Budget. In Ethiopia, Ministry of Finance and Economic Cooperation (MoEFC) is responsible for national budget and economic development planning, management, monitoring and evaluation. Sudan's state budget is prepared by the state governments and submitted to the central government, Federal Government under the Presidency in compliance with the rules make budget plans for both federal and state governments (ratio: 7:3), then submits them to the cabinet. The budget plan should be finally approved by the parliament. The State Revenue of South Sudan is collected by the Ministry of Finance and Planning in the national treasury, and budgets are allocated to local governments as necessary.

(3) Current status of development and planning executing organization

In Djibouti the Ministry of Economy and Finance usually plays a central role in economic development. In Ethiopia, MoEFC plays the core role, and the National Planning Commission serves as a coordinator for relevant ministries and agencies for planning and development. In Sudan, the Ministry of Finance and Economic Planning releases economic plans, and the Ministry of International Cooperation is the focal point for international donors. In South Sudan the Ministry of Finance and Planning is a coordinator with the executive office of the President for planning.

(4) Plans of COMESA and IGAD

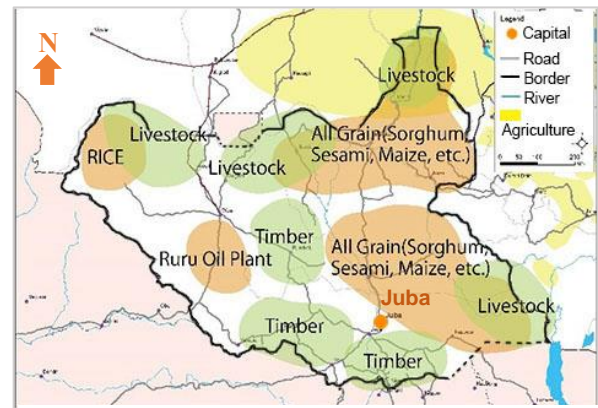
COMESA and IGAD are both planning to establish Djibouti Corridor Authority and setting up a development strategy and/or development plans.

4. Current International Trade Status of the Target Countries

(1) Main country of export / import trade, items and route²¹

Table 3 shows the characteristics of international trade by weight in the target countries, and major activities are described below:

- The main trade partner of Djibouti is Ethiopia at 56% for export, and it has a unique characteristic of a high re-export ratio. For example 12.5% of re-exports to Somalia and 4.6% to Kenya, which also show that Djibouti plays a role as a gate for import for other countries²², such as Kenya and Somalia, which also have sea ports. The items of the largest quantity are the same in export and in import because of the high re-export rate
- Among export items of Ethiopia, the largest amount is “Petroleum oils and oils obtained from bituminous minerals, other than crude.” The top export and import partners are the same (Kuwait and Saudi Arabia). Such condition is highly unusual so that further study is necessary.



Source : Prepared by JICA survey team based on the information provided by government of South Sudan

Figure 6 Distribution map of agriculture and livestock in South Sudan

²⁰ As references, national debt of Djibouti is about 60% of GDP in 2014, of Ethiopia is about 54% of GDP in 2016 and of Sudan is about 68% of GDP. (Source: World Factbook, CIA) Also, IMF Country Report 17/87 (April, 2017) describes that Djibouti's debt to GDP ratio has increased from 50% of 2014 to 85% of 2016.

²¹ Since the UN Comtrade Database data of South Sudan is not available, the data is not described.

²² Somalia and Kenya owns sea ports, however there could be land transport trade made from Djibouti.

- For Sudan, China is the largest trading partner both for export (81%) and import (23%). Specifically, “Petroleum oils and oils obtained from bituminous minerals, crude” is exported to China and “Cane or beet sugar” is largely imported from India and Thailand.
- South Sudan has strong relationship in trading with Uganda and Kenya, and crude oil is the largest export item sharing over 95%²³.

Table 3 International Trade Characteristics and Items in the Target Countries (Weight-based)

		Djibouti	Ethiopia	Sudan
Export	Largest Export Item	Cement (30%)	Petroleum oils and oils obtained from bituminous minerals, other than crude (27%)	Petroleum oils and oils obtained from bituminous minerals, crude (79%)
	Largest Export Partner	Ethiopia (56%)	Kuwait (25%)	China (81%)
	Its Item	Cement, Wheat or meslin flour	Petroleum oils and oils obtained from bituminous minerals, other than crude	Petroleum oils and oils obtained from bituminous minerals, crude
Import	Largest Import Item	Cement (38%)	Petroleum oils and oils obtained from bituminous minerals, other than crude (28%)	Cane or beet sugar (23%)
	Largest Import Partner	Pakistan (21%)	China (16%)	China (23%)
	Its Item	Cement	Nitrogenous fertilizers, Iron and steel	Flat-rolled products of iron or non-alloy steel, New pneumatic tyres of rubber

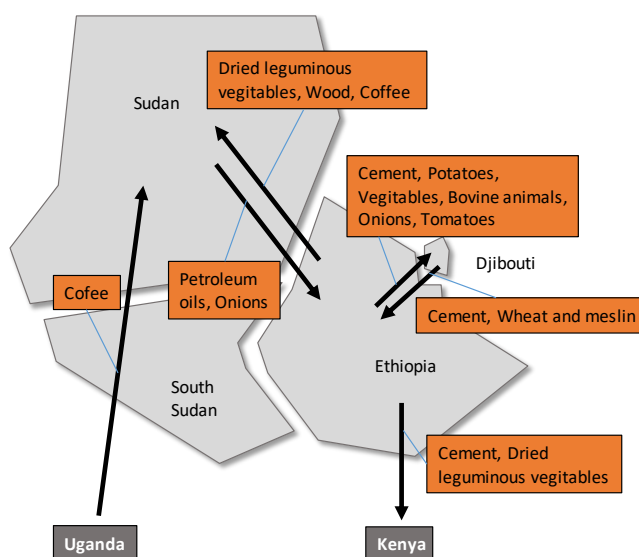
Source: Prepared by JICA Survey Team based on the data from UN Comtrade Database.

(2) Condition of international trade between the target countries

As mentioned above, the trade among the target countries is limited. The items of international trade between the target countries are shown in Figure 7 (over 10,000 tons of logistics per year). It is only between Ethiopia and Djibouti, Sudan and Kenya that show more than 10,000 tons of logistics per year. Within the target area, Ethiopia is mainly the center of logistics.

(3) Condition of trade activity in Ethiopia (Route of export and import)

In Ethiopia, most routes are to Djibouti and Sudan for the majority of the trade amount. In terms of import and export by road, 94% of imports and 58% of exports are mostly through Galaffi. The transport route between Ethiopia and Djibouti via Galaffi is the main artery of the Djibouti Corridor (export routes are shown in Figure 8). Although the route through Djibouti ~ Dewele ~ Dire dawa ~ Awash ~ Modjo ~ Addis Ababa is shorter in distance, the route via Galaffi is major because the whole route is improved and it is topographically flatter. It is assumed that it will be possible to reduce time and transportation cost²⁴ (Figure 9), when the Dewele route is improved in the future. In addition, railway has been developed in the same route²⁵, and the logistics may be split in multiple transport modes.



Source : Prepared by JICA survey team based on UN Comtrade Database

Note: Orange colored boxes concerns trade over 10,000 tons.

Figure 7 International transactions between target countries

²³ Reference data: “Draft South Sudan Trade Policy Framework (August 2014)” which was obtained from the Ministry of Trade and Industries.

²⁴ Detailed development plan of Dewele route has not been obtained, however the time saving is expectedly reduced from 31 hours to 12 hours after the route development is completed (via Harer). The time saving is expected in half of the present duration.

²⁵ Expected to be operational during the year 2017, according to the government officials.

(4) Transport cost and time²⁶

Import and export cargo in Ethiopia is classified into two categories. They are called as Unimodal cargo and Multimodal cargo. The procedures, such as custom process, are different²⁷. Export is only Unimodal cargo. Multimodal cargo is classified as container cargo and RO-RO cargo. The others are Unimodal cargo. Multimodal transport is a system started from 2010 by ESLSE²⁸. Cargo landed at Djibouti ports obtains only transportation permission and all customs procedures are then carried out at the Dry Port of the destination in Ethiopia. Meanwhile, Unimodal transportation requires customs inspection and processes by both countries at Djibouti Port, which requires a long waiting time. Multimodal Import cargo is lower in transport cost than that of Unimodal cargo. This is because handling costs are reduced due to less procedures and checks at the port. Multimodal transport pricing regulation also reduces the overall cost. On the other hand, export transportation cost is much lower²⁹ compared to that of import. This is because its customs procedure is much simpler with price competition due to less cargo transport demand.

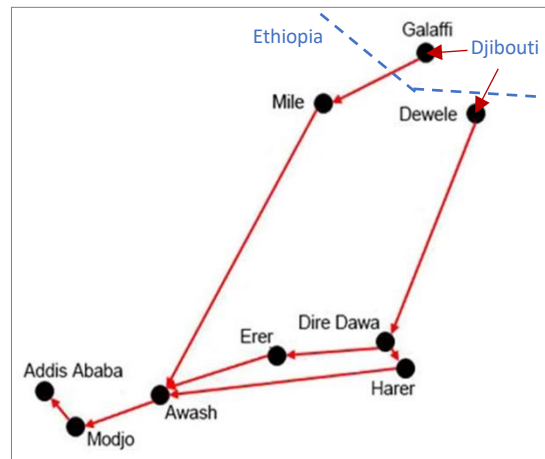
5. Current Condition and Development Plans by Infrastructure in each Target Country

The current conditions and development plans of transportation infrastructure, border management facilities (soft infrastructure), energy, electric power, and communication infrastructure are studied through obtained data and interviews to the government officials, and summarized hereafter.

5.1. Transportation infrastructure

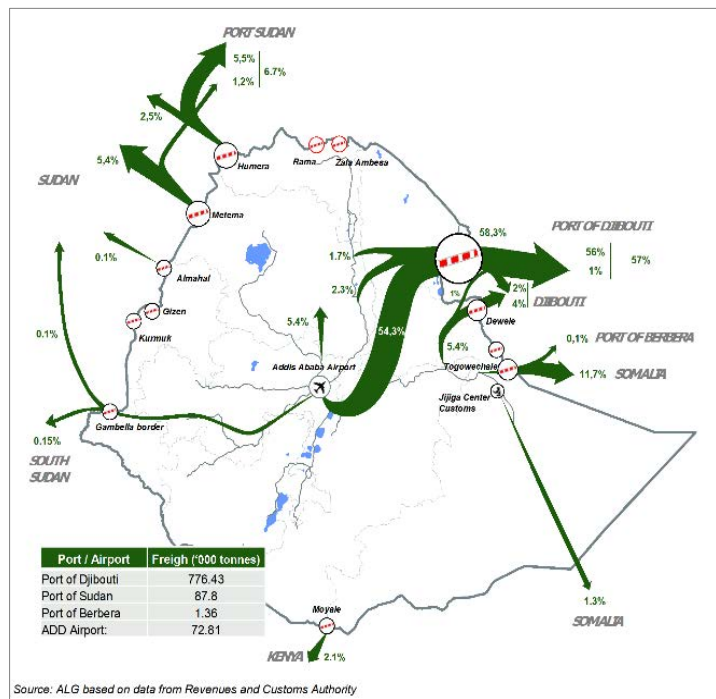
(1) Road

Roads are the most important infrastructure in transportation as the railway network is considerably weak in the target countries. As shown in Figure 10, the major road network in the target countries is connecting the capital city and major cities in each country. The roads become main artery connecting the landlocked countries to the sea ports in the target countries³⁰. The only highway in Ethiopia is operational connecting Addis Ababa and Adama. The construction of another route between Adama and Awash has started, while the route between Adama and Dire Dawa has not been financed yet. Modjo to Hawasa route is under



Source : Prepared by JICA survey team based on Ethiopian Customs Guide

Figure 8 Alternative route between Ethiopia and Djibouti



Source : ALG data from Revenues and Customs Authority

Figure 9 Main export routes from Ethiopia

²⁶ Data from Ethiopia has only been obtained.

²⁷ Customs procedure required for Multimodal transport is made at once only in Ethiopia, while the procedure for Unimodal transport should be made in both Ethiopia and Djibouti.

²⁸ Ethiopian Shipping and Logistics Service Enterprise

²⁹ The price for Multimodal transport is 2,519USD/TEU, Unimodal transport is 2,982USD/TEU, and export transport is 1,424USD/TEU.

³⁰ The noted information is based on the hearings to the target countries.

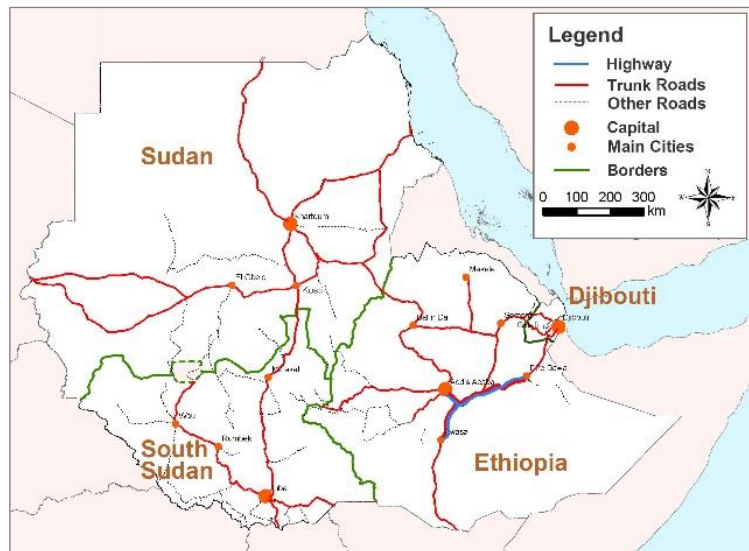
construction. The road surface pavement ratio in each country varies from 3% to 49%, and concerned government agencies do not have actual status of the road surface and conditions, according to the interviews to the officials. Deterioration of the paved surfaces due to overloaded traffic and severe weather conditions is considered as a major problem. An axle load weighbridge was installed at the Galaffi border although this facility is not operational today due to inappropriate maintenance.

(2) Marine traffic (sea ports)

Djibouti port and Port Sudan face the Red Sea, which is a part of the world's largest trade route of Europe – Asia, they play a major role with large transport volume. Djibouti port (container capacity: 1.2 million TEU) is consisted of three major port facilities, Old Djibouti Port, Doraleh Container Terminal and the Oil Pier. The Doraleh Multipurpose Port started operation in May 2017. The port of Sudan has a handling capacity equivalent to that of Djibouti port, though the actual handled volume is about 2/3. Berbera port in Somalia (mainly used by Ethiopia) and Lamu port in Kenya (used by Ethiopia and South Sudan) are used, although their handling volume is small. Figure 11 shows the handled cargo volume of Djibouti Port. Both import and export have increased about 1.5 times in the past five years and the capacity shortage of the facility was concerned. With the opening of Doraleh multipurpose port, further service growth is expected.

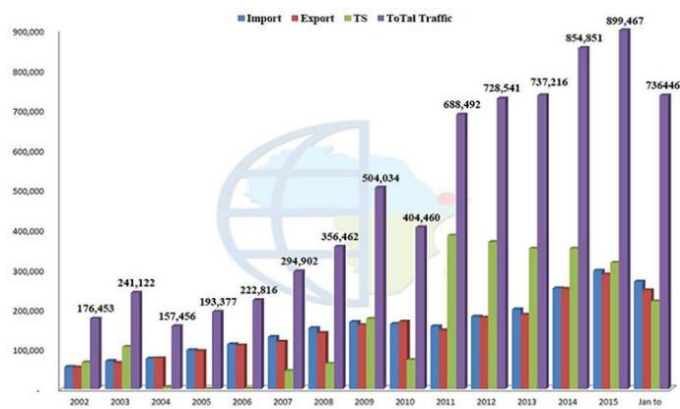
(3) Railway

Between Djibouti and Ethiopia, Ethio-Djibouti Railway between Addis Ababa and Djibouti port was originally developed in 1917 with total 784km length of service (1,000mm narrow gauge). However, lack of proper maintenance had caused reduction in headway schedule, and the operation was terminated.³¹ Recently, Djiboutian and Ethiopian governments have developed a standardized electric railway in this section with Chinese funds³² (construction was completed in January 10th, 2017, and the scheduled commencement is in 2017) to cater for increasing logistics demand. This railway (Addis Ababa – Djibouti Railway: Total service length of 756km with 1,435mm standard gauge) covers not only cargo but also passenger transport services³³, and it is expected



Source: Prepared by JICA survey team

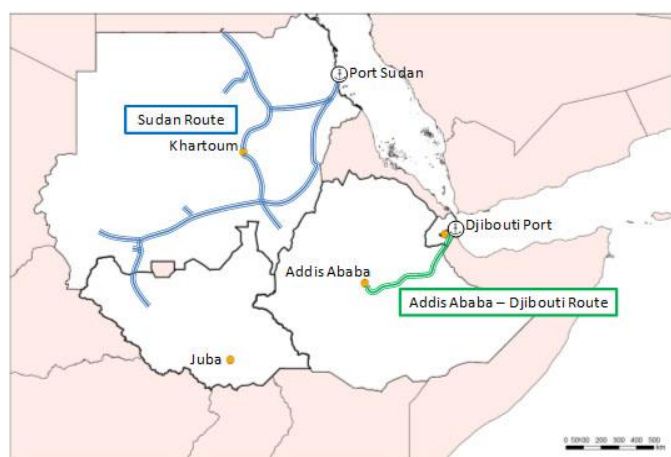
Figure 10 Road network in the target area



Source: Unleashing the economic potential of Africa (2016)

Djibouti Ports & Free Zones Authority

Figure 11 Handled container volume at Djibouti port



Source: Prepared by JICA survey team

Figure 12 Current railway network in target area

³¹ Information of actual service termination date was not obtained.

³² Chinese fund covers 70% of total cost of 3.4 billion USD.

³³ Passenger service capacity is expected at 3,000 ~ 6,000 passenger per day.

to contribute in facilitating transportation between Djibouti and Ethiopia effectively. The regional railway network is shown in Figure 12.

In Sudan, although the railway which is the second longest railway network (narrow gauge) in Africa has been installed since the 1890s, the share of railways in cargo and passenger transport is very limited (passenger 0.1% and cargo 3.8%)³⁴ due to inadequate maintenance and aging of facilities. The government-owned Sudan Railway Corporation is carrying out improvement projects, changing the current rail system to the standard gauge between Khartoum - Sudan Port which is the principal route. The development project was awarded to Chinese company in 2007.

(4) Air transportation

Ethiopian Airlines has several lines covering the continent of Africa, Europe and Asia with 96 passenger service routes and 36 cargo routes (Figure13). The number of passengers and volume of cargo have been increasing in air transportation. Expected number of passengers in 2015/2026 is 7.6 million per year and 350 thousand tons per year for cargo. In freight transportation, Ethiopia exports flowers and textile products³⁵, which are lightweight and high-value, to Europe and imports electronics³⁶ from Asia, such as India and China, by air. Although it is only about 3% of the total Ethiopia trade volume in weight, it is increasing at 25% per year³⁷.



Source: Outline of Cargo (2017) Ethiopian Airlines

Figure 13 Main destinations of Ethiopian Airlines (Cargo)

Djibouti Airlines is the flagship carrier operating within the neighboring countries, such as Ethiopia, Kenya and Somalia and to the Middle Eastern countries. Sudan has its flagship carrier, Sudan Airways, and operational in similar countries. Airliners from Middle East countries are also servicing. South Sudan only networks to its surrounding countries.

(5) River transportation

River transportation was operated between Juba in South Sudan and Kosti in Sudan along the Nile River basin in the past, and there were seven river ports, which are not operational today, on the route. Salloum dry port, which was the largest in Sudan, was adjacent to the river port in Kosti, where transshipment to Sudan port was carried out. The port of Juba is planned to be expanded with the support of JICA to construct quay, crane and storage facilities, however the project is not progressing³⁸. A feasibility study financed by UN started in April 2017 on river transportation toward South Sudan side, and it is expected that river transportation will be used in the future.

(6) Dry port

Dry port is an important logistics base for import and export in landlocked countries and it also effectively alleviates port congestion in coastal countries. As of 2017, seven dry ports are operated in Ethiopia. The Modjo dry port handles the largest amount of cargo (79% of total volume), and due to insufficient capacity, there is ongoing expansion work to upgrade area size from 62ha to 150ha. They are also increasing store facilities from 2 storehouses to 6 storehouses as well as to adding and installing cargo handling equipment. Connecting with the railway system is also ongoing, and it is assumed that import / export cargo will gradually shift to railway transport in the future. In Sudan, dry ports are found in Kosti and Salloum. Kosti functioned as a hub of both land transportation and inland water transportation mainly as transshipment terminal in the past. However today, customs clearance procedures for imported goods from Port Sudan are performed and the goods are distributed to the final destination by trucks. Salloum dry port has just started its operation in recent years³⁹ with the aim of alleviating congestion in Port Sudan, according to the interview to the operation company.

³⁴ There is no detailed information about passenger.

³⁵ Most textile products are transported by surface mode, however some items are shipped by air transport.

³⁶ No detailed information regarding imported electronics is obtained during the survey.

³⁷ Data collection from Djibouti, Sudan and South Sudan should be made during the next study stage.

³⁸ Although a contract with a Japanese construction company was signed, the construction is suspended due to the unstable internal condition of South Sudan.

³⁹ The information regarding the data of initial operation date of the port was not obtained during the survey.

(7) Government related organizations concerned with transportation infrastructure development

In road sector of the target countries, the Ministry of Transport is responsible for policy making while road agencies manage project implementation and development. Ports are mainly controlled under the Ministry of Transport and its policy. The Port Free Zone Authority is in charge of development and operation in Djibouti, the Marine Transportation Agency and government-owned Marine Transportation Corporation are in charge in Ethiopia, and the Port Authority is in charge in Sudan. In the air transportation sector, the Ministry of Transport in each country controls its policy. The aviation authority operates and manages the projects. In the railway sector, the Ministry of Transport is also responsible of policy making, and railway companies control development, operation and management. In the inland water transportation, the Ministry of Transport is in charge of policy making in Sudan and South Sudan and the River Transportation Corporations undertake development and management.

5.2. Border Control Facility and Institutional System

The target countries are IGAD members, and the three countries except South Sudan are COMESA members. In the regional economic agreement between IGAD and COMESA, applying COMESA's scheme, standardization, harmonized procedure and simplification of border trading are promoted with the aim of facilitating regional economic integration, and in the cooperative effort, logistical costs and time are expected to be reduced.

(1) Custom

COMESA strongly obliges the member countries to apply and comply with the customs laws in order to achieve effective and modern customs procedure which was recommended under the WCO⁴⁰ revised Kyoto Treaty. However, the law enforcement and system installation in the target countries has not progressed well. Each country is under the process of installing the customs system (ASYCUDA, etc.⁴¹), however the system that each country has selected varies, and it is not possible to integrate the countries for effective operation. It is considered necessary to standardize the system and regulations in the target region under the support and instruction of IGAD.

(2) Immigration control

Although Article 13 of the IGAD Cooperation Agreement states the free movement and the residence rights of people within the regions, the immigration control is operated based on particular regulations of each country. Ethiopia and Djibouti only have signed bilateral agreements, therefore movement between the other countries are still regulated and limited in accordance with their own visa control regulations⁴². It is considered necessary to relax immigration control among countries and promote setting up bilateral agreement under the support and instruction of IGAD.

(3) Quarantine

There are wider variety of activities regarding the animal and plant quarantine to be attended, and each country owns its quarantine center and carries out quarantine according to own standard⁴³. The details of quarantine activities and efforts were not open to the Survey. IGAD is developing regional quarantine policies for early implementation for improving current situation in each country. Through the adoption of the policy by the member countries, realization of harmonized quarantine environment among the member countries is expected.

(4) Land transport facilitation measures

In order to facilitate smooth transportation of land transport within the target region, it is necessary to harmonize axle weight regulation, trade concerned system, usage manual, certificate etc. Currently, the installation of One Stop Border Post (OSBP)⁴⁴ facility to facilitate regional trade and border transport is under consideration. There is information regarding test operation of OSBP with railway operation at the border

⁴⁰ World Customs Organization

⁴¹ Djibouti and Sudan has introduced ASYCUDA World, Ethiopia installed ASYCUDA++, and South Sudan uses manual processing customs system.

⁴² Visa is note required for Djibouti people when they enter to and exit from Ethiopia, while Ethiopian people are required for immigration visas to enter to and exit from Djibouti.

⁴³ The Djibouti Regional Livestock Quarantine Centre is operational regulating and providing certification of good health for livestock. Ethiopia is in the process of developing a national standards policy. The South Sudan National Bureau of Standards (SSNBS) is responsible for the setting and enforcement of standards.

⁴⁴ The concept of One Stop Border Post (OSBP) is a framework that enables immigration inspection and procedures required by region or country at just single facility on the movement of goods, people, and vehicles.

between Ethiopia and Djibouti, however the details are unknown. There is no OSBP in the area particularly aiming road transport services, and it is required to conduct inspections and procedures in the each entered and left country at the time of customs clearance, thus this causes longer transportation time. There are OSBP facility development plans undergoing in total of nine (9) locations in the target countries⁴⁵.

5.3. Energy, Power and Telecommunication Infrastructure

(1) Energy infrastructure

4.7 Tcf⁴⁶ in the Hilala Block, 2.5 Tcf in the Calub Block, a total of 7.2 Tcf of natural gas reserve is confirmed in the Hilala Block in Ogaden valley, Ethiopia, of which the development concession is given to POLY-GCL in China, while nothing has been found in Djibouti. POLY-GCL also signed a contract for construction of gas transport pipeline, and plans to construct LNG terminal at Damerjog in Djibouti for export. In gas transportation between Djibouti and Ethiopia, development cooperation in the future is important considering the expansion of Djibouti port function.

According to BP statistics, oil reserve amount in Sudan is 1.5 billion barrels at the end of 2015 and the minable years is 39 years (R/P ratio). With the same statistics, oil reserves in South Sudan is 3.5 billion barrels at the end of 2015 and minable years is 65 years (R/P ratio). Most of the oil reserves in both countries are present in the Muglad valley and the Melut valley near the border shown in the following Figure 14. Although there are two oil export pipelines between the two countries, South Sudan has a plan to construct another export pipeline. The plan is to run the pipe through Kenya to reach Lamu port, in order to reduce dependency on Sudan, though the planning has been suspended.

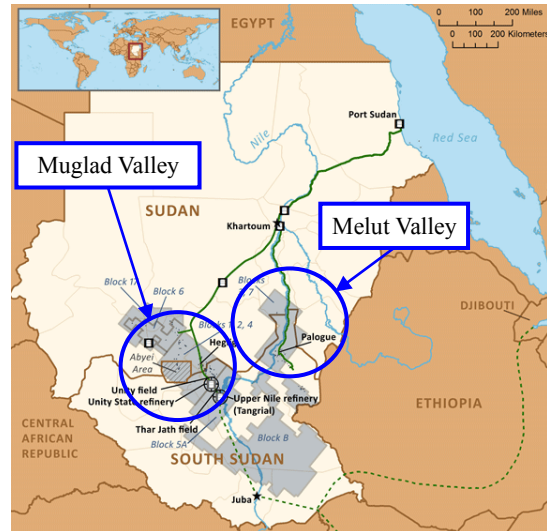
In Sudan, two oil refineries, namely Al Jaili, Khartoum and Port Sudan, and three atmospheric distillation plants, namely El Obeid, Shajirah and Abu Gabra, are in operation, where total oil refining capacity is 14.37 million barrels per day. Khartoum refinery expansion and the construction of a new refinery at Port Sudan are planned. In South Sudan, there are plans to construct three oil refineries such as Unity (5,000 barrels/day), Thiangrial (20,000 barrels/day) and Pagak (50,000 barrels/day) and four strategic oil depots such as Juba (Diesel oil: 50,000 m³, Gasoline: 25,000m³, LPG: 5,000m³), Bor (Diesel oil: 5,000 m³, Gasoline: 2,500 m³, LPG: 150m³), Malakal (Diesel oil: 5,000 m³, Gasoline: 2,500 m³, LPG: 150m³) and Wau (Diesel oil: 10,000 m³, Gasoline: 5,000 m³, LPG: 200m³), however these plans have been suspended as the crude oil export pipeline plans.

In Sudan, two oil refineries, namely Al Jaili, Khartoum and Port Sudan, and three atmospheric distillation plants, namely El Obeid, Shajirah and Abu Gabra, are in operation, where total oil refining capacity is 14.37 million barrels per day. Khartoum refinery expansion and the construction of a new refinery at Port Sudan are planned. In South Sudan, there are plans to construct three oil refineries such as Unity (5,000 barrels/day), Thiangrial (20,000 barrels/day) and Pagak (50,000 barrels/day) and four strategic oil depots such as Juba (Diesel oil: 50,000 m³, Gasoline: 25,000m³, LPG: 5,000m³), Bor (Diesel oil: 5,000 m³, Gasoline: 2,500 m³, LPG: 150m³), Malakal (Diesel oil: 5,000 m³, Gasoline: 2,500 m³, LPG: 150m³) and Wau (Diesel oil: 10,000 m³, Gasoline: 5,000 m³, LPG: 200m³), however these plans have been suspended as the crude oil export pipeline plans.

(2) Power infrastructure

1) Power demand

In Djibouti, electricity supply volume has been growing by 6.5% per year in the five years till 2015. The peak demand in 2015 was 99 MW, showing a high growth of 17.8% over the previous year. Electric power import from Ethiopia has begun in 2011 upon the completion of 230kV interconnection transmission lines between Dire Dawa and Jaban'as, and the source of electric power shifted from diesel power generation to electricity importation.



Source: Japan Petroleum Energy Center (2015.6)
“Petroleum and natural gas trends in major North African countries (1)”

Figure 14 Oil drilling sites in Sudan and South Sudan

⁴⁵ There are 1 location (Moyale) at the border of Ethiopia and Kenya, 1 location (Akobo) at the border of Ethiopia and South Sudan, 3 locations (Bumbadi-Omedla, Kurmuk and Galabat-Mettema) at the border of Ethiopia and Sudan, 3 locations (Balho, Galaffi and Galile-Deweile) at the border of Ethiopia and Djibouti, and 1 location (Nimule-Elegu) at the border of South Sudan and Uganda. Three OSBP locations between Ethiopia and Sudan have no progress, and the OSBP at Moyale is completed in Kenya side but Ethiopian side is under construction.

⁴⁶ Trillion Cubic Feet

As shown in Table 4, the electricity supply in Ethiopia has increased by 13.6% per year in the five years till 2016. Electricity exports in Ethiopia account for 5 to 10% of total electricity consumption, and the increase in electricity demand is mainly derived from an increase in domestic demand. Progress in large scale hydro power development enables Ethiopia to have sufficient generation capacity but delay in the reinforcement of transmission network is the bottleneck of electricity supply. Improved transmission and distribution plan of electricity is necessary for the future expansion of the manufacturing industry.

As shown in Table 5, Sudan has recorded a high growth rate of 11.7% per year in electricity supply during the five years till 2015, while both peak power and supplied electricity are declining from 2013.

It is closely related to the petroleum industry, and coordination with future manufacturing industry development plans is necessary.

South Sudan Electricity Authority has not been generating or supplying electricity in South Sudan because they cannot afford fuel cost for diesel power generation over the past two years. Citizens depend on their own power generation.

2) Equipment of power supply

Although there are two diesel power plants, namely, Boulaos (121MW) and Marabout (18MW) in the city area in Djibouti (available capacity; 103MW), 66% of power supply relied on electricity import from Ethiopia in 2015. There is a plan for constructing a 100 MW class power station in Jaban' as district and developing geothermal power generation to increase power generation capacity, which reflects its policy to secure self-power supply. The transmission system consists of 230 kV and 63 kV.

Existing power generation facilities in Ethiopia are 89% hydropower, and when the Grand Ethiopian Renaissance Dam begins to operate, the total power generation capacity will be about 2.5 times from the current capacity of 4,304MW(including Gibe-III) to 10,558MW. The transmission system consists of 5 voltage categories such as 400kV, 230kV, 132kV, 66kV and 45kV and the 500 kV international interconnection line under construction becomes the highest. It is expected earning foreign currency can be realized by effective regional use of power generation capacity, including a second international interconnection plan to Djibouti.

Sudan has a plan to construct new 500kV double circuit transmission lines from Grand Ethiopian Renaissance Dam. Sudan has total generation capacity at 3,227MW. Power generation is 64% by hydropower represented by Merowe Dam (commissioned in 2009, 1,250MW) and 35% thermal power such as Kosti (commissioned in 2006, 500MW, crude oil firing steam turbine), 1% import. Effective planning of future industrial development and power sharing is necessary.

There is no nationwide transmission grid in South Sudan and independent power supply is working in cities. Installed generation capacity is approximately 64MW but available capacity is only 29MW in South Sudan.

(3) Telecommunication infrastructure

Djibouti is a Gateway of submarine cables such as SEA-ME-WE, EASSy etc. for Asia-Europe communication network, and contributes to the connection to 22 East African countries. A state-owned corporation monopolizes the telecommunication service. In Ethiopia, a 100-G backbone optical fiber network contracted to ZTE, China has been under construction since 2016. The communication services are provided exclusively by a state-owned corporation, Ethio-telecom. In Sudan, there is an optical fiber network with a total extension of 12,000 km, which links Egypt to Ethiopia. Sudatel Telecom Group provides optical fiber communication connection service. There are connections with submarine optical fiber cables such as EASSy (Eastern Africa Submarine System), Africa-1, FALCON, Saudi Arabia-Sudan (1 and 2) at Port Sudan. Although there is an optical fiber laid before independence in South Sudan, it does not function today. There are a basic optical fiber network development plan that connects to neighboring countries, and a network plan with Uganda and Kenya. There are three companies conducting Internet communication business. Further

Table 4 Changes in peak demand and electricity supply(Ethiopia)

	2012	2013	2014	2015	2016	2016/12
Peak Demand (MW)	1,125	1,378	1,440	1,643	1,974	-
Growth (%)	-	22.5%	4.5%	14.1%	20.2%	15.1%
Electricity supply (GWh)	6,291	7,588	8,701	9,521	10,465	-
Growth (%)	-	20.6%	14.7%	9.4%	9.9%	13.6%

Source : Ethiopian Electric Power

Table 5 Changes in peak demand and electricity supply (Sudan)

	2011	2012	2013	2014	2015	2015/11
Peak Demand (MW)	1,525	1,727	2,011	2,296	2,562	-
Growth (%)	-	13.2%	16.4%	14.2%	11.6%	13.8%
Electricity supply (GWh)	8,443	9,417	10,783	11,834	13,142	-
Growth (%)	-	11.5%	14.5%	9.7%	11.1%	11.7%

Source : Ministry of Water Resources and Electricity, Republic of Sudan

collaboration is necessary to develop a communication network in the target region that operates with market competition principle.

(4) Government organizations concerning energy, power and telecommunication infrastructure

In each target country, there is a government agency, as well as power companies, which are in charge of planning, development and management. Ministry of Energy and Natural Resources in Djibouti, Ministry of Mines, Petroleum and Gas in Ethiopia, Ministry of Energy and Mines in Sudan and Ministry of Energy and Dam in South Sudan are agencies which formulate policies and plans on energy development. Similarly, Ministry of Energy and Natural Resources in Djibouti, Ministry of Water, Irrigation and Electricity in Ethiopia, Ministry of Energy and Mines in Sudan and Ministry of Energy and Dam in South Sudan are agencies which formulate policies and plans on electricity supply infrastructure.

There are electricity supply utilities which are responsible for power generation, transmission and distribution. Electricite de Djibouti in Djibouti. In Ethiopian Electric Power (EEP) which is in charge of power generation and transmission and Ethiopian Electric Utility (EEU) which is responsible for electricity distribution in Ethiopia, generation companies (Sudanese Thermal Generation Co., Sudanese Hydro Generation Co., Merawi Dam Electricity), transmission company (Sudanese Electricity Transmission Co.), and distribution company (Sudanese Electricity Distribution Company (SEDC) Ltd.) in Sudan and South Sudan Electricity Corporation in South Sudan are the agencies which deal with physical electricity supply. Electric utility company was already unbundled in Sudan. EAPP (Eastern Africa Power Pool) is responsible for the coordination of regional power trade and interconnection.

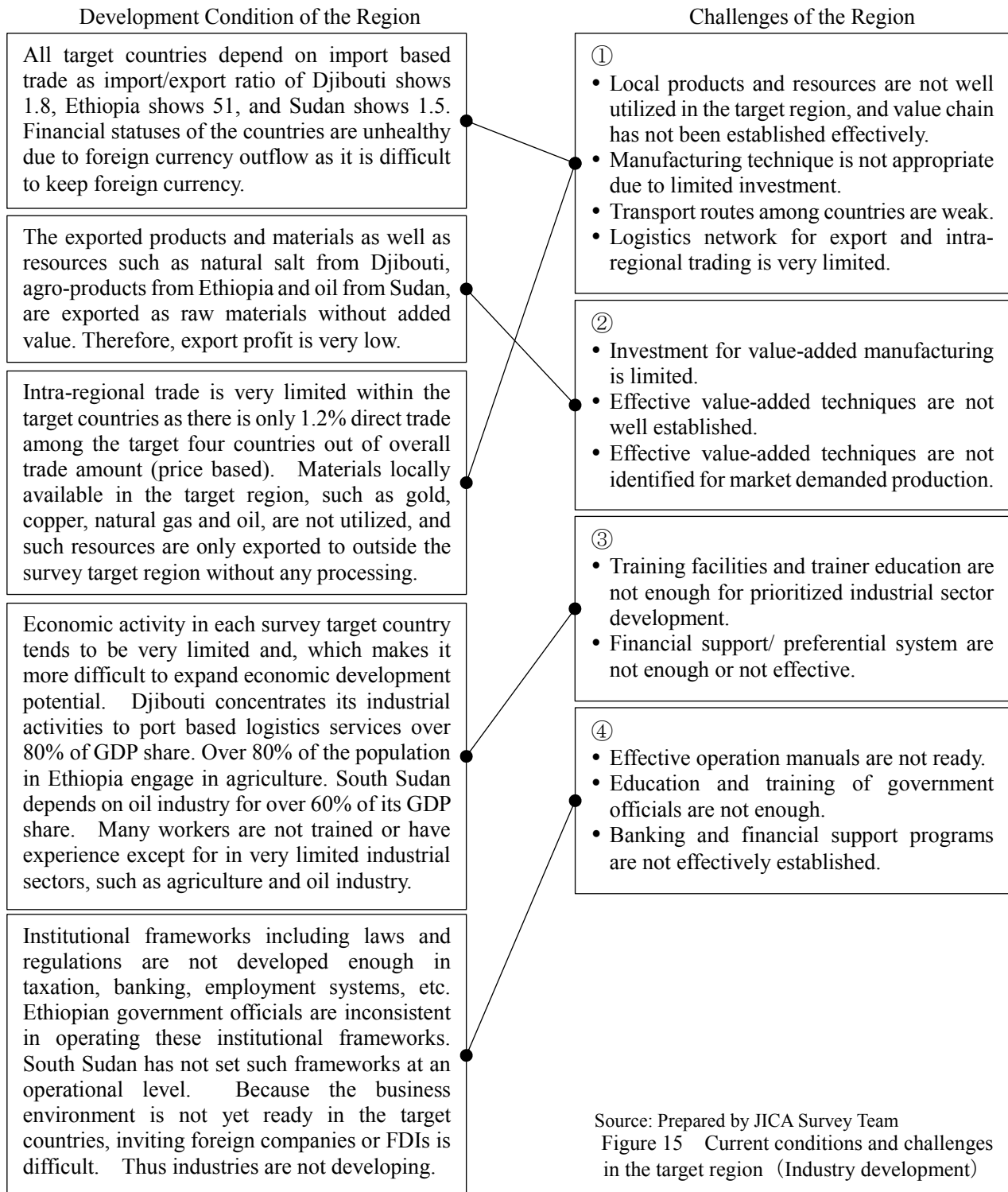
Regarding communication infrastructure, government agencies conduct development management related to international collaboration, while services are conducted by government owned company and private companies.

6. Challenges regarding Regional Corridor Development

In this section, current situation in each development sector explained in chapter 2 through chapter 5 are summarized and overall regional level development challenges described in chapter 6 were summarized and structured in a matrix. The challenges in promoting the regional corridor development in the target region were compiled in the terms of regional and industrial development, the implementation organization, infrastructure development and logistics measurements. A study on current conditions and challenges was conducted utilizing the information obtained from government and other interviews, collected data, site visits, etc.

(1) Current conditions and challenges of regional and industrial development

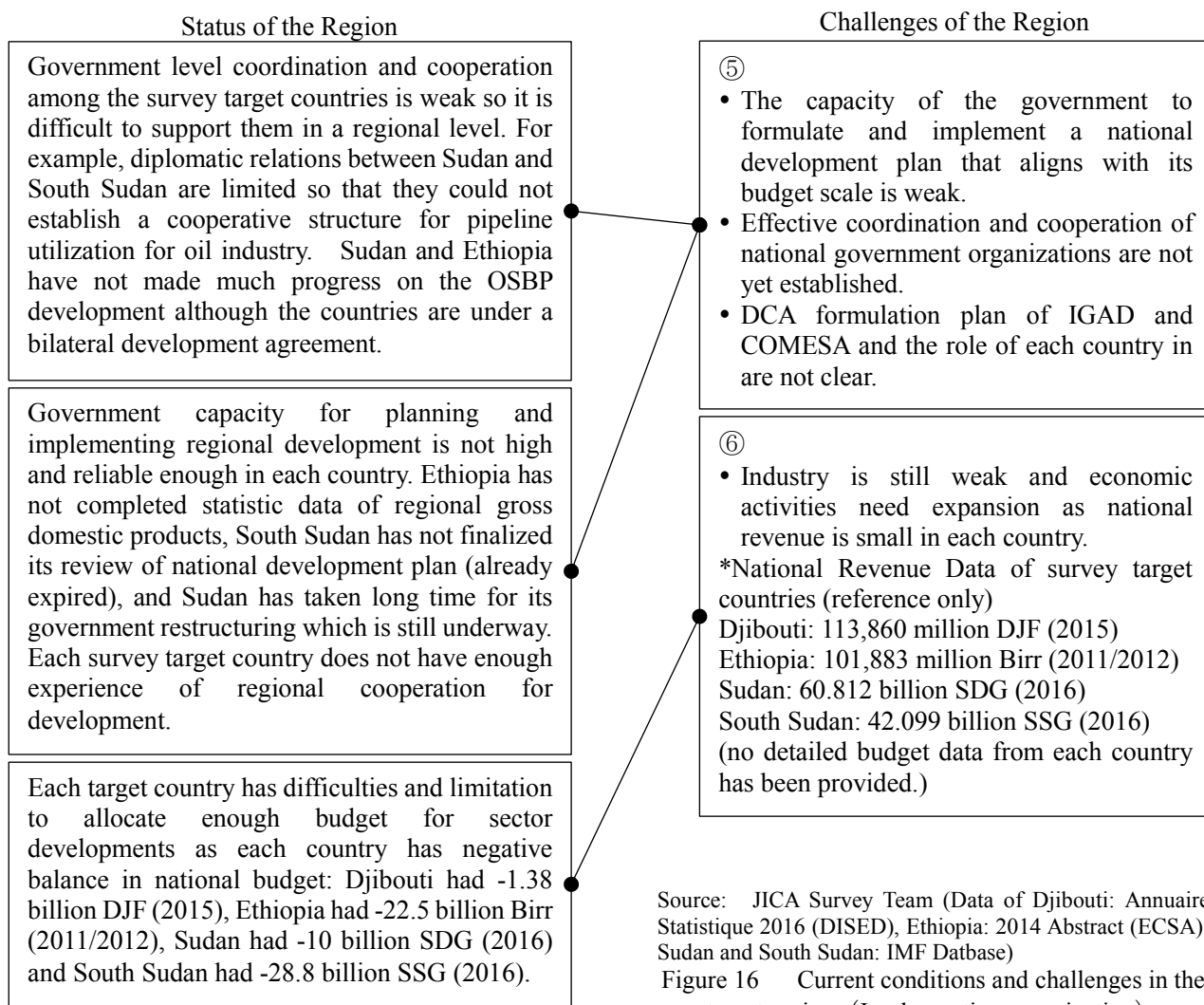
The current conditions and challenges of regional and industrial development in each target country are summarized as follows.



Source: Prepared by JICA Survey Team
Figure 15 Current conditions and challenges in the target region (Industry development)

(2) Current conditions and challenges regarding implementing organization of regional corridor development

The current conditions and challenges of implementing organization in each target country are summarized as follows.



(3) Current conditions and challenges of infrastructure development and logistics countermeasures

The current status and challenges related to infrastructure development and logistics measures in each target country are summarized as follows.

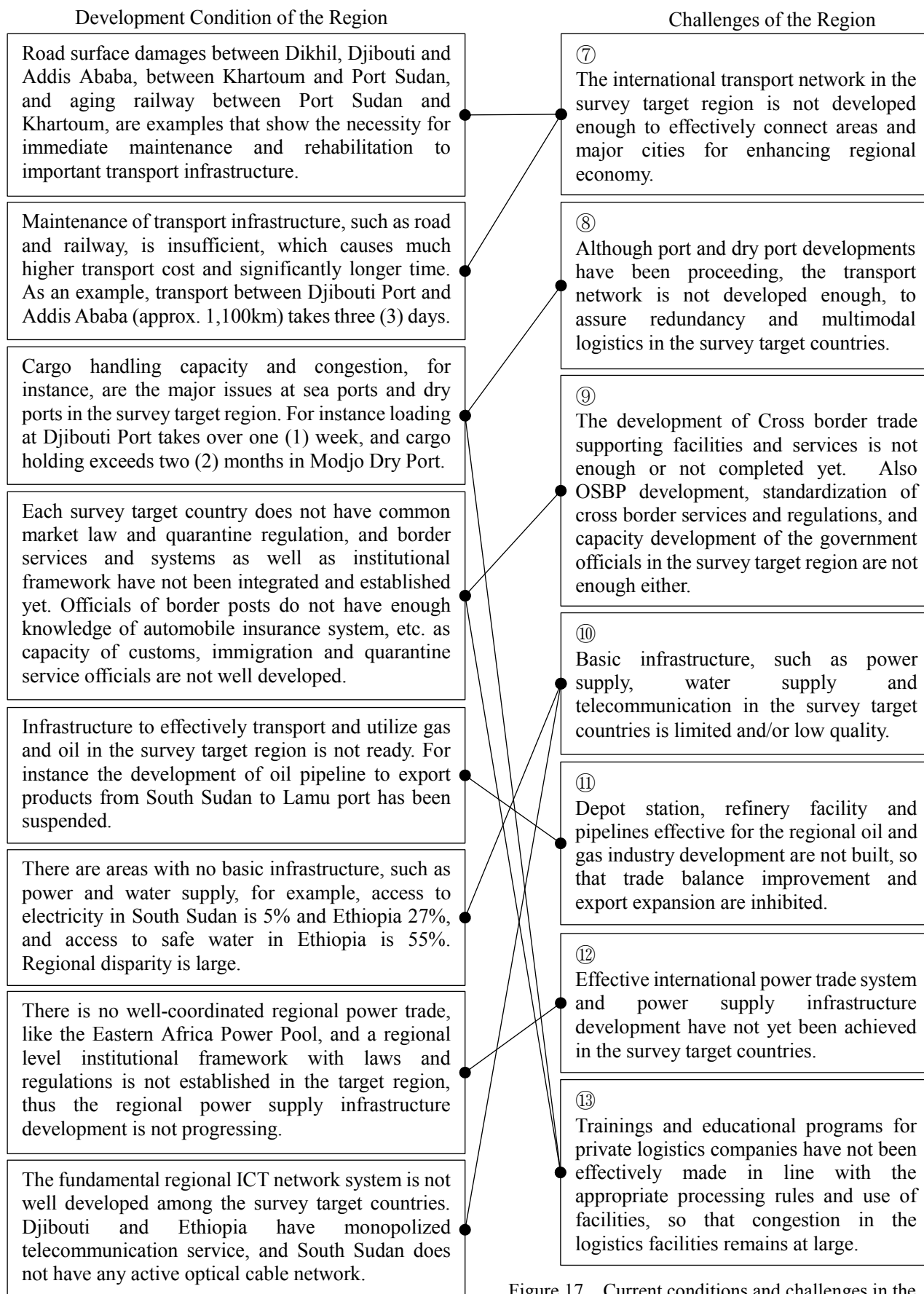


Figure 17 Current conditions and challenges in the target region (Logistics measures and infrastructure development)

Source: Prepared by JICA Survey Team

7. Recommendations for Formulating a Regional Corridor Development Strategic Master Plan

Based on the development issues related to industrial development and regional trade facilitation and the infrastructure development that supports above, the recommendations for formulating a regional corridor development strategy master plan were compiled as follows.

(1) Comprehensive development issues in the target area

The comprehensive development issues relating to regional corridor development in relation with the regional conditions and challenges discussed in earlier section 6 are summarized as shown in Table 6 below. The comprehensive development issues are identified from the “necessity for the regional corridor development” point of view.

Table 6 Relations between Comprehensive Development Issues and Regional Challenges

Comprehensive Development Issues related to the corridor development	Related “Regional Challenges” (refer to earlier section-6 of summary)
Achieve “Cooperation between agriculture - livestock industry and manufacturing industry as well as activation of intra-regional trade and distribution”	①、⑦
Achieve “Value added production in regional manufacturing industry and expanding exports to foreign markets”	①、②、③
Achieve “Transportation time and cost reduction through facilitation of effective intra-regional trade and distribution”	⑦、⑧、⑨
Achieve “Collaboration to improve livelihood of local communities”	⑩
Achieve “Collaboration for utilization of natural resources etc. in the region”	⑪、⑫
Achieve “Strengthening of management organization and establishment of legal system and cooperation among countries through the cooperation system”	④、⑤、⑥、⑫、⑬

Source: JICA Survey Team

(2) Development potential in the target area

As one of the strategies, there is a possibility to achieve the manufacturing of value-added products in the target area by utilizing products and resources, including agriculture and livestock, of which the production can be increased. Manufacturing industries in Ethiopia are expected to be strengthened in the future. In order to realize the above, it is important to develop corridors that achieve regional industrial network and promote intra-regional trade. Regional development including regional integration by facilitating transport with OSBP is expected to facilitate the realization of the manufacturing value-chain by use of the regional resources, then to expand exports to overseas markets. Looking at the development issues shown in (1) including the possibility of development through mutual cooperation of such industries, there is high necessity of regional corridor development for solving the problem through cooperation among the four target countries.

(3) Recommendations for formulating regional corridor development master plan survey (full-scale survey)

1) Basic approach

The aim of the master plan study is to propose a regional corridor development strategic master plan that realizes economic security and intra-regional trade promotion in the target region, while confirming consistency between existing development plans and projects in each target country. This is achieved by strengthening regional industries and establishing complementary relations through development collaboration in the target countries.

Based on the above (1) and (2), there are mainly following three points that are important and need to be considered in the basic approach when formulating regional corridor development strategic master plan that will contribute to intra-regional trade promotion and industrial network through industry and infrastructure development in the target region. Since the area is vast, selection and concentration is considered while maximizing development effect throughout the region.

- ① Clarify the role of Djibouti Port and understand its role and needs of the target countries, which can be the core of regional development, and also regional development and industry promotion of other target countries.

- ② Strengthening investment promotion and improving effectively the corridor infrastructure that supports industrial development
- ③ Securing redundancy of corridor infrastructure and attaining intra-regional trade promotion at the same time as resolving the barriers between the national legislation

In order to achieve intra-regional trade promotion and industrial development in the target region, it is particularly important to improve the distribution network and the border facilities connecting the countries. Only after this, the effective use of regional resources and products, production of value-added products and export will be achieved. Looking at the development situation in each country, it is difficult to build a value-chain in a single country, so that development cooperation along the corridor is essential. Therefore, it is important to identify the needs and roles of each country before proposing any development plan.

2) Master Plan Formulation Executing Organization Structure (Counterpart) among Four Countries

It is important to establish a joint executing body among four countries and an implementation structure within each country in order to maximize target four countries' cooperation and active relationship for the master plan formulation of corridor development for regional integration. In order to achieve an effective active organization setup, an Interstate Executive Board (IEB) with representatives from each country and Working Groups (WG) for each country may be established. IEB will function as a facilitator among countries for overall master plan formulation as well as a focal point with JICA.

Chapter 1

CHAPTER 1 Outline of the Survey and Current Condition of the Target Countries

1.1. Back Ground of the Survey

Japanese government announced the formulation of 10 strategic master plans¹ in five priority regions², to support Africa's economic growth and corporate activities' participation and involvement in Africa during TICAD V held in Yokohama in 2013. "Djibouti Corridor" to be studied is positioned within five priority region and is the tenth strategic master plan candidate. The Djibouti Corridor is an international corridor connecting the four countries namely, Republic of Djibouti (hereinafter referred to as "Djibouti"), Federal Democratic Republic of Ethiopia (hereinafter referred to as "Ethiopia"), the Republic of the Sudan (hereinafter referred to as "Sudan") and the Republic of South Sudan (hereinafter referred to as "South Sudan"). The logistics network connecting Addis Ababa, Khartoum and Juba starts from Djibouti port. Due to insufficient hard infrastructure and inefficient cross border service and systems, the transportation cost is quite high and this has created an obstacles to economic growth in the whole survey target region³. The Japan International Corporation Agency (hereinafter referred to as "JICA") organized the 1st workshop on the development of the Djibouti Corridor attended by the four survey target countries and the Common Market for Eastern and Southern Africa (hereinafter referred to as "COMESA"⁴) in March 2016. At the workshop positive opinions were exchanged for implementation of the Djibouti Corridor master plan formulation. COMESA in this regard has been preparing the strategic plan for the Djibouti corridor development together with Djibouti Corridor Authority. In response to this, JICA decided to conduct the data collection survey (hereinafter referred to as "the survey") in order to necessarily collect the basic information of the target region.

1.2. Corridor Development Approach by JICA

In order to address the issues, which are common in many developing countries, and make them better, JICA has introduced "Corridor Development Approach." The approach is not only to assist development of hard infrastructures, such as roads, railways and power transmission lines, but also to support industry and social sectors for enhancing economic development along the corridor.

The approach is regarded target areas as one active economic zone which is connected by a corridor network. Through planning stages to the each project implementation, the development scenario will be drawn to identify industrial potentials, to develop infrastructure, to improve institutional system for customs and others, to promote investment, to develop human resources, etc. Such seamless approach will effectively enhance activities in the region through infrastructure development as an integrated comprehensive approach. As an example, tackling the high cost of transportation to lower should improve economic activities. The Corridor Development Approach could solve various issues in the target areas and contributes to regional economic development through developing various infrastructures such as fulfilling efficient intra-regional logistics system and others as well as improvement of institutional systems.

¹ The Strategic Master Plan under the TICAD V commitment for 10 candidate areas mainly targets urban development, transportation and infrastructure development. There are five Transport and Comprehensive Corridor Development areas are identified: 1. The North Corridor in East Africa, 2. The Central Corridor in East Africa, 3. The Nacala Corridor in South East Africa, 4. West Africa Growth Ring, and 5. Infrastructure development plans in Algeria, Morocco, and Tunisia, and there are two energy and two natural gas development areas are identified: 6. Geothermal development in the Rift Valley in East Africa, 7. Regional power network in Southern Africa, 8. Natural Gas Value Chain in Northern Mozambique, and 9. Gas Utilization around the Mtwara Port Region in Tanzania. (Source: JICA's Activities in Africa TICAD V Five-Years Assistance 2013-2017)

² Five main candidate areas include ①area which comprehends western part of Trans-Maghreb Corridor including Morocco, northern part of Algeria, Tunisia, and northwestern part of Libya, ②area which comprehends West Africa Growth Ring including Cote d'Ivoire, Ghana, Togo, Benin, Burkina Faso and southern part of Mali, ③area which comprehends Central Corridor and eastern part of Northern corridor including Kenya, Uganda, and Tanzania, ④area which comprehends part of Nacala Corridor and Southern Corridor including Nacala, Malawi, Zambia, Zimbabwe, Mozambique, eastern part of Botswana, and Northern part of the Republic of South Africa, and ⑤area which comprehends survey target area including Ethiopia, Djibouti, Sudan, South Sudan, and northern part of Kenya and Uganda.(Source: JICA's support in Africa (2016.7))

³ Further data collection and study are necessary in order to identify the relationship between the transportation cost and economic growth in the survey target region and countries.

⁴ It is a regional organization involving 19 countries in the Southeast Africa including the target four countries. It was established in 1994 with the aim of forming a stable economic and trade cooperation in the region. The headquarters is in Zambia.

1. Planning Stage

Corridor development master plan draws inclusive economic growth scenario of the region.

2. Project Implementation Stage

Comprehensively support the realization of the economic growth scenario by making full use of a variety of cooperation tools.



Source: Japan Brand ODA – Corridor Development Approach (2016) JICA

Figure 1.2.1 JICA Corridor Development Approach

1.3. Purpose of the Survey and Target Countries

This is a data collection survey to identify potentials and challenges for development of the regional corridor among four target countries: Djibouti, Ethiopia, Sudan and South Sudan are the four target countries for the survey. It is important that some areas in the target region has limited information, while it is required to gather necessary data and information for the formulation of master plan for the regional corridor development. The study aims to identify availability of data and information, data management responsible organization. The survey activities and tasks include:

- ① **Basic Data Collection for the preliminary study and preparation for future implementation of Djibouti Corridor Development Master Plan formulation**
- ② **Preparation of the general component including executing organization structure, implementation schedule, basic concept with purpose, target countries and target development sectors for the future implementation of the Djibouti Corridor Development Master Plan**

In the survey, countries are grouped as survey target countries and additional study target countries. The survey target regions are defined as areas which are both survey target countries and additional study target countries for survey implementation. (refer to the Survey Map).

Table 1.3.1 Definition of Survey Target Countries and Region

Survey Target Regions	Survey Target Countries	<u>Djibouti</u> , <u>Ethiopia</u> , <u>Sudan</u> , South Sudan
	Additional Study Target Countries	Kenya (Republic of Kenya), Uganda (Republic of Uganda) (concerns of Northern Corridor development ⁵)

※ Underlined countries are physically visited for survey. South Sudan government officials were invited to Ethiopia for the survey interviews instead of the team visiting to the country under the unstable condition with conflict.

The survey aims to identify development issues, challenges and opportunities for the corridor development master plan formulation utilizing the data and information provided through the survey activities and concerned discussions and hearings among stakeholders.

1.4. Survey Team Composition

The survey in both Japan and target countries was conducted by the members organized as shown below.

Table 1.4.1 Survey Team Member List

Sector	Name	Organization	Duration of Dispatch
Team Leader/ Regional Development Planner/Industrial Development Expert	Hiroyasu KUDO	Yachiyo Engineering Co., Ltd.	3/12 ~ 4/13 and 5/21 ~ 6/7
Deputy Team Leader/ Regional Development Planner/Industrial Development Expert	Yuichiro MOTOMURA	Padeco Co., Ltd.	3/13 ~ 3/21

⁵ The survey has included Kenya and Uganda as these countries are concerned of North Corridor Development in which South Sudan is depending on these countries for trading activities.

Transport Infrastructure Expert	Seiji KADOOKA	Padeco Co., Ltd.	3/17 ~ 4/13 and 5/21 ~ 6/2
Industrial Development /Logistics Expert	Toshiaki HORII	Yachiyo Engineering Co., Ltd.	5/21 ~ 6/4
Electricity/Energy/ Communication Infrastructure Expert	Kyoji FUJII	Yachiyo Engineering Co., Ltd.	3/18 ~ 4/2 and 5/21 ~ 6/1
Soft Infrastructure (Immigration, Customs, Quarantine) Expert	Penina SIMBA	Padeco Co., Ltd.	3/17 ~ 4/13 and 5/22 ~ 6/1

1.5. Survey Schedule

The survey was implemented as shown in Table 1.5.1 and 1.5.2 below.

- First survey was conducted from March 12th to April 12th.
- Second Survey was conducted from May 21st to June 7th

Table 1.5.1 First Site Survey Schedule

First Field Survey: Ethiopia Djibouti Sudan South Sudan Rwanda 			
Date		Activities	
March, 2017	12	Sun	Transport Move (Tokyo – Dubai)
	13	Mon	Transport Move (Dubai- Addis Ababa)
	14	Tue	<ul style="list-style-type: none"> • Interviews to: Ethiopian Investment Commission, Ethiopian Mapping Agency • Interview to Japanese Company: Mitsubishi Trade Ethiopia • Courtesy Call to: JICA Ethiopia
			Transport Move (Addis Ababa - Kigali)
	15	Wed	• Interviews to: COMESA, EAC, NEPAD, IGAD (Kigali, Rwanda) during OSBP Conference
	16	Thu	Transport Move (Kigali- Addis Ababa)
	17	Fri	<ul style="list-style-type: none"> • Courtesy Call to: Japanese Embassy in Addis Ababa • Report to: JICA Ethiopia
			Transport Move (Addis Ababa - Djibouti)
	19	Sun	<ul style="list-style-type: none"> • Courtesy Call to: Japanese Embassy in Djibouti • Courtesy Call to: JICA Djibouti • Interviews to: Ministry of Equipment and Transport
	20	Mon	• Interviews to: Ministry of Economy and Finance, Ministry of Agriculture, Ministry of Equipment and Transport, Ministry of Energy and Natural Resources, Electricite de Djibouti, Regional Livestock Quarantine Center, and IGAD
	21	Tue	• Interviews to: Ministry of Foreign Affairs, Ministry of Communication, Posts and Telecommunication, Ministry of Equipment and Transport, Djibouti Railway, Maritime Transit Service Agency, Djibouti Port & Free Zones Authority, Djibouti Telecom, and IGAD
	22	Wed	<ul style="list-style-type: none"> • Interviews to: Ministry of Budget, Ministry of Housing, Urban & Town Planning and Environment, Ministry of Labor, Ministry of National Education and Vocational Training, Djibouti Road Agency (ADR), Immigration Police, and Djibouti Customs and Indirect Tax
			• Interview to: Ministry of Water, Irrigation and Electricity
	23	Thu	<ul style="list-style-type: none"> • Interviews to: Port of Djibouti • Report to: JICA Djibouti
			• Interview to: Ministry of Communication and Information Technology, Ethiopian Electric Power, and Ministry of Mines, Petroleum and Natural Gas
24	Fri	Transport Move (Djibouti - Khartoum)	
		• Interview to: Ethio Telecom	
25	Sat	Information and Data Organization and Data Analysis	

First Field Survey: Ethiopia Djibouti Sudan South Sudan Rwanda 			
Date	Activities		
March, 2017	26	Sun	<ul style="list-style-type: none"> Courtesy Call to: JICA Sudan Interviews to: National Highway Authority, and Sudan Customs
	27	Mon	<ul style="list-style-type: none"> Interviews to: Ministry of Finance and Economic Planning, Ministry of Trade, Ministry of Agriculture and Forest, Sudan Railway
	28	Tue	<ul style="list-style-type: none"> Interviews to: Ministry of Industry, Ministry of Agriculture and Forest, Ministry of Environment, Natural Resources and Urban Development, Ministry of Investment, River Transport Corporation, and Sudan Port Corporation
	29	Wed	<ul style="list-style-type: none"> Interviews to: Ministry of Water Resource, Irrigation and Electricity Courtesy Call to: Japanese Embassy in Sudan Report to: JICA Sudan
			<ul style="list-style-type: none"> Interviews to: Eastern Africa Power Pool
	30	Thu	<ul style="list-style-type: none"> Interviews to: Ministry of Energy and Dams, Ministry of Petroleum, Ministry of Information, Telecommunication and Postal Service, and South Sudan Electricity Corporation
Transport Move (Khartoum - Addis Ababa)			
31	Fri	<ul style="list-style-type: none"> Interviews to: Ethiopian Road Agency, and Ethiopian Roads Authority 	
April, 2017	1	Sat	Information and Data Organization and Data Analysis
	2	Sun	<ul style="list-style-type: none"> Interviews to: South Sudan Delegation (Workshop), Ministry of Finance and Planning, Ministry of Agriculture and Food Security, Ministry of Mining, Ministry of Roads & Bridges, Ministry of Transport, Road Authority, South Sudan Customs, and South Sudan Delegation
	3	Mon	<ul style="list-style-type: none"> Interviews to: Ministry of Trade and Industry, South Sudan Bureau of Standards, and South Sudan Delegation (Workshop Wrap-up)
	4	Tue	<ul style="list-style-type: none"> Interviews to: Ministry of Agriculture and Natural Resources, Ethiopian Maritime Affairs Agency, Ministry of Transport
	5	Wed	<ul style="list-style-type: none"> Interviews to: Ministry of Trade, Ministry of Mines, Petroleum and Natural Gas, Ethiopian Railway Corporation, Ethiopian Airlines, Textile Industry Development Institute, and Leather Industry Development Institute
	6	Thu	<ul style="list-style-type: none"> Interviews to: Ethiopian Immigration and Nationality Affairs, Ethiopian Toll Roads Enterprise, Industrial Park Development Corporation, and Kaizen Institute
	7	Fri	<ul style="list-style-type: none"> Interviews to: National Planning Commission and Ministry of Labor and Social Affairs
	8	Sat	<ul style="list-style-type: none"> Interviews to: Ethiopian Revenue and Customs Authority
	9	Sun	Information and Data Organization and Data Analysis
	10	Mon	<ul style="list-style-type: none"> Interviews to: Ministry of Forestry, Environment and Climate Change, Ministry of Public Enterprises and Human Resources, Ministry of Urban Planning and Housing, Ministry of Mines, Petroleum and Natural Gas, Ethiopian Shipping & Logistics Service Enterprise (ESLSE), and Modjo Dry Port
	11	Tue	<ul style="list-style-type: none"> Interviews to: Ministry of Mines, Petroleum Report to: JICA Ethiopia
	12	Wed	<ul style="list-style-type: none"> Interviews to: Federal Transport Authority
			Transport Move (Addis Ababa – Dubai)
13	Thu	Transport Move (Dubai- Tokyo)	

Note 1: Interviews to RECs (COMESA, IGAD, EAC, and NEPAD) were made in Kigali, Rwanda during the OSBP Conference.

Note 2: A few survey team members were moving more independently and some meetings in different countries were held in the same dates.

Note 3: South Sudan delegation was invited to Addis Ababa for meetings/interviews because of security regulation that the survey team could not access to the country of South Sudan.

Note 4: The list of official meeting members of each government agency is attached as Appendix 1 for reference.

Table 1.5.2 Second Site Survey Schedule
Second Field Survey: Ethiopia Djibouti

Date		Activities	
May, 2017	21	Sun	Transport Move (Tokyo – Addis Ababa)
	22	Mon	Transport Move (Addis Ababa - Djibouti)
			<ul style="list-style-type: none"> • Courtesy Call to : JICA Djibouti • Interview to : Ministry of Equipment and Transport
	23	Tue	<ul style="list-style-type: none"> • Djibouti Government Workshop • Interview to: Djibouti Customs and Indirect Tax
	24	Wed	• Interviews to: Chamber of Commerce, Djibouti Telecom, Ministry of Energy and Natural Resources, and Ministry of Equipment and Transport
	25	Thu	<ul style="list-style-type: none"> • Interview to: Electricite de Djibouti, Importers & Exporters Transporters Association • Interview to: Local Private Company (B&G.A) • Report to: JICA Djibouti, and Japanese Embassy in Djibouti
			Transport Move (Djibouti - Addis Ababa)
	26	Fri	• Interviews to: Ministry of Finance and Economic Cooperation, Ministry of Agriculture and Natural Resources, Ethiopia Electric Power, and Eastern Africa Power Pool
	27	Sat	Information and Data Organization and Data Analysis
	28	Sun	Information and Data Organization and Data Analysis
	29	Mon	<ul style="list-style-type: none"> • Interviews to: Ethiopian Revenue and Customs Authority, Ministry of Industry, and Ethiopian Civil Aviation Authority • Interview to: JETRO
30	Tue	<ul style="list-style-type: none"> • Interviews to: Chamber of Commerce, and National Planning Commission • Interview to Private Company: MACCFA (local transporter) 	
31	Wed	• Interviews to: Ethiopian Shipping & Logistics Services Enterprise	
June, 2017	1	Thu	• Interview to: World Food Programme, Ministry of Agriculture
	2	Fri	<ul style="list-style-type: none"> • Interviews to: Modjo Dry Port • Report to: JICA Ethiopia
	3	Sat	Information and Data Organization and Data Analysis
	4	Sun	Information and Data Organization and Data Analysis
	5	Mon	• Interviews to Private Companies: Hiroki (Japanese), and Green Logistics (local transporter)
	6	Tue	Transport Move (Addis Ababa - Bangkok)
	7	Wed	Transport Move (bangkok - Tokyo)

Note 1: Second Survey was concentrated to Djibouti and Ethiopia for interim reporting and additional data collection.

Note 2: According to the consultation to JICA, the visit to COMESA in Zambia survey in Sudan as well as South Sudan delegation call for meeting were canceled.

Note 3: The list of official meeting members of each government agency is attached as Appendix 1 for reference.

1.6. Core Survey Method and Survey Output

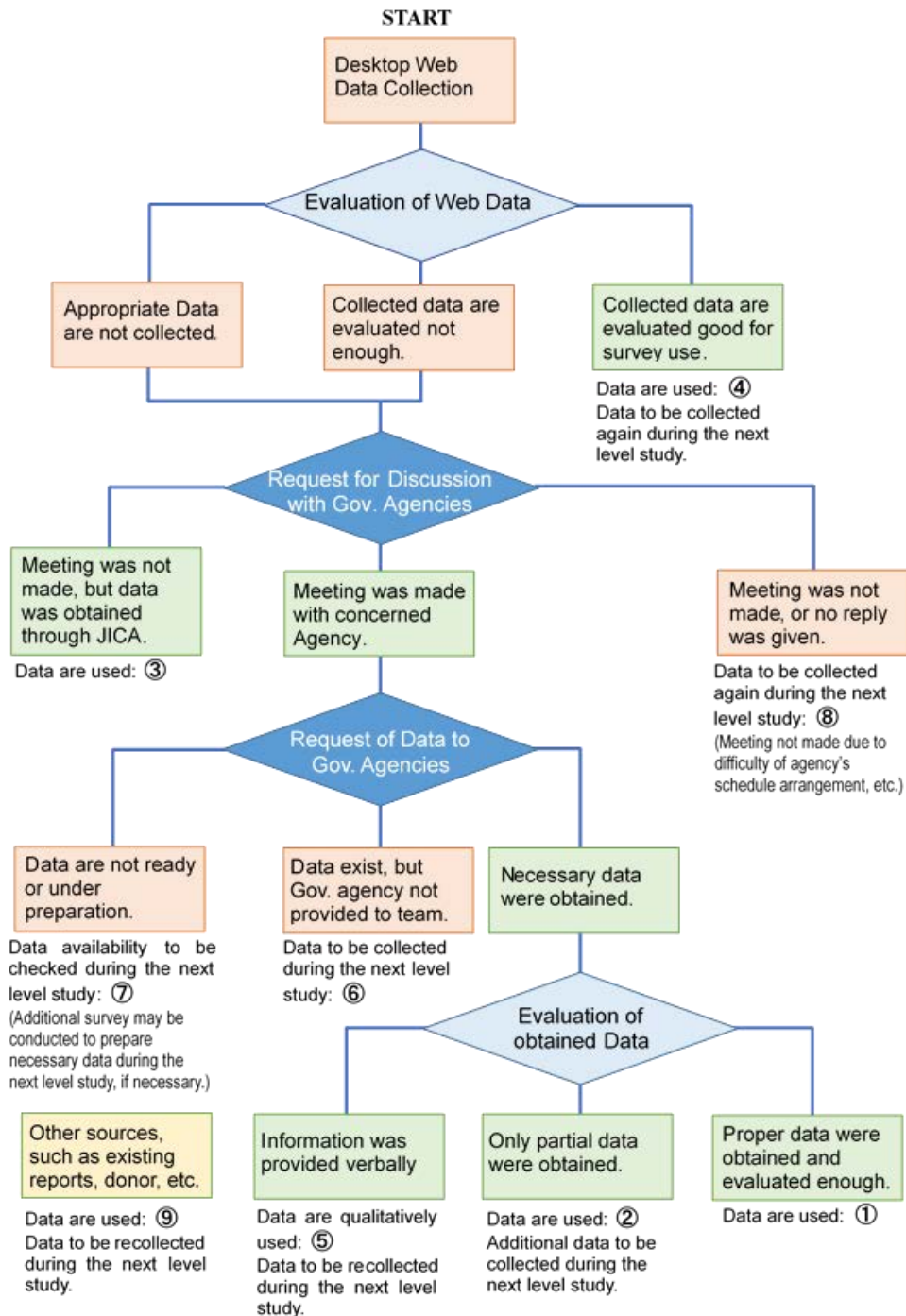
(1) The following survey method and tasks have been conducted and reported in the following Chapters.

1) Information collection on existing Policies, Plans and Institutional Systems

- The purpose of the data collection of this survey is to identify availability of the necessary data and information as well as responsible government organization of the data that should be necessary for the master plan formulation of the regional corridor development.
- For future master plan formulation in the survey target countries, it is necessary to understand the current condition of each country's development in terms of social, economic and physical development including industrial activities and infrastructure preparedness. In order to maximize the understanding of the region and to visualize the region's future, collecting as much as available data and necessary information as possible from the government agencies and concerned public and private entities should be managed during the survey.

- The data and information include but not limited to the socio-economic statistics, industrial production and trading statistics, infrastructure development and bilateral and diplomatic actions as well as all concerned development plans, policies in wide range of aspects and sectors.

The survey was conducted according to the data collection procedure and work flow as shown in the following Figure 1.6.1. The data collection status is also indicated in the Table 1.8.1 hereafter.



Source: JICA Survey Team

Figure 1.6.1 Data Collection Procedure Flow and Data Category

2) Analysis of existing Government Bodies' Roles and Tasks

Development through the future master plan should be involved with multiple sectors including industrial sectors and infrastructures. Each country or its government agency(s) as development stakeholder(s) may take specific sector(s) to develop or should share with other country(s) for several connections and networking. RECs in the target region also plan developments to, for instance, poverty reduction and

industrial development with investment as well as infrastructure, and RECs should be also major inter-governmental development stakeholders to the region or role taker. Thus, there are many concerned executing bodies in this sense, and the best suitable executing structure for the future development of master plan should be identified for effective processes among countries in the region. The following Table 1.6.1 describes stakeholder analysis point to achieve above noted study.

Table 1.6.1 Stakeholder Analysis

Regional Corridor Development Master Plan Planning Capacity	Regional Corridor Development Master Plan O&M Capacity	Coordination Capacity of Donor and RECs
<ul style="list-style-type: none"> •Work Scope (authority, power) •Level experience on Regional Corridor Development Master Plan or similar plan formulation 	<ul style="list-style-type: none"> •Work Scope (authority, power) •Budget (for infrastructure and industrial developments) 	<ul style="list-style-type: none"> •Number of experiences in coordination for donor assistance and RECs coordination

Source: JICA Survey Team

(2) Development Concept, Potential Target Area, Executing Organization and Implementation Schedule

The basic study and review of all data and information as well as hearings and discussed matters with each concerned government entities and others were conducted to identify necessary actions that become the basis of the future development master plan formulation. Based on the data study, possible executing organization structure and schedule for actual master planning were identified.

1.7. Structure of the Report

This report is organized as described hereafter.

- Chapter 1: This chapter explains the general background of the project survey, purpose and method of the study to collect baseline data, and survey schedule. The list of collected data is also included.
- Chapter 2: This chapter illustrates current status of the target countries in terms of natural and climate condition, population, economic condition, social service condition, industrial development and investment status, political and government system and structure, land use and tenure status, water resource management, education and human resource management, and trade status.
- Chapter 3: This chapter describes each country's latest policy and plans for regional, industrial development. Urban development and environmental and social consideration related latest laws and regulations are listed for effective and integrated development control and management in the future.
- Chapter 4: This chapter illustrates trade status of the target region in both international (global) trade and intra-regional trade.
- Chapter 5: This chapter illustrates infrastructure development status of sectors in transportation sector, power supply, energy, telecommunication (optical cable), and soft infrastructure considering customs, cross border facilities, one stop border services, and other related regulations, functions and services.
- Chapter 6: Based on the data collection and study made in previous chapters, development conditions and challenges for regional, industrial and infrastructure developments as well as development organization structure are summarized.
- Chapter 7: Based on the development challenges noted in the chapter-6, the development issues of the region are summarized, and this chapter shows the recommendation to the future study concerned of master plan formulation in the region including purpose of the next study and target area, nominated and tentative scope of study, schedule.

1.8. Status of Necessary Data Collection in this Survey

The following table summarizes the data collection status in this survey. The numbers in circle (①~⑨) refers to the same circled numbers in the Figure 1.6.1 above, and the organizations responsible of the collected data are shown in the lower line of each cell⁸.

Legend of circled numbers (also refer to the Figure 1.6.1):

- ①=Obtained from the Counterpart(s)
- ②=Obtained partially from the Counterpart(s)
- ③=Obtained through JICA
- ④=Obtained from Internet web page(s)
- ⑤=Verbally explained by the Counterpart(s)
- ⑥=It was informed that the Counterpart has the data/information, however it was not obtained due to the counterpart's reason.
- ⑦=Data/information are not available, not prepared, or these are under preparation, thus not obtained.
- ⑧=There was no meeting held with the Counterpart and/or data/information was not provided or not answered.
- ⑨=Other resources including existing reports, etc.

Table 1.8.1 Status of Data Collection

Necessary Data for Master Plan Formulation	Report Section	Djibouti	Ethiopia	Sudan	South Sudan
Chapter 2: Current Condition of the Target Countries					
Weather and Climate Data	2.1	④ ClimaTemps	④ ClimaTemps	④ ClimaTemps	④ ClimaTemps
Demographic Data	2.2	①、④ DISED	①、④ ENSA ⁹	⑥、④	⑦、④
GDP of target region	2.3	②、④ DISED	②、④ ENSA	②、④ MFEP ¹⁰	④
GRDP	-	⑧	⑦	⑧	⑧
RECs Regional GDP	2.3.2	④ WDI ¹¹	④ WDI	④ WDI	④ WDI
GDP Share by Industrial Sector	2.3.3	② DISED	② ENSA	② MFEP	② MFP ¹²
Employment and Unemployment Rates	2.3.4	④ ILO ¹³ , WDI	④ ILO, WDI	④ ILO, WDI	④ ILO, WDI
Income	2.3.4	⑧、④ ILO, WDI	⑧、④ ILO, WDI	⑧、④ ILO, WDI	⑧、④ ILO, WDI
Social Development Index		④ UNDP ¹⁴	④ UNDP	④ UNDP	④ UNDP

⁸ The listed data for collection target during the survey should be considered necessary for the regional corridor development master plan formulation in the future stage.

⁹ Ethiopia National Statistics Agency

¹⁰ Ministry of Finance and Economic Planning, Sudan

¹¹ World Development Indicator, World Bank

¹² Ministry of Finance and Planning, South Sudan

¹³ International Labor Organization

¹⁴ United Nations Development Programme

Necessary Data for Master Plan Formulation	Report Section	Djibouti	Ethiopia	Sudan	South Sudan
Agricultural Development efficiency	2.4.1	④ WDI	④ WDI	④ WDI	④ WDI
Foreign Direct Investment Value	2.4.6	④ WDI	④ WDI	④ WDI	④ WDI
Basic Infrastructure Preparedness Road Pavement Rate, Access Rate to Power Supply, Access Rate to Safe Water	2.5	④ WDI	④ WDI	④ WDI	④ WDI
Country's Administrative Division	2.6	④	④	④	④
Political Structure	2.6	⑤	⑤	⑤	⑤
Institutional Structure and Organization	2.6	④ Gov. Web Portal Site	④ Gov. Web Portal Site	④ Gov. Web Portal Site	④ Gov. Web Portal Site
Land Use Status	2.7	④ MHUPE ¹⁵	④ MUDH ¹⁶	④ MENRUD ¹⁷	⑤、④ MHPP ¹⁸
Land Tenure and Land Registration System	2.7	⑤ MHUPE	⑤ MUDH	⑤ MENRUD	⑤、④ MHPP
Natural Protection Law and Regulation	2.7	⑥ MHUPE	⑥ MFECC ¹⁹	⑥ MENRUD	⑥ MEF ²⁰
Hydrological Data Water and Resource Management	2.8	⑧ MALFWR ²¹	⑧	⑦ MWRIE ²²	⑧
Water Resource Use and Management Law, Regulations	2.8	⑧	⑧	⑧	⑧
School Enrollment Rate	2.9	④ WDI	④ WDI	④ WDI	④ WDI
Literacy Rate	2.9	④ WDI	④ WDI	④ WDI	④ WDI
Educational Laws and Regulations	2.9	⑥ MNEVT ²³	⑧ Ministry of Education	⑧ Ministry of Education	⑧ MGEI ²⁴

¹⁵ Ministry of Housing, Urban Planning and Environment, Djibouti

¹⁶ Ministry of Urban Development and Housing, Ethiopia

¹⁷ Ministry of Environment, Natural Resources and Urban Development, Sudan

¹⁸ Ministry of Housing and Physical Planning, South Sudan

¹⁹ Ministry of Forest, Environment and Climate Change, Ethiopia

²⁰ Ministry of Environment and Forestry, South Sudan

²¹ Ministry of Agriculture, Livestock, Fishery and Water Resources, Djibouti

²² Ministry of Water Resources, Irrigation and Electricity, Sudan

²³ Ministry of National Education and Vocational Training, Djibouti

²⁴ Ministry of General Education and Instructions, South Sudan

Necessary Data for Master Plan Formulation	Report Section	Djibouti	Ethiopia	Sudan	South Sudan
Trade Data (Import/Export) Price Value (HS 4-Code) (HS 4-digit Code)	2.10	④	④	④	⑦
Input-Output Table	7.4.5	⑧	④ EDI ²⁵	⑧	⑧
Chapter3: Policies, Plans and Current Development Direction of each Target Country					
National Development Plans and Policies	3.1	① MFE ²⁶	① MFEC ²⁷	① MFEP	① MFP
Industrial Development Plans	3.1	② MFE	② Ministry of Industry	② Ministry of Industry	② MTI ²⁸
Trade Plans	3.1	⑧	② Ministry of Trade	② Ministry of Trade	② MTI
Agricultural Development Plans	3.1	② MALFWR	② MANR ²⁹	② MAF ³⁰	⑧
Urban Development Plans	3.1	① MHUPE	① MUDH	⑥ MENRUD	⑧ MHPP
Urban Development Laws and Regulations	3.1	⑤ MHUPE	⑤ MUDH	⑤ MENRUD	⑤ MHPP
Laws and Regulations for Environmental and Social Considerations	3.1	⑤ MHUPE	⑤ MFECC	⑤ MENRUD	⑤ MHPP
Laws and Regulations of Investment	3.1	② MFE	② EIC ³¹	⑤ Ministry of Investment	⑤ MFE
Agro-Production Statistics	3.1	② MALFWR	① MANR	② MAF	⑧
Livestock and Fishery Production Statistics	3.1	② MALFWR	② ENSA	⑧	⑧
Manufacturing and Processing Sector Production Statistics	3.1	⑧	⑥ Ministry of Industry	⑧	⑧
Industrial Park Development Plans	3.1	② DPFZA ³²	② EIPDC ³³	②、⑤ Ministry of Industry Ministry of Investment	② MTI

²⁵ Ethiopia Development Institute

²⁶ Ministry of Finance and Economy, Djibouti

²⁷ Ministry of Finance and Economic Cooperation, Ethiopia

²⁸ Ministry of Trade and Industry, South Sudan

²⁹ Ministry of Agriculture and Natural Resources, Ethiopia

³⁰ Ministry of Agriculture and Forestry, Sudan

³¹ Ethiopia Investment Commission

³² Djibouti Port & Free Zone Authority

³³ Ethiopia Industrial Park Development Commission

Necessary Data for Master Plan Formulation	Report Section	Djibouti	Ethiopia	Sudan	South Sudan
Government Financial Statement, etc.	3.6	⑥、④ MFE	⑥、④ MFEC	⑥、④ MFEP	⑥、④ MEP
COMESA's activities Djibouti Corridor Authority	3.7	⑤ COMESA	⑤ COMESA	⑤ COMESA	⑤ COMESA
IGAD's activities Djibouti Corridor Authority	3.7	⑤ IGAD	⑤ IGAD	⑤ IGAD	⑤ IGAD
Donor Projects and Activities	3.8	④ Gov. Web Portal Site	④ Gov. Web Portal Site	④ Gov. Web Portal Site	④ Gov. Web Portal Site
Chanter 4: Current Trading Activities and Status of the Target Countries					
Trade Data (imports/exports: volume) HS 4-digit Code	4	④	④	④	⑦
Import/Export Route	4.1	④	④	④	④
Bilateral Trade Statistics	4.2	④	④	④	④
Trade Route	4.3	⑤ Private Companies	① Customs, ESLSE ³⁴	⑧	⑧
Logistics Cost and Time	4.3	⑤ Private Companies	① Customs, ESLSE	⑧	⑧
Logistics Process	4.3	⑤ Customs	① EMAA ³⁵	⑧	⑧
Logistics Volume per Transport Route	4.3	⑦	①	⑦	⑦
Transport Time per Destination per Mode	4.3	②	②	⑦	⑦
Transport Cost per Destination per Mode	4.3	②	②	⑦	⑦
Chapter 5: Infrastructure Sector Development Status and Future Plans					
Transport Infrastructure					
Development Plan (road)	5.1.1	⑤ ADR ³⁶	① ERA ³⁷	⑥ NHA ³⁸	⑦
Network Map (road)	5.1.1	② ADR	① ERA	⑥ NHA	① SSRA ³⁹

³⁴ Ethiopia Shipping and Logistics Service Enterprise

³⁵ Ethiopia Maritime Affairs Agency

³⁶ Agence Djiboutienne des Routes (Djibouti Road Authority)

³⁷ Ethiopian Roads Authority

³⁸ National Highway Agency

³⁹ South Sudan Road Authority

Necessary Data for Master Plan Formulation	Report Section	Djibouti	Ethiopia	Sudan	South Sudan
Number of Registered Vehicles (road)	5.1.1	⑥ DPFZA ⁴⁰	⑥ FTA ⁴¹ , AACTA ⁴² DDCTA ⁴³	⑧ MTRB ⁴⁴	⑦
Traffic Volume by Vehicle Type (road)	5.1.1	⑦	④ ERA	⑥ NHA	⑦
Design Standard (road)	5.1.1	⑤ ADR	① ERA	⑥ NHA	⑤ SSRA
Regulations (road)	5.1.1	⑥ ADR	④	⑥ NHA	② SSRA
O & M Organization (road)	5.1.1	② ADR	② ERA	② NHA	② SSRA
Financial Situation (road)	5.1.1	⑥ ADR	② ERA	② NHA	⑥ SSRA
Development Plan (maritime)	5.1.2	② DPFZA	—	② SPC ⁴⁵	—
Cargo Handling Volume (maritime)	5.1.2	②、④ MET ⁴⁶	—	②、④ SPC	—
Cargo Handling Capacity (maritime)	5.1.2	② DPFZA	—	① SPC	—
Port Layout (maritime)	5.1.2	⑤ DPFZA	—	① SPC	—
Port Facility Specifications (maritime)	5.1.2	② DPFZA	—	② SPC	—
Cargo Handling Equipment (maritime)	5.1.2	⑥ DPFZA	—	② SPC	—
Regulations (maritime)	5.1.2	⑥ DPFZA	—	⑥ SPC	—
O & M Organization (maritime)	5.1.2	② DPFZA	—	② SPC	—
Financial Situation (maritime)	5.1.2	⑥ DPFZA	—	⑥ SPC	⑥ DPFZA

⁴⁰ Djibouti Port & Free Zone Authority

⁴¹ Federal Transport Authority

⁴² Addis Ababa City Transport Authority

⁴³ Dire Dawa City Transport Authority

⁴⁴ Ministry of Transportation, Road and Bridge

⁴⁵ Sea Ports Corporation (Sudan)

⁴⁶ Ministry of Equipment and Transport

Necessary Data for Master Plan Formulation	Report Section	Djibouti	Ethiopia	Sudan	South Sudan
Development Plan (railway)	5.1.3	⑤ SDCF ⁴⁷	① ERC ⁴⁸	① SRC ⁴⁹	—
Railway Network Map (railway)	5.1.3	⑥ SDCF	① ERC	① SRC	—
Volume of Passenger and Cargo (railway)	5.1.3	⑦ SDCF	⑦ ERC	② SRC	—
Transport Capacity (railway)	5.1.3	⑦ SDCF	⑦ ERC	⑦ SRC	—
Operation Frequency (railway)	5.1.3	② SDCF	② ERC	⑥ SRC	—
Specifications (railway)	5.1.3	⑤ SDCF	① ERC	② SRC	—
Number of Rolling Stock (railway)	5.1.3	⑥ SDCF	⑤ ERC	① SRC	—
Regulations (railway)	5.1.3	⑥ SDCF	② ERC	⑥ SRC	—
O & M Organization (railway)	5.1.3	⑤ SDCF	⑤ ERC	⑤ SRC	—
Financial Situation (railway)	5.1.3	⑦ SDCF	⑦ ERC	⑥ SRC	—
Development Plan (air transport)	5.1.4	⑧ AAC ⁵⁰	⑥ ECAA ⁵¹	⑧ CAA ⁵²	⑧ CAA ⁵³
Airport Specifications (air transport)	5.1.4	⑧ AAC	⑥ ECAA	⑧ CAA	⑧ CAA
Destinations (air transport)	5.1.4	④	① ET ⁵⁴	④	④
Airliners in operation in the region (air transport)	5.1.4	④	④	④	④
Cargo Volume (air transport)	5.1.4	⑧ AAC	② ET	⑧ CAA	⑧ CAA

⁴⁷ Société Djiboutienne des Chemins de Fer (Djibouti Railway Company)

⁴⁸ Ethiopian Railways Corporation

⁴⁹ Sudan Railways Corporation

⁵⁰ L'Autorité de l'Aviation Civile

⁵¹ Ethiopian Civil Aviation Authority

⁵² Civil Aviation Authority (Sudan)

⁵³ Civil Aviation Authority (South Sudan)

⁵⁴ Ethiopian Airlines

Necessary Data for Master Plan Formulation	Report Section	Djibouti	Ethiopia	Sudan	South Sudan
Regulations (air transport)	5.1.4	⑧ AAC	④	⑧ CAA	⑧ CAA
O & M Organization (air transport)	5.1.4	⑧ AAC	② ECAA	⑧ CAA	⑧ CAA
Financial Situation (air transport)	5.1.4	⑧ AAC	⑥ ET	⑧ CAA	⑧ CAA
Development Plan (river transport)	5.1.5	—	—	⑤ RTC ⁵⁵	⑧ RTC ⁵⁶
Network and Port Location Map (river transport)	5.1.5	—	—	④	④
River Port Specifications (river transport)	5.1.5	—	—	⑥ RTC	⑧ RTC
Cargo Handling Equipment (river transport)	5.1.5	—	—	⑥ RTC	⑧ RTC
Cargo Volume (river transport)	5.1.5	—	—	② RTC	⑧ RTC
Regulations (river transport)	5.1.5	—	—	⑥ RTC	⑥ RTC
O & M Organization (river transport)	5.1.5	—	—	⑤ RTC	⑧ RTC
Financial Situation (river transport)	5.1.5	—	—	⑥ RTC	⑥ RTC
Development Plan (dry port)	5.1.6	⑧ DDPFZCO ⁵⁷	⑤ ESLSE	⑤ SRC	—
Cargo Handling Volume (dry port)	5.1.6	⑧ DDPFZCO	② ESLSE	⑥ SRC	—
Dwell Time (dry port)	5.1.6	⑧ DDPFZCO	② ESLSE	⑥ SRC	—
Location Map (dry port)	5.1.6	⑧ DDPFZCO	③ ESLSE	⑤ SRC	—
Facility Specifications (dry port)	5.1.6	⑧ DDPFZCO	⑤ ESLSE	② SRC	—

⁵⁵ River Transport Corporation (Sudan)

⁵⁶ River Transport Corporation (South Sudan)

⁵⁷ Djibouti Dry Port Free Zone Company

Necessary Data for Master Plan Formulation	Report Section	Djibouti	Ethiopia	Sudan	South Sudan
Cargo Handling Equipment (dry port)	5.1.6	⑧ DDPFZCO	⑥ ESLSE	⑥ SRC	—
Regulations (dry port)	5.1.6	⑧ DDPFZCO	④	⑥ SRC	—
O & M (dry port)	5.1.6	⑧ DDPFZCO	② ESLSE	② SRC	—
Financial Situation (dry port)	5.1.6	⑧ DDPFZCO	⑥ ESLSE	⑥ SRC	—
Soft Infrastructure					
Customs Management Laws	5.2	①	①	④	④
Customs Strategic Plan	5.2	⑥	⑥	⑧	⑦
Legal and regulatory framework for implementation of standards	5.2	⑨	⑨	⑨	⑨
IGAD OSBP action plan	5.2	⑨	⑨	⑨	⑨
Legal and regulatory framework for facilitation of transport	5.2	⑨	⑨	⑨	⑨
Time Release Studies	5.2	⑧	⑧	⑧	⑧
Implementation status international and regional trade regimes	5.2.1	②、⑨ Djibouti Customs	②、⑨ Ethiopian Revenue & Customs Authority (ERCA)	⑨	⑤、⑨ South Sudan Customs Service / SSCS
Level of standardization and harmonization of documents, processes and procedures	5.2.1 5.2.2	⑤ Djibouti Customs National Police & Immigration (NPI)	⑤ ERCA, Ethiopia Immigration and Nationality Affairs (EINA)	①、④ Customs Authority	⑤ SSCS
Performance levels of transit services	5.2.1	① Djibouti Customs	① ERCA	⑧	⑤ SSCS
Capacity building initiatives	5.2.1 5.2.2	① Djibouti Customs, NPI	① ERCA EINA	⑧	⑤ South Sudan Delegation

Necessary Data for Master Plan Formulation	Report Section	Djibouti	Ethiopia	Sudan	South Sudan
Level and mechanism of collaboration between corridor states	5.2.1 5.2.2	① Djibouti Customs, NPI	① ERCA EINA	⑧	⑤ South Sudan Delegation
Mechanism for dissemination of information to the public and relevant agencies	5.2.1	① Djibouti Customs	① ERCA	⑧	⑤ SSCS, South Sudan Bureau of Standards / SSNBS
Performance levels of port services (cargo handling, cargo dwell time, customer service etc.)	5.2.1	⑤、④ Djibouti Customs Djibouti Port Authority Maritime Transit Services Agency	⑤ Ethiopian Maritime Affairs Authority	⑧	—
Level and mechanism of collaboration between public and private sector	5.2.1	⑤ Djibouti Customs, Chamber of Commerce	⑤ ERCA EINA	⑧	⑤ SSCS, SSNBS
Functions and roles of Immigration services	5.2.2	⑤ NPI	⑤ EINA	⑧	⑧
Implementation status of regional and international standards regarding quarantine	5.2.3	① Djibouti Regional Livestock Quarantine Centre	⑥ The Ethiopian Standards Agency	⑧	⑤ SSNBS
Level of harmonization of quarantine standards in the corridor	5.2.3	⑤、① Djibouti Regional Livestock Quarantine Centre	⑥ The Ethiopian Standards Agency	⑧	⑤ SSNBS
Implementation status of regional road, trade and transport facilities	5.2.4	⑤、⑨ Ministry of Transport	⑤、⑨ Ethiopian Roads Authority	⑨	⑨
Implementation status of establishment of OSBPs	5.2.4	⑨	⑤、⑨ ERCA	⑨	⑤、⑨ SSCS

Necessary Data for Master Plan Formulation	Report Section	Djibouti	Ethiopia	Sudan	South Sudan
Energy Infrastructure					
Oil/Gas reserve	5.3.1	—	① MMPNG ⁵⁸	④	④
Law on Oil/Gas industries	5.3.1	⑧	⑧	⑧	⑧
Technical standards on oil/gas	5.3.1	⑧	⑧	⑧	⑧
Outline of crude oil/ oil Product pipeline	5.3.1	⑤ MENR ⁵⁹	⑤ MMPNG	④	④
List of oil refining facilities	5.3.1	—	—	④	④
Power Supply Infrastructure					
Electricity law	5.3.2	⑧	⑧	⑧	⑧
Technical standards on electrical equipment	5.3.2	⑧	⑧	⑧	⑧
Grid code	5.3.2	⑧	⑧	⑧	⑧
Peak demand (MW) and energy demand (GWh)	5.3.2	① EdD ⁶⁰	① EEP ⁶¹	④	② SSEC ⁶²
List of power plants	5.3.2	① EdD	① EEP	④	② SSEC
List of transmission lines and substations including interconnection lines	5.3.2	① EdD	① EEP	④	② SSEC
Power system master plan	5.3.2	③	③	⑧	⑦
Transmission network diagram	5.3.2	① EdD	① EEP	④	⑦
Telecommunication Infrastructure (optical cable)					
Telecommunication law	5.3.3	⑧	⑧	⑧	⑧
Technical standards on telecommunication	5.3.3	⑧	⑧	⑧	⑧
Optical fiber network diagram	5.3.3	⑥	⑥	⑧	⑦
List of optical fiber cables	5.3.3	①	⑥	⑧	⑦
Connection status with Submarine cables	5.3.3	④	—	④	—

Source: JICA Survey Team

⁵⁸ Ministry of Mines, Petroleum and Natural Gas, Ethiopia

⁵⁹ Ministry of Energy and Natural Resources

⁶⁰ Electricite de Djibouti

⁶¹ Ethiopian Electric Power

⁶² South Sudan Electricity Corporation

Chapter 2

CHAPTER 2 Current Condition of the Survey Target Countries

This chapter discusses and illustrates general condition of the target countries for the regional corridor development in terms of natural climate, socio-economic status, industrial activities, government and financial condition of the countries. Visualization of such status of each country especially should help identifying potential needs and necessary developments that should be considered within the future corridor development master plan formulation. It is also important to identify possible development that could be achieved by multilateral development cooperation for regional integration which has not been realized yet. The general information summarized in this chapter could become basic source in order to identify development potentials of each country.

2.1. Natural Condition of the Survey Target Countries

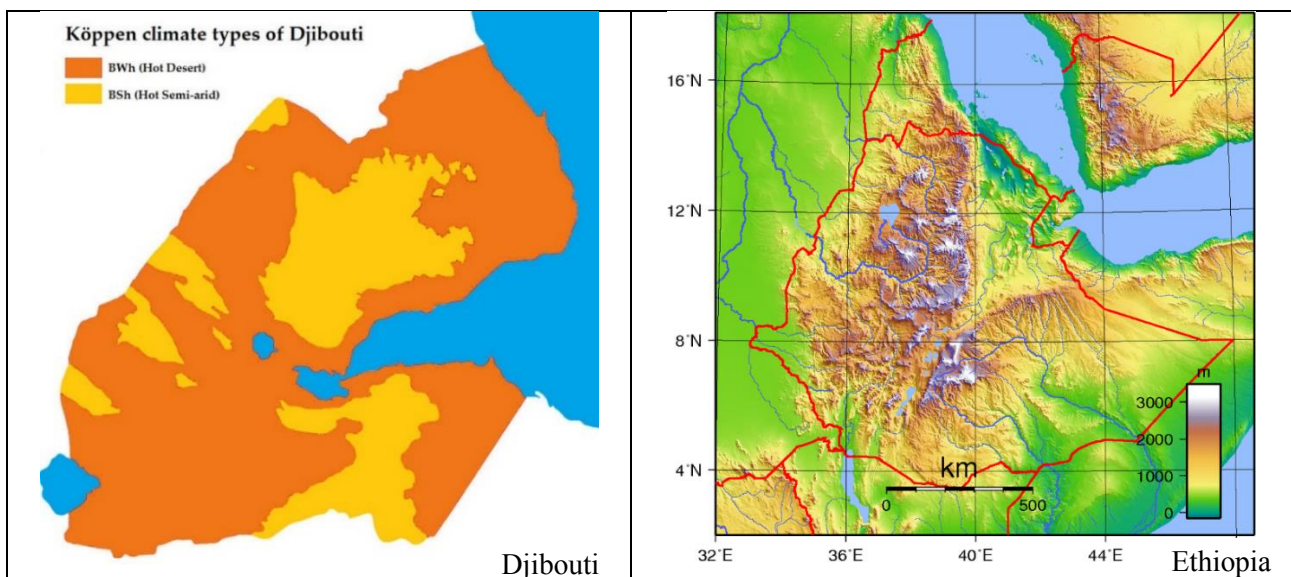
The survey target countries are located in the area so-called the “Horn of Africa.” In terms of geographical nature of the target four countries, the region indicates clear difference in two conditions: Djibouti and Sudan face the Red Sea and Gulf of Aden with long coastal line, and Ethiopia and South Sudan are the landlocked countries.

Meteorological profile of the target region is dry or semi-dry with less than 600mm rainfall per year in about 70% of the area in all four countries, and about 46% of the land area is designated as non-productive land¹ under the land use category. The region could easily be affected by serious drought, and is considered as one of the most fragile area against climate change. On the other hand, the region has wide variety of altitude from 150m to 4,600m with also wide varieties of agricultural productions with natural ecosystem, such as Ethiopia with higher rainfall for larger potential of agro-production expansion, although cultivated farm land occupies less than 10% of overall land of the four countries.

Besides, there are unutilized natural resources within the target region that should be considered as high potential target of industrial development. The Nile² running through Sudan from South Sudan and Ethiopia to Egypt, and the river brings high potential hydro-generated power supply for industrial development as well. These natural resources should have higher potentials for development.

Djibouti has severe climate with high average of heat with very limited rain fall throughout the year, and this causes its agricultural production being so limited (Figure 2.1.1 left).

Ethiopia on the other hand is located in the high altitude region ranging around 2,000m and above in the west region, and this provides appropriate climate for agriculture as well as livestock breeding. Besides, eastern areas are dry region (Figure 2.1.1 right).



Source: JICA Survey Team with Köppen Climate 2017 data

Source: JICA Survey Team with Globe Data (Sadalmelik) 2017 data

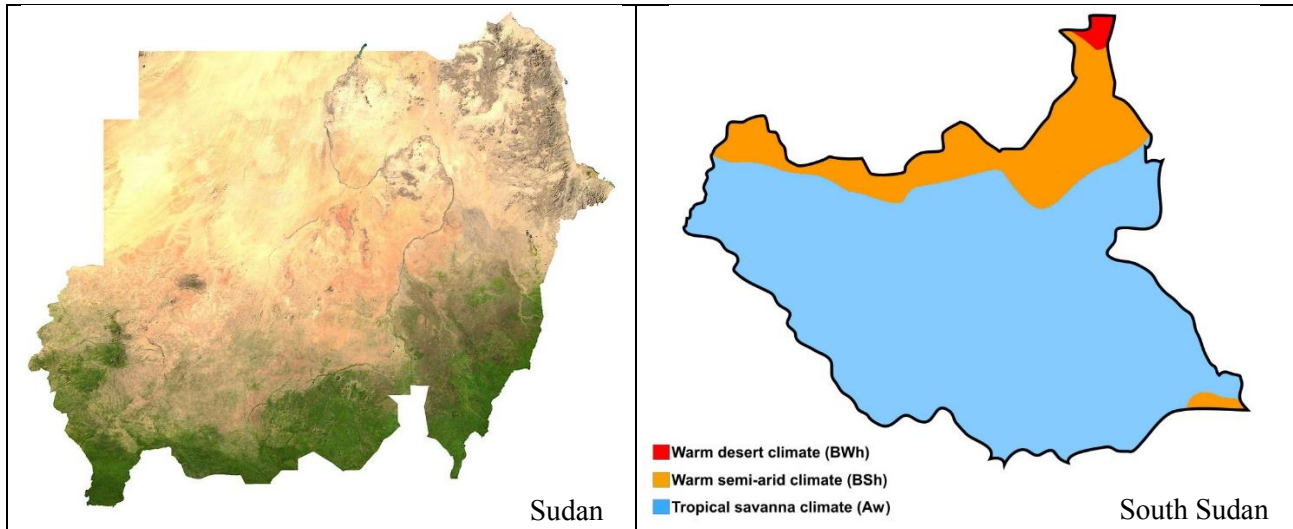
Figure 2.1.1 Climate Zone Map of Djibouti and Altitude Map of Ethiopia

¹ The land which is not suitable for any agro-production. Studied based on the information from government hearings, World Development Indicator, World Factbook, etc.

² There are the White Nile and the Blue Nile running through the region.

Sudan territory is at the eastern edge of desert together with the Niles' grace. Because northern part of the land is mostly in the desert, most agro-productions are made in the southern side toward the border with great irrigation network (Figure 2.1.2 left).

South Sudan stays in the savanna climate, and overall climate is slightly milder than that of Sudan. However the Nile running in the middle of the country occasionally floods and gives major issues for agro-production and transport system (Figure 2.1.2 right).

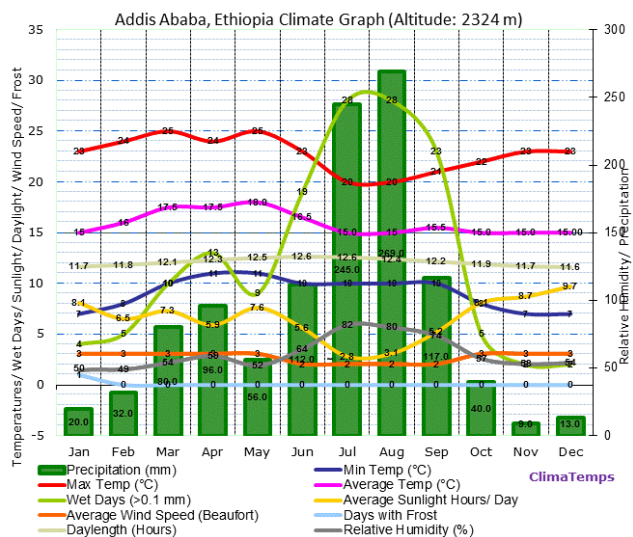
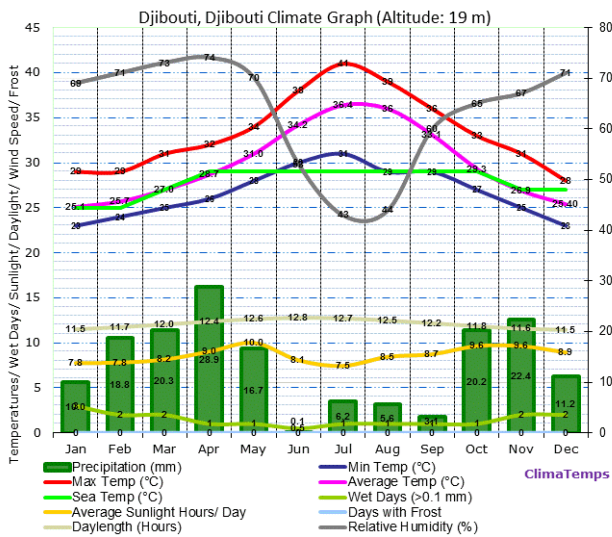


Source: JICA Survey Team with Google Map 2017

Source: JICA Survey Team with Koppen Climate 2017

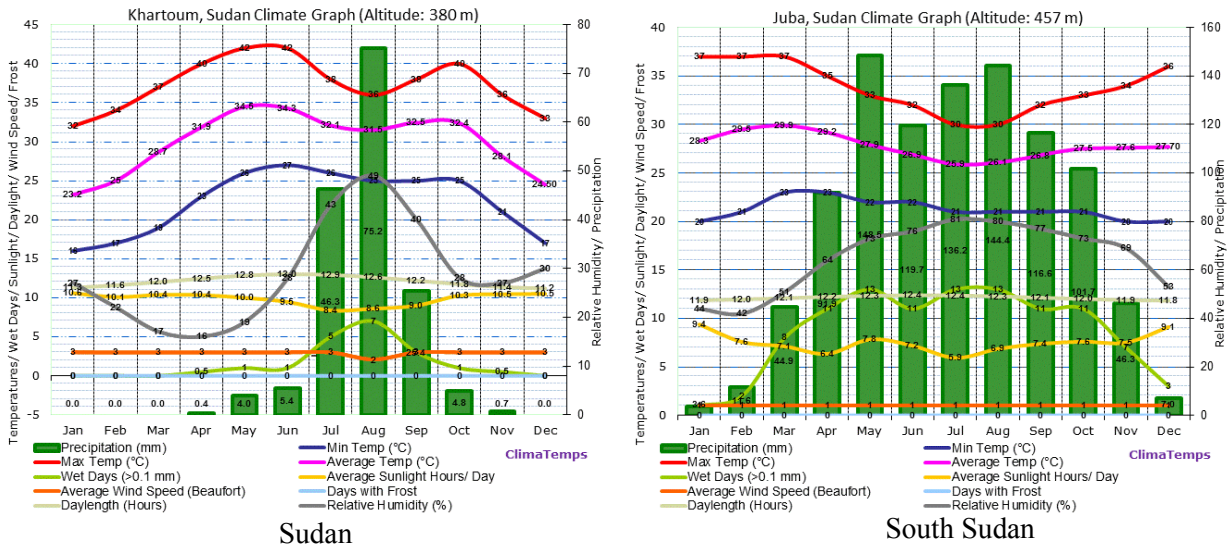
Figure 2.1.2 Satellite Map of Sudan and Climate Zone Map of South Sudan

Figure 2.1.3 and Figure 2.1.4 illustrate climate condition of each survey target country. Djibouti indicates dry climate throughout the year, especially from June to September. Ethiopia shows lower temperature comparing with other countries with higher rainfall in July and August. Sudan indicates rainfall concentration in summer season. South Sudan indicates higher rainfall from April to November. Each country has different climate condition as shown below.



Source: ClimaTemps (2017, <http://www.climatemps.com/>)

Figure 2.1.3 Climate Comparison in the Survey Target Countries (Djibouti and Ethiopia)

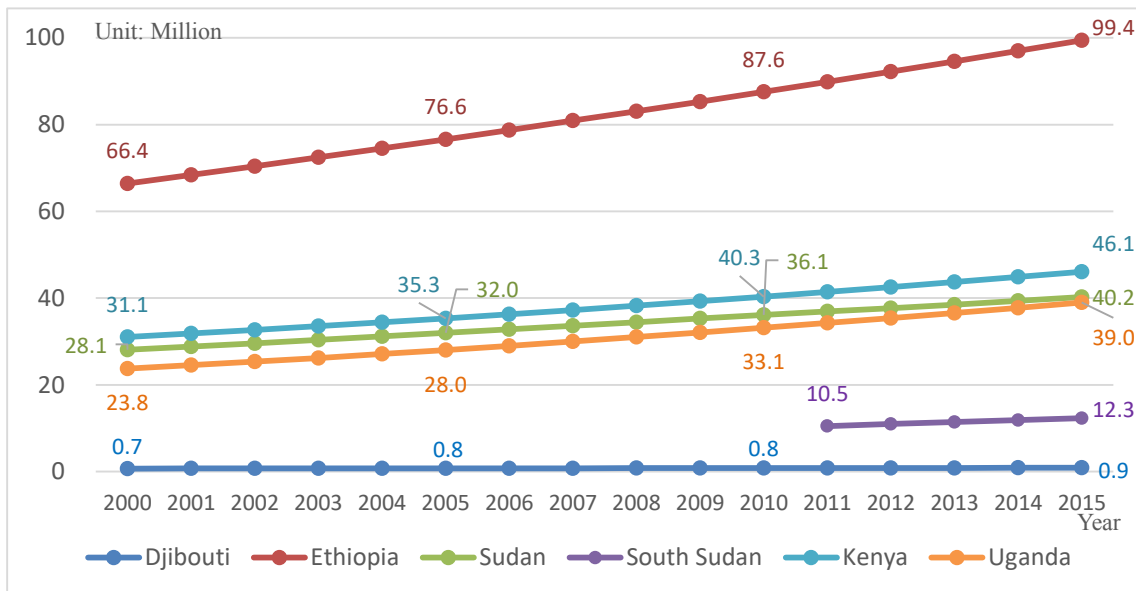


Source: ClimaTemps (2017, <http://www.climatemps.com/>)

Figure 2.1.4 Climate Comparison in the Survey Target Countries (Sudan and South Sudan)

2.2. Population of the Survey Target Region

The following Figure 2.2.1 illustrates population increase trend of the survey target region. Social population condition of each survey target country has been studied based on the data obtained from international organization and reliable web data, World Bank and World Development Indicator, to study instead of using each country's statistical data in order to even the data quality. Population in Ethiopia is exceeding 99.4 million at the largest among others, and Sudan, Kenya and Uganda follow with population of 39.0 to 46.1 million. Djibouti then is still at the smallest at about 900 thousand. The target countries indicate trend of continuous increase, and Ethiopia among others could be expected with larger increase. The five year population growth ratio from 2010 to 2015 of Djibouti is at 1.33%, Ethiopia at 2.56%, Sudan at 2.18% and South Sudan at 4.17%.

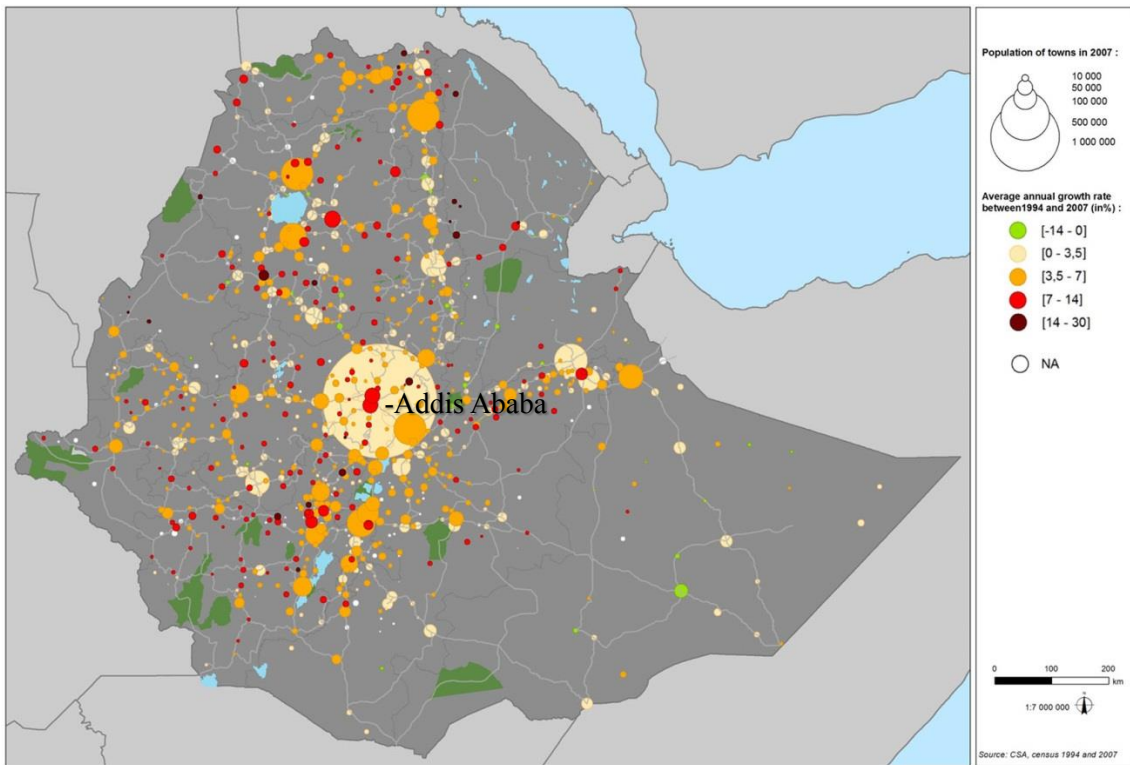


Source: World Development Indicator (Unit: million)

Figure 2.2.1 Comparison of Population in the Survey Target Region

The population distribution and growth are well studied to identify the growing regions in Ethiopia in National Urban Development Spatial Plan 2016. According to the government officials concerned, the urban developments and industrial developments are in many areas overlapped to enhance each development, therefore the potential focal areas for the development need to be well integrated into those development areas making Ethiopia to be a regional corridor hub, so that understanding physical network

linkage of Ethiopia should be valuable to the corridor development in the future. The following Figure 2.2.2 illustrates population distribution in Ethiopia. As shown in the Figure below, the population is concentrated in areas connected by the radial network of national roads.



Source: National Urban Development Spatial Plan 2016

Figure 2.2.2 Population Distribution and Growth Map

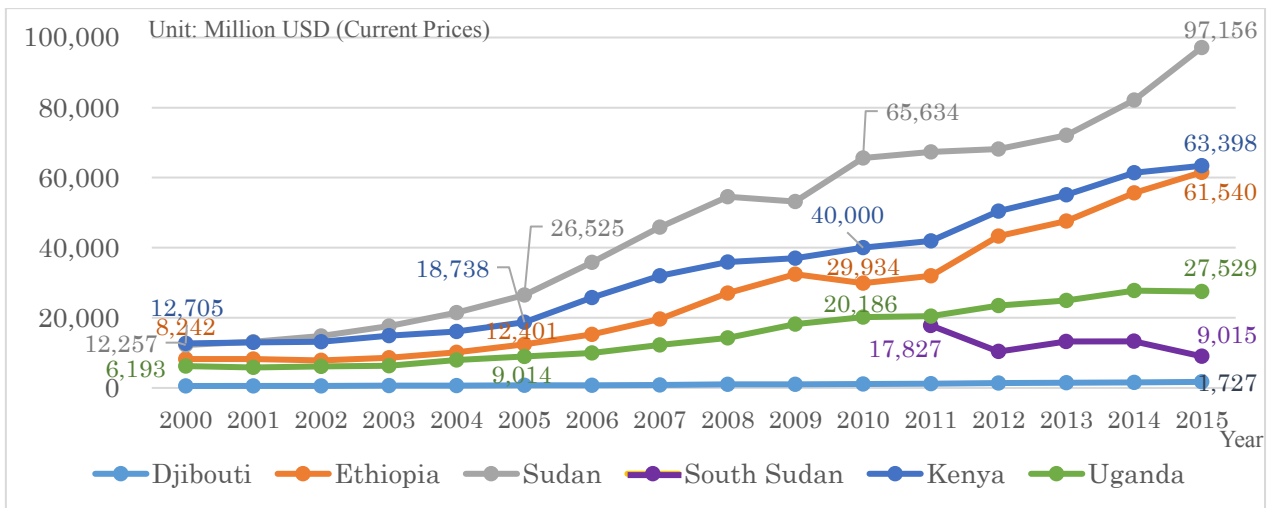
2.3. Economic Condition of the Survey Target Region³

2.3.1. GDP Growth of the Survey Target Region

The GDP is growing in the survey target region as shown in the Figure 2.3.1. Ethiopia has achieved steep growth of about 14% annual rate in last fifteen years average, while Djibouti indicated slow increase at about 8% and South Sudan showed negative growth⁴. Ethiopia especially economically developed itself rapidly since 2011 without much natural mineral resource utilization. The government expects Ethiopia's GDP growth further in the next decade.

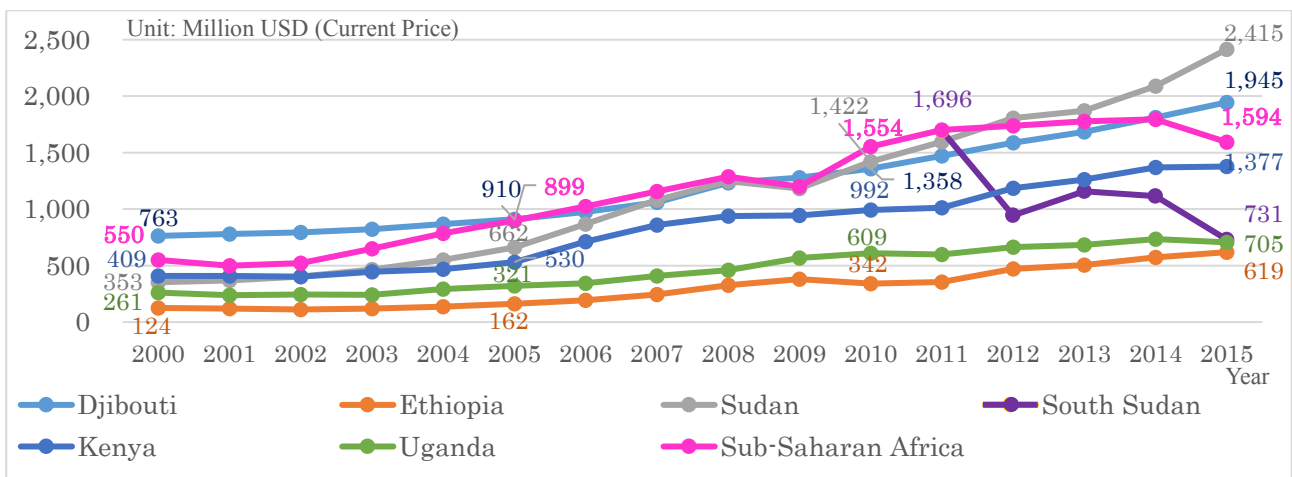
³ To picture more detailed socio-economic growth trends, further data and information analysis is necessary.

⁴ Due to the impact of independence of the country, the country has faced unstable political and economic situation, therefore such country condition could be causing its negative GDP growth.



Source: World Development Indicator (Unit: Current Price Million USD)
Note: Data for South Sudan is only available from 2011 after the independence.

Figure 2.3.1 GDP Growth in each Country of the Survey Target Region



Source: World Development Indicator (Unit: Current Price USD)
Note: Data for South Sudan is only available from 2011 after the independence. Sub-Saharan Africa Region is included for comparison.

Figure 2.3.2 GDP Per Capita Growth in each Country of the Survey Target Region

Djibouti indicates the smallest on population and GDP, as shown in the Figure 2.3.2, however Djibouti achieved the second highest GDP per capita among others in the survey target region after 2014, while Ethiopia indicates the lowest in GDP per capita although its industry is growing faster.

The situation in Ethiopia could be considered that the country has strong price competitiveness with desired labors as labor cost is still low in the country. Negative growth of South Sudan should be led by its unstable political condition and affected industrial development slow down as well as famine, and the country requires immediate action to address these issues for improvement.

2.3.2. Economic Performance Comparison of the Survey Target Region and other RECs Regions

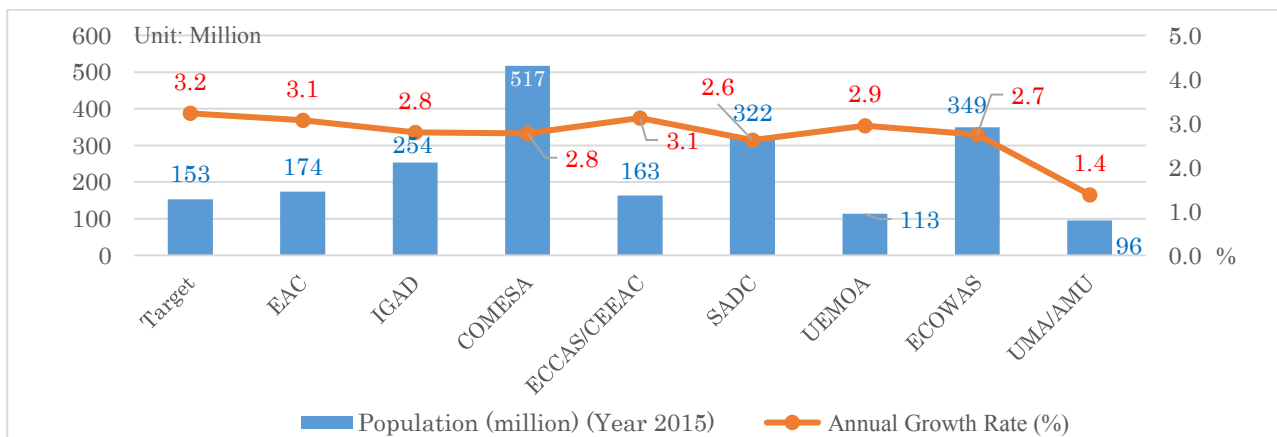
The GDP per capita comparison was made between the survey target region with four countries and other RECs regions. Comparison target RECs are selected based on JICA's corridor development project shown in the following Table 2.3.1.

Table 2.3.1 Selected RECs for Socio-Economic Performance Comparison

Concerned RECs	Corridor Development	Corridor Development Project under TICAD nominated S-M/P	Target Countries
EAC, IGAD, COMESA	Northern Corridor	East Africa Northern Corridor Development	Kenya, Uganda, Rwanda, Burundi
EAC, COMESA	Central Corridor	Tanzania Logistic System Enhancement Project	Tanzania, Rwanda
SADC, COMESA	Nacala Corridor	Nacala Corridor Development Project	Mozambique, Malawi, Zambia
UEMOA, ECOWAS	West Africa Growth Ring	West Africa “Growth Ring” Regional Development Project	Burkina Faso, Cote d’Ivoire, Ghana, Togo
UMA/AMU	Maghreb Corridor	Maghreb Region Infrastructure Development Project	Morocco, Tunisia, Algeria
IGAD, EAC, COMESA	Djibouti Corridor	Djibouti Corridor	Djibouti, Ethiopia, Sudan, South Sudan

Source: JICA Survey Team

The Figure 2.3.3 indicates population in 2015 and growth rate between year 2000 and 2015. COMESA indicates the largest total population at 517 million, and ECOWAS follows with 349 million. The population growth indicates that the selected RECs have grown by 1.4 to 3.2 times annually. Comparing with year 2000 population, the “Target” (four survey target countries) region indicates the largest growth with 3.2 times annually of increase among others, and ECCAS/CEEAC and EAC follows with 3.1 times of increase annually.



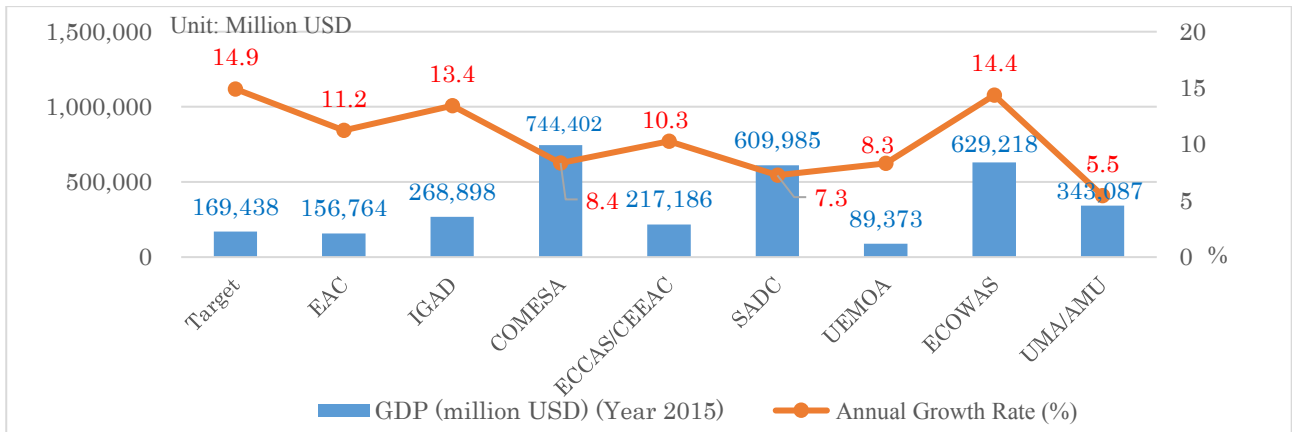
Source: JICA Survey Team prepared based on World Development Indicator data

Note: Data for Eritrea and Libya are taken from 2011. “Target” means the target four countries.

Figure 2.3.3 Population growth of the Survey Target Countries (Target) and concerned RECs

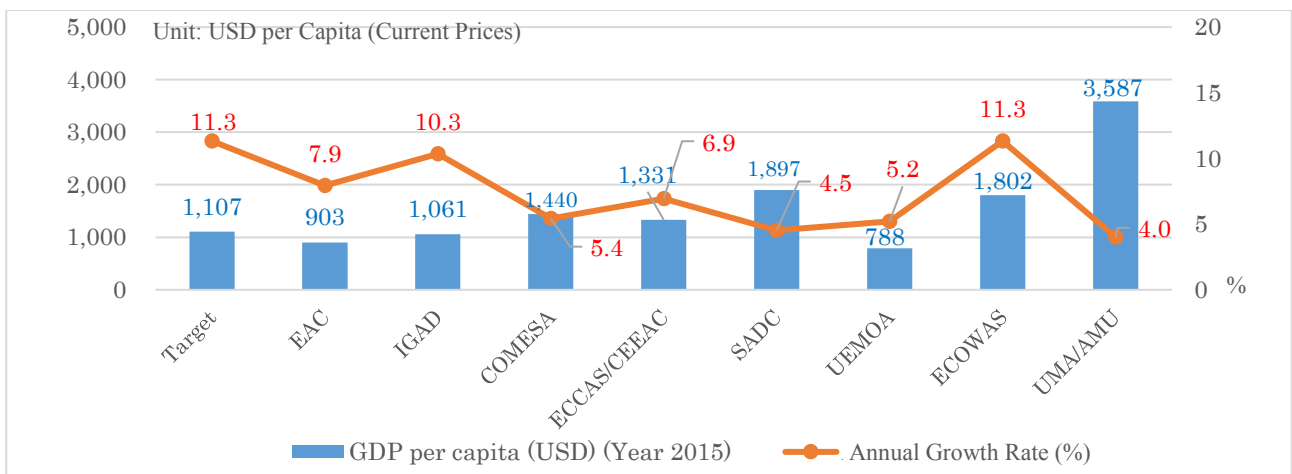
The Figure 2.3.4 and Figure 2.3.5 above indicate the year 2015 GDP and GDP growth rate between year 2000- and 2015 of RECs and the “Target.” GDP performance comparison illustrates that COMESA is the largest with 744 billion USD followed by ECOWAS with 629 billion USD. Based on the comparison to year 2000 GDP total, the “Target” region indicates the largest increase at 14.9% annually, and ECOWAS follows with 14.4% of increase annually. For GDP per capita comparison, UMA/AMU shows the largest with USD 3,587 followed by SADC with USD 1,802. GDP per capita growth rate of “Target” region is the largest at 11.3% annually followed by ECOWAS with slightly lower figure, and IGAD comes next with 10.3% annually of growth rate.

The survey target countries indicate low GDP per capita among other RECs communities. However this also means that there is a potential and opportunity to further develop their economy faster. The survey target countries illustrate high GDP growth since 2000, and have the continuous sustainable industrial development and economic growth potential.



Source: JICA Survey Team prepared based on World Development Indicator data
Note: Data for Eritrea and Libya are taken from 2011. "Target" means the target four countries.

Figure 2.3.4 GDP Comparison of the Survey Target Countries (Target) and other RECs

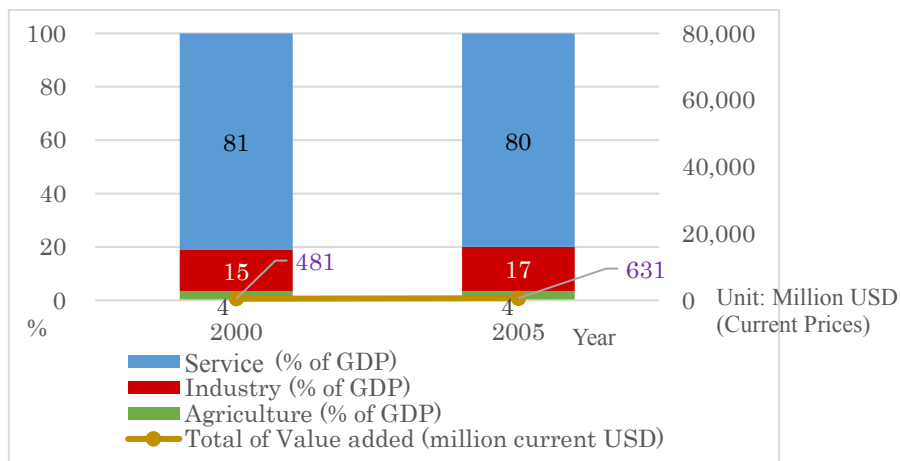


Source: JICA Survey Team prepared based on World Development Indicator data
Note: Data for Eritrea and Libya are taken from 2011. "Target" means the target four countries.

Figure 2.3.5 GDP per Capita Comparison of the Survey Target Countries (Target) and other RECs

2.3.3. GDP Share of Industrial Sector of each Country

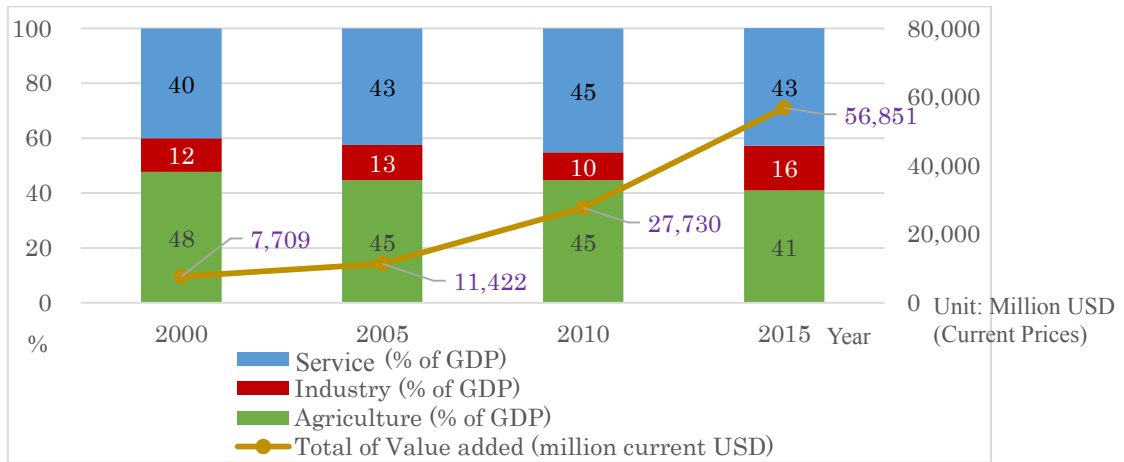
Among others Djibouti shows exceptionally higher GDP share by the service sector because of its export/import oriented cargo handling and logistics services (Figure 2.3.6). Industry sector mainly formed by construction related productions accounting 16.6%, and primary sector indicates very small.



Source: World Development Indicator

Figure 2.3.6 Comparative Chart of Industrial Sector GDP Share of Djibouti

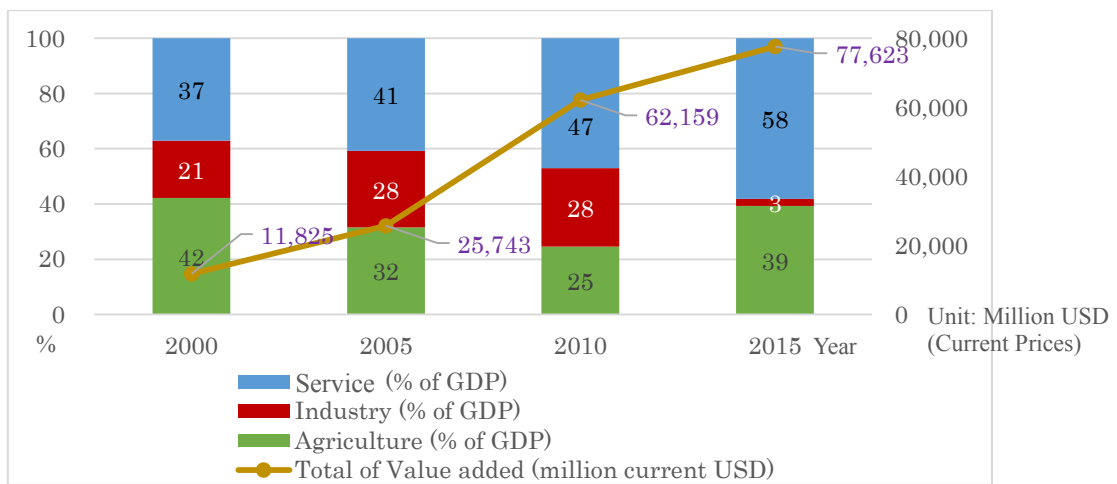
Ethiopia indicates 41% of GDP share by agriculture including livestock sector, and the primary sector could be considered as a leading industry of the country. Production industry sector indicates 16%, and this could be further increased yet it may take longer time for major expansion.



Source: World Development Indicator

Figure 2.3.7 Comparative Chart of Industrial Sector GDP Share of Ethiopia

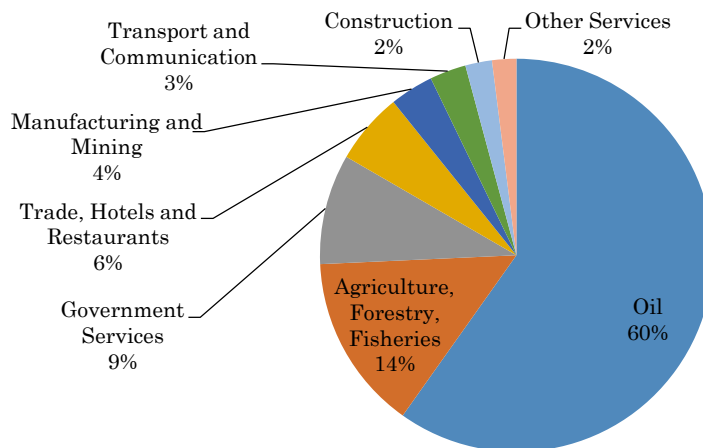
Sudan indicates growth in service sector, however its industrial sector drastically reduced its GDP share in 2015 figure. This could be caused by South Sudan's independence and share reduction of oil mine (Figure 2.3.8). Further study of industrial statistics needs to be made in the future for more precise analysis.



Source: World Development Indicator

Figure 2.3.8 Comparative Chart of Industrial Sector GDP Share of Sudan

Although South Sudan's data is not available, the Figure 2.3.9 below provided by the Ministry of Trade and Industry of South Sudan indicates general idea of the industrial share in GDP of the country. Oil and petrol sector shows the largest share accounting 60%. The primary sector including forestry follows by 14%.



Source: Ministry of Trade and Industry (African Development Bank Data source)
Figure 2.3.9 Industrial Sector Share of South Sudan

As above comparative figures illustrate, there is a common tendency of industrial concentration with higher GDP generating sector(s) for Djibouti, Sudan and South Sudan, such as port and logistics service for Djibouti and oil export for South Sudan. Industrial diversification should be a key to improve their economy. As each country has industrial policy with diversification, widening active sector in industry is more desired.

2.3.4. Social Service and Employment Environment Conditions

(1) Social Services

In education sector, the data (World Development Indicator) of World Bank indicates that primary school enrollment rate was about 64% (2016) and secondary school enrollment rate was about 48% (2016) of Djibouti. The same of Ethiopia was about 54% (2015) and about 35% (2015). The same of Sudan was about 57% (2013) and about 42% (2013). South Sudan shows with the same of about 61% (2015) and about 9% (2015). Besides, Kenya shows high enrollment rate for primary school and about 60% (2009) for secondary school enrollment rate, while Uganda indicates about 53% for primary school enrollment rate and about 23% for secondary school enrollment (2015).

Healthcare service could be studied based on the number of beds per population of the same data from World Bank. Ethiopia shows the highest at 6.3 beds per 1,000 population (2011), Djibouti (2012) and Kenya (2010) with 1.4 beds, Sudan with 0.8 (2012) and Uganda with 0.5 (2010). Most countries are facing shortage of beds in healthcare services. The data of South Sudan is not available.

(2) Social Development Trend

In order to understand social development condition of the target countries, social development trend with several indicators have been studied by using UNDP data, and the summary is shown in the following Table 2.3.2.

Table 2.3.2 Target Countries' Social Development Trend Comparison (2015 data)

Compared Index	Djibouti	Ethiopia	Sudan	South Sudan
Life Expectancy (year)	62.3	64.6	63.7	56.1
Expected Year of Schooling (year)	6.3	8.4	7.2	4.9
Mean Years of Schooling (year)	4.1	2.6	3.5	4.8
Gross National Income per Capita (GNI: 2011 PPP \$)	3,216	1,523	3,846	1,882
Human Development Index (HDI) 2015	0.473	0.448	0.490	0.418
HDI Rank	171	174	165	179
Labor Force Participation Rate (% Ages over 15 and older) Male	68.1	89.1	72.2	75.3
Labor Force Participation Rate (% Ages over 15 and older) Female	36.5	77.0	24.3	71.2

Compared Index	Djibouti	Ethiopia	Sudan	South Sudan
Population near Multidimensional Poverty ⁵ (%)	16.0	6.7	17.9	8.5
Population in Severe Multidimensional Poverty (%)	11.1	67.0	31.9	69.6
Human Development Index (HDI) 2015	0.473	0.448	0.490	0.418
HDI Rank	171	174	165	179

Source: Human Development Report 2016, UNDP)

Note: PPP to be calculated by using Purchasing Power Parity rate.

As shown in the Table 2.3.2 above, the target countries are scored at lower rank of the Human Development Index of UNDP. Sudan, for instance, indicates quite high GNI per capita among others, however large amount of population in the country are categorized under severe multidimensional poverty status. Therefore, it is important to make further study on the relationship between income level and livelihood level, for example, to better understand the social development status of each country during the next study stage.

(3) Employment

There is a very limited information and data available for employment analysis in the target countries. ILO (International Labor Organization) provides employment rate with the age over 15 against population. Ethiopia as shown in the Table 2.3.3 indicates exceptionally higher employment rate among others. Because of limited job opportunities, Djibouti has significantly low employment rate, however there could be another factor of religious and cultural impact to the lower employment rate, and women's less interest to jobs might be a cause of the lower rate. The data of South Sudan is not available.

Table 2.3.3 Employment Rate of the Survey Target Countries (2015)

Country	Employment Rate (15 years old and above)
Djibouti	24.1 %
Ethiopia	78.44 %
Sudan	41.58 %
South Sudan	Not Available

Source: ILO

(4) Income Level

Individual level or household level income data is not available in the target countries, so that further data collection is necessary during the next study stage.

2.4. Current Industrial Development and Investment

2.4.1. Primary Sector (Agriculture, Livestock, Fishery, Forestry)

(1) Djibouti

African Development indicator reports that the grain self-sufficiency of Djibouti is nearly 0%. This is due to harsh climate, super permeable soil and lack of water resource causing inappropriate agro-production condition. Therefore, Djibouti citizens should depend on food imports mainly from Ethiopia. On the contrary to agriculture, fishery is active because of a nutrient-rich sea water near the border of Somalia. However, fishing industry does not contribute national economy because fish is mainly consumed by coastal community locally as self-support.

(2) Ethiopia

About 85 percent of labor force is engaging in the primary industry, Agriculture and its GDP contribution accounts for 41% in 2015. Feature of Ethiopian agriculture, in terms of production, is that staple food crop occupies the top. Top 5 crops in terms of production value in 2011 are corn (US\$830 Million), root crop (US\$890 Million), other cereal⁶ (US\$900 Million), sorghum (US\$600 Million) and wheat (US\$450 Million).

⁵ Multidimensional Poverty Index (MPI) refers to three human development indexes (HDI) of health, education and income to scale living condition of each household identifying which index has higher stress.

⁶ This includes Teff and other grain.

Production of cash crops such as coffee and sesame seeds is far smaller than staple foods though they share more than 40% in terms of export value. As for export, horticulture, especially cut flower, cultivation is growing these years for European market mainly Netherland.

One more important feature of Ethiopian agriculture is the small cultivation scale⁷ with weak productivity. Because of this, productivity and modernization has been left behind by time. Small scale farming also prevents value chain from developing.

(3) Sudan

In Sudan, agriculture production takes place mostly along the Nile basin and the Nile is an important life line for food production⁸. Farmers grow Senegalese Acacia trees, Arabic gum, sugarcane, peanuts, sesame seeds, cotton, etc., and raise livestock such as cattle, sheep, goat for export to Middle East countries such as Saudi Arabia, and catch fish, such as Nile perch in the river. Corn and wheat also are widely grown at irrigated plantations which are invested by Gulf countries.

As for cash crops, Sudan is the world largest Arabic gum producer where supplies 80% of world demand. In addition, sugar supply is the 3rd largest in Africa and share of sesame in the EU market in 2007 was 5%. Sudan is called as the breadbasket of Africa for agricultural production, but bulk exports have become main stream.

(4) South Sudan

South Sudanese grow cotton, peanuts, millet, Arabic gum, casaba, sugar cane, mango, etc., but is not well organized in general production. They grow crops mainly for subsistence purpose, and there are limited introduction of technologies with less irrigation and fertilizer use for more effective production⁹. However, there is the largest teak and mahogany plantation in Africa¹⁰ for export. South Sudan is under civil war condition today so that business infrastructure is not functioning well.

(5) Analysis of Agriculture Productivity in the Survey Target Countries

During the survey and government hearings, there are issues regarding low productivity raised by the government officials: There is no effective production system involving community or larger region; Utilization of fertilizer, for example, is not effectively made; Mechanization is not well implemented for production improvement; and others. Knowing these issues, agriculture productivity basic analysis was made for the target countries together with possible comparable regions. As illustrated hereafter, some productions in the countries indicated lower productivity, and these products could be considered for production expansion in the region possibly applying mechanization and other technical application including fertilizer technique.

1) Land area based Productivity

➤ Cereal Productivity in the target region (refer to Table 2.4.1)

Although its production is very small, Djibouti indicates its cereal productivity at 40.0, while Ethiopia indicates 46.5, Sudan with 13.7 and South Sudan with 25.1. Ethiopia shows the highest among others, and Sudan and South Sudan exceed Sub-Saharan Africa Region's average of 29.0 in the cereal productivity. Although Ethiopia's productivity is higher than that of Sub-Saharan Africa Region, it is only about 40%~46% of East Asia & Pacific's yield. Sudan and South Sudan indicate lower land area based productivity, and it is lower than the average of Sub-Saharan Africa region at 29.0%. On the other hand, Ethiopia has arable land at 15 million ha (about 15% of national land) and Sudan has 19 million ha (8.3% of national land), and there could be a higher potential for agro-production increase utilizing these arable lands in the future.

⁷ Information based on articles in "Food and Agriculture in Ethiopia" (University of Pensilvania, 2012) found in International food Policy Research Institute homepage, "South Sudan" (AfDB, 2013) and "Sudan Plan of Action 2015-2019 (FAO)

⁸ The area between White Nile and Blue Nile is known as major agro-field with great irrigation development. Gezira Scheme (1925) by England is the largest irrigation development.

⁹ The information is based on the hearing to the South Sudan government officials.

¹⁰ Mahogany timber production is fully controlled by the government regulation.

Table 2.4.1 Comparison of Target Countries' Agriculture Productivity (2014)

	Cereal Production Area (ha)	Cereal Production Volume (quintal)	Yield (quintal/ha)
Djibouti	8	320	40.0
Ethiopia	10,152,014	472,153,240	46.5
Sudan	11,812,534	161,278,000	13.7
South Sudan	1,013,451	25,411,020	25.1
Sub-Saharan Africa	104,670,735	3,039,005,160	29.0
East Asia & Pacific	176,189,714	17,472,629,140	99.2

Source: UN Metadata

Note: Cereal includes Maize, Sorghum, Millet, Teff and Wheat etc. 1 quintal is approximately 50kg of amount.

Import data as shown in later section illustrates that Ethiopia today imports large amount of cereal from the US, India, China and others, and the total amount imported in 2015 was 352 million USD. Accordingly, when Ethiopia can improve Productivity in cereal production, such expense against cereal imports could be reduced.

➤ Land based Productivity in Ethiopia and Sudan

Productivity of cereal, oil seeds, pulses and vegetables for Ethiopia and Sudan are shown in the following Table 2.4.2.

Table 2.4.2 Comparison of Land based Productivity of Products in Ethiopia and Sudan

Ethiopia (2013/2014)	Area (ha)	Production Volume (quintal)	Yield (quintal/ha)
Cereal	9,838,054	215,754,586	21.9
• Sorghum	1,677,486	38,288,701	22.8
• Finger Millet	454,662	8,489,564	18.7
• Wheat	1,605,654	39,251,741	24.4
Oil Seeds	816,125	7,112,592	8.7
• Groundnuts	79,947	1,120,887	14.0
• Safflower	11,526	83,471	7.2
Pulses	1,609,229	26,601,028	16.5
Sudan (2013/2014)	Area (ha)	Production Volume (quintal)	Yield (quintal/ha)
Cereal			
• Sorghum	7,136,220	45,240,000	6.3
• Finger Millet	2,782,080	10,900,000	3.9
• Wheat	135,660	2,650,000	19.5
Oil Seeds			
• Groundnuts	2,161,740	17,670,000	8.2
• Safflower	105,840	860,000	8.1
Pulses	117,000	1,040,000	8.9
Vegetables			
• Sugar cane	69,804	67,979,000	973.9
• Potatoes	20,565	3,427,540	166.7
• Sweet potatoes	11,397	2,434,690	213.6

Source: 2014 Abstract (Ethiopian Central Statistics Agency), Sudan Ministry of Agriculture and Forest Production Statistics (obtained from Ministry of Agriculture and Forest: 2015/2016 data)

Note: Cereal includes Maize, Sorghum, Millet, Teff and Wheat etc. 1 quintal is approximately 50kg of amount.

As illustrated in the above table, Ethiopia and Sudan have oil seed productivity at low level averaging 8.1~8.7 quintal/ha. Data for the productivity analysis should be further collected for more detailed analysis.

2) Labor Force based Productivity

➤ Per Farmer (worker) Productivity in Quantity

Table 2.4.3 Comparison of Agriculture Productivity by Labor Force in Target Countries (Quantity)

	Employed Population (worker)	Production volume in Agriculture Sector (Quintal)	Yield (Quintal/worker)
Djibouti	25,059	40,240	1.6
Ethiopia	30,817,068	914,000	0.03
Sudan	14,384,436	840,160	0.06
South Sudan	3,775,361	26,151,820	6.9
Sub-Saharan Africa	No data	3,195,302,416	No data
East Asia & Pacific	413,736,751	21,737,329,947	52.5

Source: Data for Djibouti are compiled with UN Metadata (2002) and DISED2016Statistic Data; Data for Ethiopia are compiled with Statistic Data from Central Statistics Agency; Data for Sudan are UN Metadata (2011) and Sudan Labor Survey 2011 “Percentage distribution of Employed persons (10 Years and over) by Employment status, rural/urban area and sex- 2011,” “Percentage Distribution of Employed persons (10 Years and over) by Major Industry, rural/urban area and Sex in 2011”; and Data for South Sudan are UN Metadata (2008) and “Percentage of agricultural employment population (UCW calculations based on Sudan Fifth Population and Housing Census 2008 / 2011).”

Note: Further data collection is necessary during the next study stage.

As shown in above Table 2.4.3, per farmer (worker) productivity of Djibouti is 1.6, Ethiopia is 0.03, Sudan is 0.06 and South Sudan is 6.9. Therefore, Ethiopia and Sudan indicate quite low productivity per farmer (worker). This accounts less than 10% of worker based productivity 52.5 of East Asia Pacific region except South Sudan. Improving per worker productivity is important to the target countries.

➤ Per Farmer (Worker) Productivity in Value (see Table 2.4.4 below)

Table 2.4.4 Comparison of Agriculture Productivity by Labor Force in Target Countries (Value)

	Yield (constant prices, 2010 USD /worker)
Djibouti	No data
Ethiopia	483
Sudan	2,600
South Sudan	No data
Sub-Saharan Africa	1,219
East Asia & Pacific	1,657

Source: UN Metadata

Sudan shows higher per farmer (worker) productivity at value of USD 2,600 in 2010 in above table. Ethiopia shows only USD 483 in productivity, and this is much lower than Sub-Saharan Africa Region’s average at USD 1,219 per farmer (worker).

As reference, the production statistic data of agro-products of Sudan is attached as Appendix 8-1.

2.4.2. Mining Industry

Current activities in this sector in the region is not at a large scale of production except a few mineral resources. The survey target countries contains variety of mineral resources, such as gold, copper, iron, marble stone and gem stones as well as natural gas, but most of them have been just started with exploitation or minor production under the concession agreements and licenses provided by the governments. Each country has its own mining industry development plan considering related sector development, and mineral resource development will be further studied by each country.

- Oil and petrol production in Sudan should continuously contribute its national revenue although the market price has been lowering. Sudan plans to expand mineral resource utilization diversifying oil based industry and its revenue plan.
- South Sudan could also utilize its oil resource for revenue generation while industrial diversification is pursued. South Sudan also planned the refinery development, and it is under construction although it has been stalled due to political issues.

- Mineral utilization plans have been generated by Ethiopian government, for instance, for gas pipeline for export or fertilizer production.
- Djibouti plans to improve infrastructure to accept new mineral resource export from Ethiopia by its government plan.

2.4.3. Manufacturing Industry

Each country has very clear industrial development policy and plans, and diversification of industry is considered highly necessary for country's economic development. Current development in Djibouti and South Sudan is very limited in manufacturing sector. As reference, the manufacturing sector production statistic data of Ethiopia is attached as Appendix 8-2.

- Djibouti is just developing industrial zone called Free Zone¹¹ in the port area for future investment and manufacturing sector establishment with effective trading and logistics system.
- Ethiopia has established number of institutes, such as leather, textile and coffee as well as KAIZEN to effectively develop and lead manufacturing sector production. Its low labor cost also helps labor intensive manufacturing development. The government also has been developing number of industrial parks to support SMEs and new business establishments in manufacturing sector. Also existing sectors mainly agro-production will be strongly integrated into value chain of food processing industry together with Integrated Agro-Industrial Park development¹². Accordingly, food processing, leather and textile industry as well as new chemical mainly fertilizer industry, etc. could be considered for further development.
- Sudan has established Free Zones¹³ in the country and more to come in the future under the government plans. Based on the diversification of industry policy, the government of Sudan has been trying to invite FDIs and to start actual manufacturing utilizing local materials and resources, or expanding production of sugar, etc. However, the source is limited for investment including Chinese, Saudi Arabia and Arabic countries today.
- South Sudan has been struggling with its transformation of industrial structure from oil production based revenue system. The country may need some more time to set up the foundation of manufacturing sector development together with FDI promotion.

2.4.4. Tourism Industry




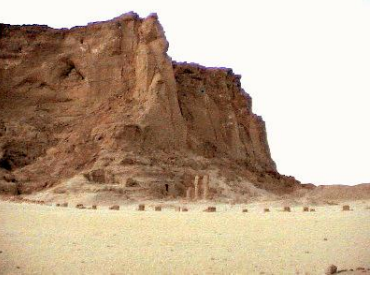

Ethiopia and Sudan have several UNESCO registered heritage based tourism developments made, and these could be developed further with the transportation and service sector developments to invite more oversea and African region tourists. Djibouti and South Sudan also try to develop tourism sector, however weak tourism infrastructure of both countries may hinder attractiveness to the tourists. Though, there are potentials for eco-tourism for instance to attract people.

¹¹ It is also called as Djibouti International Free Trade Zone (DIFTZ). Source: Djibouti and the World Japan Edition 2017 (obtained from Djibouti Embassy in Tokyo)

¹² Value chain is an integrated and networked production and distribution activities from the origin of products or materials to processing, packaging, stocking and distribution to consumers, etc. to complete the product sales. Where complete integration of activities are effectively set, the product for sale could gain higher value and competitiveness, and these could also be analyzed to identify any issues for improvement. It is also explained as "the idea of the value chain is based on the process view of organizations, the idea of seeing a manufacturing (or service) organization as a system, made up of subsystems each with inputs, transformation processes and outputs. Inputs, transformation processes, and outputs involve the acquisition and consumption of resources – money, labour, materials, equipment, buildings, land, administration and management. How value chain activities are carried out determines costs and affects profits" by IfM (Institute for Manufacturing), Cambridge University.

¹³ More information is described in Chapter-3 hereafter.

Table 2.4.5 Tourist Spots in Ethiopia and Sudan¹⁴

								
(Source: http://whc.unesco.org) Rock-Hewn Churches, Lalibela	(Source: Google) Rock Monument in Tiya	(Source: Google) Konso Cultural Landscape						
		<table border="1"> <tbody> <tr> <td>①</td> <td>②</td> <td>③</td> </tr> <tr> <td>④</td> <td>⑤</td> <td></td> </tr> </tbody> </table> <p>①~③ : Ethiopia Site ④~⑤ : Sudan Site</p>	①	②	③	④	⑤	
①	②	③						
④	⑤							
(Source: http://whc.unesco.org) Gebel Barkal & Napatan Region	(Source: http://whc.unesco.org) The Island of Meroe							

According to the World Development Indicator of World Bank, three country accounts total numbers of tourists as follows: Djibouti with 63,000 (2013), Ethiopia with 864,000 (2015), and Sudan with 741,000 (2015). However, those numbers could consist of business trip due to difficulties to obtain business visas in these countries, and actual number of tourists in each country should be further studied to project tourism development potential.

2.4.5. Other Sectors

(1) ICT Industry

ICT industry in the survey target countries is still not widely developed as service provided monopoly and government influence is still at large, especially in Ethiopia. The governments of the countries express their plans to expand the services in wider range with more service providers to achieve wider network in the region utilizing the optical cable system, however the development could take longer to be realized. Ethiopia may need to open up the regional network system development as the country sits in the major regional ICT network junction among other countries after the cable entry from Djibouti.

(2) Science Technology Industry

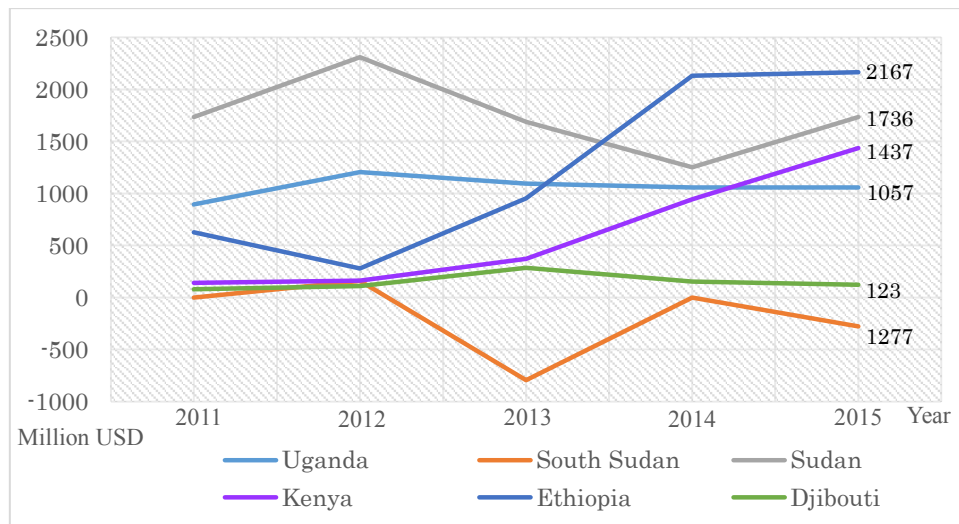
Ethiopia and Sudan governments plan to develop chemical industry as well as pharmaceutical industry for domestic demand. Especially, Ethiopia is now developing fertilizer factory to initiate own production in the country¹⁵. Chemical sector could be one target for these countries, however high-tech chemical manufacturing may not be considered sooner. South Sudan and Djibouti may take longer time to come into this field for development.

2.4.6. Investment climate

Investment climate of the survey target countries is not attractive to lure foreign investors in terms of “Doing Business 2017” ranking announced by the World Bank. World ranking of the four countries out of 190 parent population in 2016 was No.159 (Ethiopia), No.168 (Sudan), No. 171 (Djibouti) and No.186 (South Sudan). The following table illustrates current FDI net inflow to each country. Because of unstable condition of South Sudan, its FDI activity indicates unstable and negative after its independence. The investment amount to Ethiopia is at the top and expected for farther growth. The following figure illustrates FDI trend in the target region.

¹⁴ Sanganeb Marine National Park and Dugonab Bay - Mukkawar Island Marine National Park was also registered in 2016.

¹⁵ Ethiopian government is planning to utilize potassium and natural gas resources identified in the country.



Source: World Development Indicator

Note: Where value indicates negative figure, the investment effect is lower.

Figure 2.4.1 Recent FDI Net-inflow (balance of payment current price)

2.4.7. Development Projects by Privates¹⁶

The target countries could be observed with a distinctive industry development approach. Like other developing countries, the capital scale of local investors in the region is small, and these countries may not be making investments with a large economic impact. However, the region has comparative advantages to attract FDI. The major comparative advantages of the region are i) being a logistic hub between Inland African countries and market countries (Middle East, EU, eastern African countries)(Djibouti), ii) availability of vast fertile arable land with water resource and rich agricultural yield (Ethiopia and Sudan), iii) cheap cost of workforces and its large availability (Ethiopia), and iv) Existence of oil and gas resources (other than Djibouti).

Large scale private businesses in the region are mostly operated by foreign capitals but locals. China contributes as the top of FDI to the region, and North American, European and India follows. Indian capital produces garments for low-end garments market using cost competitive labor forces. North American and European capitals also manufacture shoes, garments and leather products for middle to high-end market. These companies operate mainly in Free Zone or industrial parks and they complete all the production processes in-house.

As for crop plantation near the middle basin of the Nile and owned by Middle-Eastern countries, its harvest exports directly to investor's country in bulk without transferring to manufacture secondary products in the cropped country. FDI, in this regard, does not effect on promotion of local private industries.

The reasons for poor collaboration between foreign and local industries may be described by the following local conditions:

1. Industrial framework in terms of manufacturing capability of quality products, number of firms and variety of supporting entities of each target African countries is very weak. Cooperation between foreign companies and local companies are at poor state.
2. Match making system to connect big or foreign firms and local firms is not organized.
3. Logistic system including transportation network and information network is not well developed.

2.4.8. Foreign Entrepreneurs' and Investors' Needs

The survey team has made interviews to several entities stationed in Ethiopia during the survey period to identify the issues that the companies, investors and entrepreneurs are facing and that become hindering factor to the business establishment and activities. Especially Japanese companies are targeted as they have high quality and operation standard ready to bring into the region: Mitsubishi Ethiopia Trading PLC., and

¹⁶ Generally, primary industry, manufacturing industry, commercial based services of the region is relied upon privates while services and businesses categorized in social welfare are handled by the government.

Hiroki Addis Manufacturing S.C¹⁷.

The following points are mainly raised by all entities as these should be addressed and improved or considered as major issues that the Ethiopian government should take into account for appropriate actions.

(1) Need of Government Constitution Improvement

Current government has strong tendency being bureaucratic. This helps top-down order intact and the orders should be followed. However, subordinate officials do only what ordered or instructed, and this makes all process and activities “square without flexibility” so that any tasks outside of the order/instruction cannot be taken by subordinate officials as they must further ask superior authority for direction or decision. Thus, processes should take much longer than required in general. In addition, government officials at the customer service lines do put too much unnecessary documentation and procedures, which seriously stall all business related administrative processes taking very long time. This should be changed immediately.

(2) Need of Immigration Process Improvement

There have been number of business visa processes applied by business person, however the processing, approval and issuing business visa takes too long together with very complicated requirement such as identity underwriter. Obtaining actual visa could take months, thus many business person gave up and temporary visit Ethiopia with tourist visa. Immigration officials’ human errors are also reasons of delay, and there is no standardized rules because each official may change as they differently understand regulations. Many business and company personnel lose motivation because of these problems.

(3) Need of Taxation System and Process Improvement

Taxation processes are handled by very unskilled officials, as too many officials leave the government offices every year¹⁸ so that the skills and knowledges cannot stay with officials. Thus, process always becomes “from the scratch” without standardized rules then taking too much time to complete. Earlier stage of business setup could be smooth as corporate tax etc. will not be charged for a while. However, once the tax is charged to the foreign companies, they should face major headaches with taxation process.

(4) Need of Banking System Improvement

Major cause is that the country cannot keep foreign currency due to greater expense for commodity import trading. In order to keep foreign currency in government bank hands, local banks tends to hold foreign currency. Therefore, market becomes local currency based transaction environment, and this should stall foreign companies businesses. Foreign currency withdrawal process takes sometimes over nine (9) months to cash out. Thus, initial business setup could be easily affected and withdrawn, especially for small companies. Such banking environment shall be changed, therefore method of foreign currency earning shall be strategized better.

(5) Need of change in Shipping Line Monopoly Environment

Shipping cost is already high in the survey target region due to road network and condition disturbing the logistics services. The majority of logistics activity is controlled by government based company(s) in the market, and this sets improper price system, etc. Such monopolized environment should also become major issue to the entrepreneurs and investors coming to the country.

2.5. General Infrastructure Development in the target Region

As a general baseline data study the team collected possible available data to picture the current infrastructure preparedness of each country, and the sector based comparative figures are provided hereafter.

(1) Paved Road Ratio

Road pavement ratio of the countries in the survey target country should have larger space for improvement. There is no appropriate data for Djibouti, Sudan and South Sudan, and it is difficult to picture the road pavement ratio today. According to the World Development Indicator data, Ethiopia has achieved some

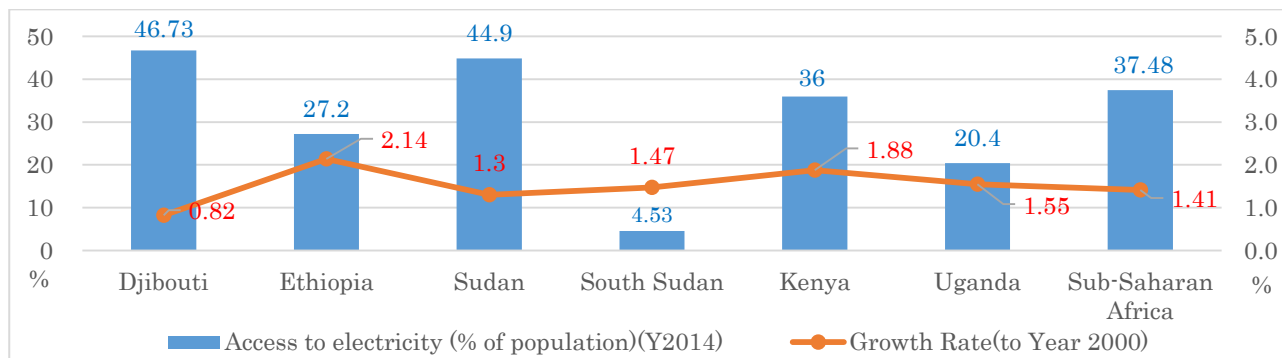
¹⁷ In addition to these private companies, a hearing was made to Japan External Trade Organization (independent administrative agency of Japan).

¹⁸ Based on the hearings, the number of leaving officials every year could account over 10,000.

improvement in road pavement ratio¹⁹, however overall region needs to have much more effort for road infrastructure improvement for better intra-regional trading activities and support.

(2) Access to Electricity

The figure below illustrates that Ethiopia has increased its electricity access by 2.1 times, while Sudan made 1.3 times and South Sudan made 1.5 time of increase compared with 2000 data (from 2000 to 2014). Though, electricity supply ratio 27.2% of Ethiopia and South Sudan's 4.5% are lower than Sub-Saharan Africa region's ratio.



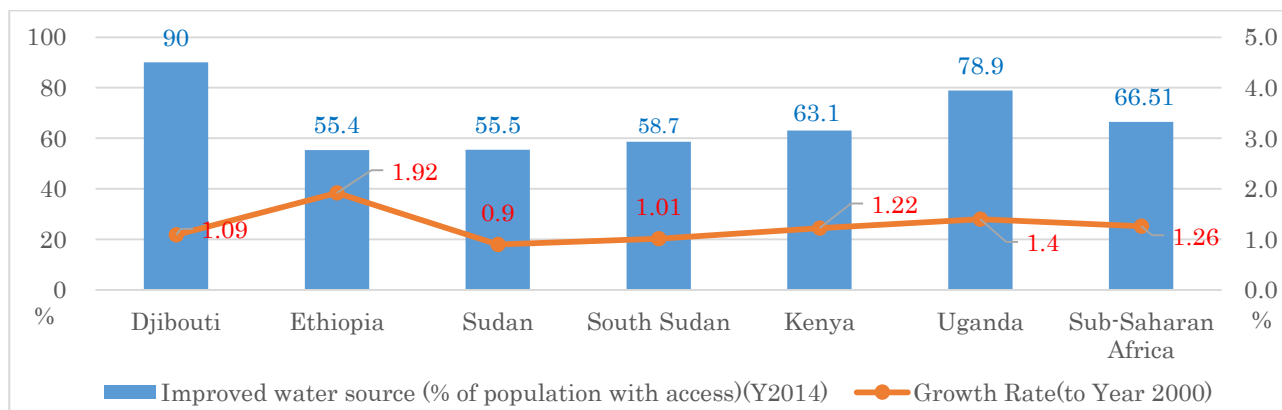
Source: World Development Indicator

Note: Growth rate of South Sudan is compared with 2011 data.

Figure 2.5.1 Access to Electricity (% of population)

(3) Improved Water Access

The latest water supply status of all survey target countries exceeded 50% of population with water access. Comparing with 2000 data of safe water access, Djibouti made 1.1 times and Ethiopia made 1.9 times of increase. However, Ethiopia's 55.4% ratio, Sudan's 55.5% ratio and South Sudan's 58.7% are all lower than that of Sub-Saharan Africa region at 66.5% ratio. In order to achieve regional level equal water access at higher ratio, it is further necessary to develop the infrastructure in rural areas of the countries. Household water demand in each target country becomes higher, and water supply infrastructure for both living and the industrial development is necessary as demanded.



Source: World Development Indicator

Note: Growth rate of South Sudan is compared with 2011 data. Improved water supply means that the supplied households are connected by the piped water network.

Figure 2.5.2 Improved Water Access (% of population)

2.6. Political System and Government Organization of each Survey Target Country

Each target country has some unique historical or political background that structured current society and living environment among other African countries. Understanding the politics and government structure is important task to strategize regional development during the actual master plan formulation.

¹⁹ World Development Indicator of World Bank indicates that the road pavement ratio in 2005 was 1.5%, and increased to 2.7% in 2010, and further increased to 8.1% in 2014, however the latest date indicates too large improvement and the accuracy of the data should be further analyzed in the future.

2.6.1. Political and Government System of the Target Countries

(1) Political System and Government Organization of Djibouti

Political system of Djibouti is a presidential republic, whereby the president enforces the executive power. Legislative power resides in both the parliament and government. A new national constitution was approved in April 2010. The president shall serve as the head of state being elected for a five-year term. The Djibouti government is headed by the prime minister as appointed by the president and the Council of Ministers. The representatives for a 65-member chamber of deputies are elected for terms of five years popularly. The country is divided into five regions and one city administratively, and these are further subdivided twenty districts.

Country Area	23,180 km ² total
Administrative Division	Ali Sabieh Region, Arta Region, Dikhil Region, Djibouti Region, Obock Region and Tadjourah Region

Ali Sabieh Region	Obock Region	
Holhol District	Moulhoule District	
Ali Sabieh District	Khor Angar District	
Ali Adde District	Obock District	
Arta Region	Dadda'to District	
Arta District	Adailou District	
Lake Asal District	Tadjourah Region	
Dikhil Region	Dorra District	
As Eylal District	Mousa Ali District	
Dikhil District	Randa District	
Yoboki District	Tadjoura District	
Galafi District	Balho District	
Djibouti Region		
Djibouti District		

Source: JICA Survey Team (Based on image from Bing Map)

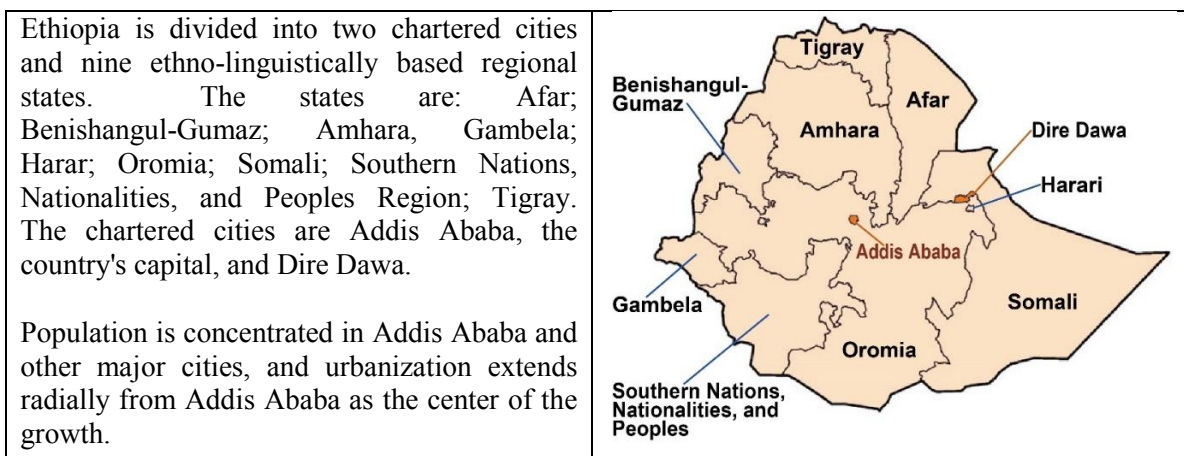
Figure 2.6.1 Djibouti District Map

Large population is concentrated in the southern part of the country, regions of Djibouti, Ali Sabieh, Arta and Dikhi, while northern part of the country is less populated except coastal areas, such as Tadjourah district.

(2) Political System and Government Organization of Ethiopia

The system of Ethiopian government is in a framework of federal republic with parliament, whereby the government is headed by the Prime Minister. The government holds executive power, and the prime minister is chosen by the parliament. Federal legislative power is resided in both the government and the parliament composed of two chambers. There is a bicameral parliament consisting of the federation 108-seat House and the 547-seat House of Peoples Representatives. The Judiciary is independent from the executive and the legislature under the 1995 Constitution of Ethiopia.

Country Area	1,104,300 km ² total
Administrative Division	Afar; Amhara, Benishangul/Gumuz, Gambela, Harar, Oromia, Somali, Southern Nations Nationalities and Peoples Region, Tigray. Addis Ababa (country's capital) and Dire Dawa (Chartered cities)



Source: JICA Survey Team

Figure 2.6.2 Ethiopia Administrative Divisions Map

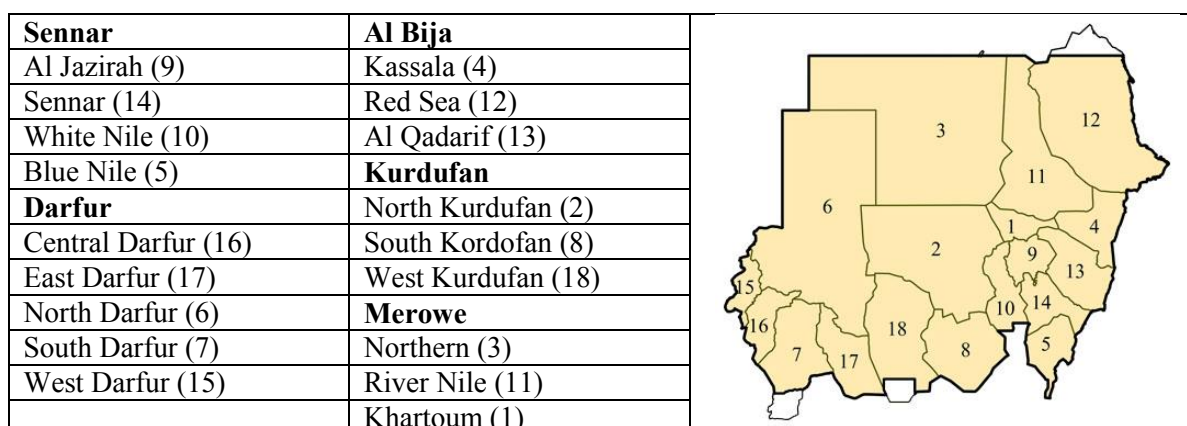
The country in its history had large influence by Soviet Union from 1970's through 1980's, and the nation's administrative behavior still indicates with some communist concept, thus the government organization structure is in order of top-down philosophy.

(3) Political System and Government Organization of Sudan

The Sudan's politics is organized with the framework of a presidential representative democratic consociationalist republic, where the President resides as a State Head of Sudan in a multi-party system, Head of Government and Commander-in-Chief of the Sudanese Armed Forces. Legislative power is held in both the government and in the two chambers, the National Assembly (lower) and the Council of States (upper). The judiciary is independent and obtained by the Constitutional Court.

Country Area	1,886,068 km ² total
Administrative Division	<p>Sennar: Al Jazirah, Sennar, White Nile, Blue Nile</p> <p>Darfur: Central Darfur, East Darfur, North Darfur, South Darfur, West Darfur</p> <p>Al Bija: Kassala, Red Sea, Al Qadarif</p> <p>Kurdufan: North Kurdufan, South Kordofan, West Kurdufan</p> <p>Merowe: Northern, River Nile, Khartoum</p>

Sudan is divided in 18 states after South Sudan's independence forming the territory of the Republic of Sudan, and each is governed by a governor and council of ministers.



Source: JICA Survey Team

Figure 2.6.3 Sudan Administrative Division Map

Population tends to concentrate in the capital of Khartoum, Port Sudan area and south eastern part of the country where benefit of the Blue Nile and the White Nile could be enjoyed instead of sub-Saharan dry weather. The same region along the Rivers is also the major agro-production zone with irrigation networks.

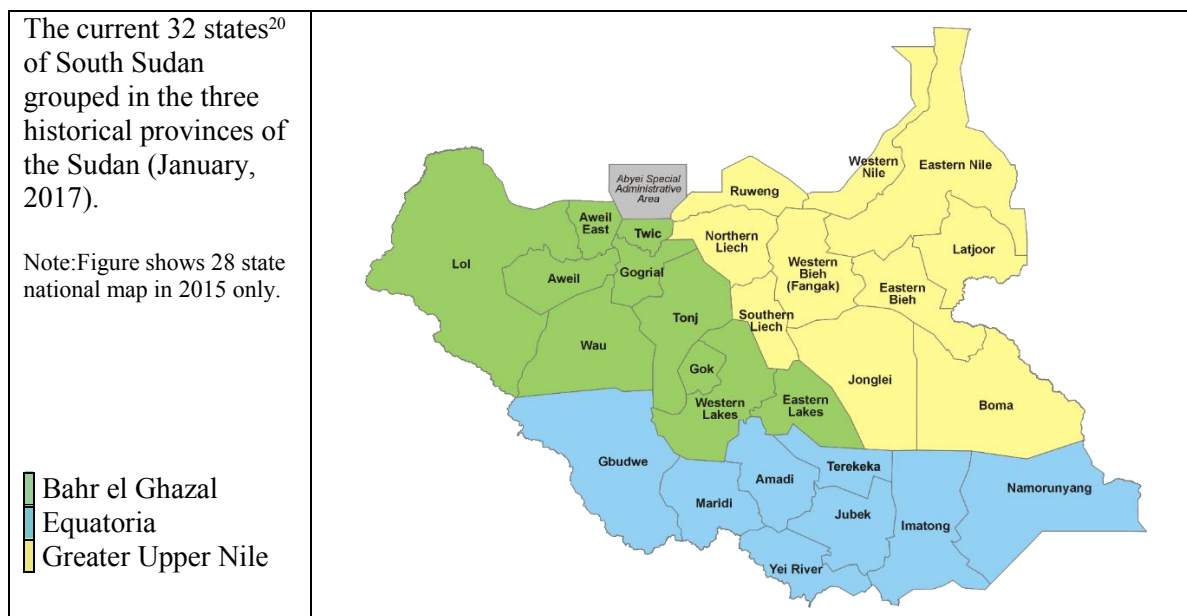
(4) Political System and Government Organization of South Sudan

The South Sudan's politics concerns the republic government system. Southern Sudan from 2005 was an autonomous region of the Republic of Sudan after the signing of the Comprehensive Peace Agreement (CPA) between the government of Sudan and the rebel Sudan People's Liberation Army, and South Sudan finally gained independence in 2011.

The South Sudan States were defined out of the three historic former provinces (and contemporary regions) of Bahr el Ghazal (northwest), Equatoria (southern), and Greater Upper Nile (northeast). The three provinces were divided into 28 states, and further sub-divided into 180 counties. In October 2015, President Salva Kiir of South Sudan issued a decree establishing 28 states in place of the 10 previously established states, and in November the parliament approved the new state creation. In January 2017, the President issued another decree to further subdivide the country from 28 into 32 states.

Country Area	619,745 km ² total
Administrative Division	<p>Greater Upper Nile: Eastern Nile, Western Nile, Ruweng, Northern Liech, Western Bieh, Eastern Bieh, Latjoor, Southern Liech, Jonglei, Boma</p> <p>Bahr Ghazal: Lol, Aweil East, Aweil, Wau, Twic, Gogrial, Tonj, Gok, Western Lakes, Eastern Lakes</p> <p>Equatoria: Gbudwe, Maridi, Amad, Yei River, Terekeka, Jobek, Imatong, Namorunyang</p>

Population tends to gather in southern regions of Equatoria, especially the area of the capital, Juba. Primary industry spreads large area of the country, especially around the Nile because of the water resources, although the same area faces flooding that could hinder the production, especially Greater Upper Nile region. Greater Upper Nile region is also a part of major petrol production area.



Source: JICA Survey Team

Figure 2.6.4 South Sudan Administrative Divisions Map

2.6.2. Government Organization of each Survey Target Country

(1) Government Organization

The government organization of each survey target country is shown in the following tables. The highlighted ministry(s) in orange color in each country is in charge of national finance and budget. Additional information of regional and industrial development concerned government agencies' organization

²⁰ It was 28 states in 2015, and lately four (4) new states have been added: Central Upper Nile, Northern Upper Nile, Tumbura and Maiwut. The latest country map with government jurisdiction should be obtained during the next study stage.

and roles as well as concerned regulations and laws are summarized in Appendix 2 through Appendix 6.

1) Djibouti

Djibouti's government organization is listed in the following Table 2.6.1.

Table 2.6.1 Djibouti Government Organization

Djibouti			
1	Ministry of Justice and Penitentiary Affairs	11	Ministry of Higher Education and Research
2	Ministry of the Presidency	12	Ministry of Communications
3	Ministry of Foreign Affairs and International Cooperation	13	Ministry of Agriculture, Livestock, Fisheries and Water Resources
4	Ministry of Economy and Finance	14	Ministry of Muslim Affairs, Culture and Wakfs
5	Ministry of the Interior	15	Ministry of Energy
6	Ministry of Budget	16	Ministry of Labour
7	Ministry of Trade	17	Ministry of Housing, Urban Planning and Environment
8	Ministry of Defense	18	Ministry of Women and the Family
9	Ministry of Equipment and Transportation	Other Agencies	
10	Ministry of Health	1	State Secretariat for Social Affairs
11	Ministry of National Education and Vocational Training	2	State Secretariat for Youth and Sports

Source: Based on Djibouti Government Portal

According to the government portal site, economic and industrial development is in charge of the Ministry of Economy and Finance with investment control. The Ministry of Housing, Urban Planning and Environment takes general development planning with land use. Major infrastructure developments have been managed by the Ministry of Equipment and Transport.

2) Ethiopia

Ethiopia's government organization is listed in the following Table 2.6.2.

Table 2.6.2 Ethiopia Government Organization

Ethiopia			
1	Prime Minister Office	Other Agencies	
2	Ministry of Finance and Economic Cooperation	1	National Planning Commission
3	Ministry of Foreign Affairs	2	The Parliament of Ethiopia
4	Ministry of Education	3	Disaster Prevention and Preparedness Agency
5	Ministry of Health	4	Ethiopian Mapping Authority
6	Ministry of Trade	5	Social Security Agency
7	Ministry of Culture and Tourism	6	Ethiopian Insurance Corporation
8	Ministry of Agriculture and Natural Resources	7	Ethiopian Telecommunication Agency
9	Ministry of Defense	8	Micro and Small Enterprises Development Agency
10	Ministry of Information and Communication Technology	9	Ethiopia Shipping and Logistics Services Enterprise
11	Ministry of Justice	10	Maritime and Transit Service Enterprise
12	Ministry of Federal and Pastoralists Affairs	11	Ethiopian Investment Commission
13	Ministry of Urban Development and Housing	12	FDRE Supreme Court
14	Ministry of Transport	13	Ethiopia Electric Power Corporation
15	Ministry of Water, Irrigation and Electricity	14	Ethiopian Revenues and Customs Authority
16	Ministry of Mines and Energy	15	National Archives and Library Agency
17	Ministry of Labor and Social Affairs	16	Environmental and Forestry Research Institute
18	Ministry of Youth and Sport	17	Central Statistics Agency
19	Ministry of Women's Affairs	18	National Bank of Ethiopia

Ethiopia			
20	Ministry of Livestock and Fishery Development	19	Public Procurement Agency
21	Ministry of Forest, Environment and Climate Change	20	Ethiopian Industrial Parks Development Corporation
22	Ministry of Mines, Fuel, and Natural Gas	21	Geological Survey of Ethiopia
23	Ministry of Public Enterprises and Human Resource Development	22	Ethiopian Trade Works Corporation
24	Ministry of Construction	23	Ethiopian Trade Competitiveness & Consumers Authority
25	Ministry of Science and Technology	24	Ethiopian Accounting and Audit Board
26	Ministry of Industry		

Source: Based on Ethiopia Government Portal

The Ministry of Finance and Economic Development takes a lead of national development planning, especially by the Strategic Planning and Management Office. The Ministry of Finance and Economic Development is also responsible for budget control and monitoring of use. National Planning Commission²¹ also involves preparation of national development plan.

3) Sudan

Sudan's government organization is listed in the following Table 2.6.3. The Presidency is at the top of Administration.

Table 2.6.3 Sudan Government Organization

Sudan			
1	Ministry of the Cabinet Affairs	18	Ministry of Animal Resources
2	Ministry of Defense	19	Ministry of Environment, Natural Resources and Urban Development
3	Ministry of Federal Government Chamber	20	Ministry of Tourism, Antiquities and Wildlife
4	Ministry of Interior	21	Ministry of Education
5	Ministry of Foreign Affairs	22	Ministry of Higher Education and Scientific Research
6	Ministry of Justice	23	Ministry of Culture
7	Ministry of Information	24	Ministry of Guidance and Endowment
8	Ministry of Finance and Economic Planning	25	Ministry of Welfare and Social Security
9	Ministry of Agriculture and Forestry	26	Ministry of Health
10	Ministry of Industry	27	Ministry of Labour and Administrative Reform
11	Ministry of Oil and Gas	28	Ministry of Human Resource Development
12	Ministry of Water Resources, Irrigation and Electricity	29	Ministry of Communications and Information Technologies
13	Ministry of Investment	30	Ministry of Youth and Sports
14	Ministry of Transport, Roads and Bridges	Other Agencies	
15	Ministry of Minerals	1	Central Bureau of Statistics
16	Ministry of Trade	2	Sudanese Standards & Metrology Organization (SSMO)
17	Ministry of International Cooperation	3	Sudan National Information Center (NIC)

Source: Based on One World Nations Online and JICA information

The national level development through investment and industrial development is strategized by the Ministry of Finance and Economic Planning together with the Ministry of Industry and the Ministry of Investment. More physical planning and development is managed by the Ministry of Environment, Natural Resources and Urban Development. New prime minister was appointed in March, 2017 (the first vice president took concurrent position), and cabinet reform was completed in May, 2017.

²¹ It is directly under the Prime Minister's Office, and the Commission should make immediate coordination with particular plans that the Prime Minister has besides operating their general tasks, according to the officials of the Commission.

4) South Sudan

South Sudan's government organization is listed in the following Table 2.6.4.

Table 2.6.4 South Sudan Government Organization

South Sudan			
1	Ministry of Cabinet Affairs	16	Ministry of Livestock and Fisheries
2	Ministry of Foreign Affairs	17	Ministry of Trade and Industries
3	Ministry of Defense and Veteran Affairs	18	Ministry of Energy and Dams
4	Ministry of Interior	19	Ministry of Roads and Bridges
5	Ministry of Justice and Constitutional Affairs	20	Ministry of Environment and Forestry
6	Ministry of Office of the President for National Security	21	Ministry of Housing and Physical Planning
7	Ministry of Parliamentary Affairs	22	Ministry of Water Resources and Irrigation
8	Ministry of Information Communication Technology and Postal Services	23	Ministry of Wildlife Conservation and Tourism
9	Ministry of Federal Affairs	24	Ministry of Higher Education Science and Technology
10	Ministry of Office of the President	25	Ministry of General Education and Instructions
11	Ministry of Finance and Planning	26	Ministry of Health
12	Ministry of Petroleum	26	Ministry of Labor, Public Service and Human Resource Development
13	Ministry of Mining	27	Ministry of Gender, Child and Social Welfare
14	Ministry of Agriculture and Food Security	28	Ministry of Culture, Youth and Sports
15	Ministry of Transport	29	Ministry of Humanitarian Affairs and Disaster Management

Source: Based on South Sudan Government Portal

National level economic development is in charge of the Ministry of Finance and Planning close coordination with the Ministry of Trade and Industries. More physical development and land use for the development are controlled by the Ministry of land, Housing and urban Development²².

(2) Foreign Relations of the Survey Target Countries

Based on mainly hearings to the concerned government officials of the survey target countries, current foreign relations of each country are summarized hereafter.

1) Djibouti's Foreign Relations

Djibouti maintains good relationships with the target countries, and especially with Ethiopia a strong relationship for trade and logistics has developed through the bilateral agreement as described in the later section of 5.2. Although there are issues of pirates in Gulf of Aden, Djibouti has been developing good relationship with Somalia and continues trading. Relationships with Sudan and South Sudan are kept with some distance for trade and industrial activities because of physical distance, though the relationships are stable. Djibouti, however, has some competitive relationship in the target region about investment promotion inviting investment and funding from China and Arab region.

2) Ethiopia's Foreign Relations

Ethiopia has developed close relationship, especially, with Djibouti and Sudan as economic development partners to maintain. Not only the trade agreement with Djibouti but also industrial development agreement with Sudan has been signed and countries have started cooperative development of cross border and industrial facilities, etc. There is not a deep relationship with South Sudan, however there has been coordination to plan networks for transport and oil pipeline between countries.

3) Sudan's Foreign Relations

Foreign relations of Sudan has mainly developed with Arab countries, and Chinese cooperation has made

²² The noted information is based on the hearings to the government officials.

for economic development. Relationship with Ethiopia is stable and Ethiopian trade has been made through Sudan and Port Sudan. The development of industrial structure with Free Trade Zone under the agreement with Ethiopia is considered with higher expectation of trade and logistics increase between the countries. The relationship with South Sudan has been unstable with political conflicts since South Sudan's independence, and the countries are putting effort to improve the situation after the CPA.

4) South Sudan's Foreign Relations

The foreign relations of South Sudan has been strongly influenced by its independence from Sudan with political conflicts, and most economic and trade activities have been made through the countries in the southern side, such as Uganda and Kenya. This also influenced to South Sudan's affiliation to EAC. Currently large amount of food products has been imported from Ethiopia, and coordination and meetings have been made for strengthening transport network between countries including oil pipeline development. However, recent growing tension of internal conflicts of South Sudan made such cooperation difficult to continue. South Sudan also considers to establish alternative port access to Djibouti, and seeking opportunities of the Djibouti relationship development.

2.7. Land Use and Tenure

According to the data from World Development Indicator, the survey target countries have limited land use because of the land profile as well as climate condition. Ethiopia takes about 36.3% of land for agricultural use, while Sudan takes 28.7% of land and South Sudan takes about 46% of land for agricultural use. Djibouti indicates the highest at about 73%, however this includes pasture and other non-utilized land as well. The sources do not have appropriate data for rural land use areas, and it is necessary to obtain more detailed land use data. Besides, Ethiopia and Sudan also have arable land at about 15% and 8% respectively, and utilizing these land areas are expected for future expansion of agro-production considering integration with food processing industry for better value chain.

Table 2.7.1 Land Area and Use Comparison

Land Use		Djibouti	Ethiopia	Sudan	South Sudan
Land Area	sq km	23,180	1,000,000	2,376,000	619,745
	%	100	100	100	100
Forest Area	sq km	56	124,584	193,844	71,570
	%	0.2	12.5	8.2	11.5
Agricultural Land Area	sq km	17,020	362,590	681,862	285,332
	%	73.4	36.3	28.7	46.0
Urban Land Area	sq km	150	5,167	6,518	N/A
	%	0.6	0.5	0.3	N/A
Others	sq km	5,954	507,659	1,493,777	262,843
	%	25.7	50.8	62.9	42.4

Source: World Development Indicator (2014 data)

Note: 1. Data were extracted from the latest year of each country (Land Area, Forest Area, Agricultural Land Area are 2014 data, Urban land Area is 2010 data)

2. Others concerns Land Area excluding forest area, agricultural area, urban land area.

3. Arable land (in hectares) includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or house gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

4. Agricultural Land also includes pasture land, and Djibouti's case the number also includes other land area not used.

Land Use		Djibouti	Ethiopia	Sudan	South Sudan
Arable Land Area	sq km	20	151,190	356,400	N/A
	%	0.1	15.1	15.7	N/A

Source: CIA World Fact Book (2011 data)

Note: "Arable Land" is the land that is not currently used, however it is expected for agricultural use.

Each target country has land use as well as land management and cadaster system and regulation to control development concerned of the land use and acquisition. Particular condition of each country is described hereafter.

(1) Djibouti

Historically Djibouti and people in Djibouti have been living on the nomadic lifestyle basis moving place to place, and there has not been a strong land ownership also due to its less productivity of land in such climate. Land registration process could be mainly seen in the urban areas of Djibouti capital and other concentrated areas properly controlled under the land related Law No.177/October 10, 1991.

The industrial development together with all possible or necessary infrastructure construction should be a target of land use and registration that might cause major issue in ownership clearance, etc. Those areas identified under the regulations²³ could be protected for the public land use and development, however the country's development in coming future should be depending on private sector to lead. Therefore, it is highly necessary to set up appropriate land registration regulation and system to identify land titles with ownership for proper land use.

(2) Ethiopia

The land in Ethiopia is all owned by the government and it is public land in general. Some lands are considered being owned by the traditional tribes due to long historic land occupation, etc. Where the government needs to utilize, the land the government should hold public consultation for proper compensation agreement to be obtained. When privates demand land to occupy for their development, the government provides land lease agreement for each, and the duration of the lease depends on the land use purpose. Normally land is leased out for 99 years for residential use, and commercial purpose lease may differ in duration based on the conditions applied. The basic land use and development related laws are listed hereafter.

- Urban Lands Lease Holding Proclamation No.721/2011
- Urban Planning Proclamation No.574/2008
- Expropriation of Landholdings for Public Purposes and Payment of Compensation Proclamation No.455/2005
- Federal Urban Planning Institute Establishment Proclamation No.450/2005
- Re-Enactment of Urban Lands Lease Holding Proclamation No.272/2002

(3) Sudan

There are customary land still existing in the country that are historically owned by the indigenous people or tribes, although most land is under the State level control. Current Land Allocation and Distribution Law 1994 is the center of the land use and development, and where land issues raise the federal government takes responsibility to facilitate the land ownership issues to settle down for better use.

(4) South Sudan

The Unregistered Land Act of 1970 that permits the Sudanese Government to claim ownership of all vacant land not formally registered with the state, effectively negated the legal basis of customary rights and institutions that were the dominant tenure system in Southern Sudan territory. CPA (Comprehensive Peace Agreement) recognized the significance of resolving land-based sources of conflict and mandated establishment of a National Land Commission and a Southern Sudan Land Commission (SSLC) in order to set land policies and draft legislation to clarify and strengthen land administrative systems and the rights of landholders. Except natural wild life protection areas (in common registered as government property), most land is owned by the people. Community or people in general owns natural resources under the law described in "Mining Act 2012" and "Mining Regulation 2015." Thus, people and communities have major interest in the profit as well as land use for the development.

The Land Act (2009) assures equal legal recognition to community, private and public land tenure systems including customary institutions. The Local Government Act of 2009 defines the roles and responsibilities of customary institutions, prescribing that they have particular responsibilities for administering community land rights. The Investment Promotion Act (2009) provides procedures for facilitating access to land for private investment including by foreign investors. The Land Act did not address adequately issues including 1) roles and responsibilities of land administrative authorities at various levels of government; 2) land rights of women and vulnerable groups; 3) procedures for conflict mediation and resolution between

²³ Further information should be obtained from the Ministry of Housing, Urban Planning and Environment.

various categories of land users; 4) restitution and resettlement policies for Internally Displaced Persons (IDPs) and refugees; and 5) documenting and reconciling customary and land use planning protocols for the management of common forest and grazing resources. The follow-up to these law items should be made in the future stage of study.

2.8. Current Status of Water Resource Management of the Target Countries

2.8.1. Water Resource management

Ethiopia and Sudan depend on irrigation system for agro-production, however comparing to the total agricultural use land area, the irrigated area is much smaller. Supplying the Nile water to the irrigation system could be stable in the future²⁴, although it is important to keep water security against drought disaster that could threaten food security in the region. The following table Table 2.8.1 shows drought disasters and damages of Ethiopia in recent years. Ethiopia occasionally faces difficulty in draught disaster causing food security issues in rural areas.

Table 2.8.1 Draught Impairment in current Draught History (Unit: thousand people)

Items	2016	2011
Number of people required food supply	10,200	4,500
Number of children with severe acute malnutrition	450	328.7
Number of refugees accepted by Ethiopia	732.7	300

Source: UNICEF

South Sudan has experienced serious famine in February 2017, and food and water security became high priority to the country as well as the region. In order to support and overcome such situation through regional cooperation and support, it is necessary to secure water resource and supply system intact and stronger. Thus, water resource data including more accurate hydrological data should be obtained to plan effective water resource management and water use in the survey target region.

Water resource is a major issue not only because it is limited in some desert areas but also it is the matter of international water rights among the Nile connected counties. The White Nile stretches from Egypt to Sudan then South Sudan, and the river connects beyond including the countries around the Lake Victoria. The Blue Nile then connects Egypt, Sudan and Ethiopia. Djibouti is the only country which does not gain benefit of the Nile. Considering the Nile Basin Cooperation Framework Agreement among nine countries²⁵, the river water resource use is a major international concern for general use, industrial use, hydro-power generation and others. The Figure 2.8.1 on the right shows the Nile watershed.

Among others, Ethiopia has quite large rainfall amount and this becomes a gift for the country's industrial and agricultural development. Sudan and South Sudan, on the other hand, is located in much dry region so the water resource from the Nile is highly necessary, as Sudan for instance has developed about 9,000km² of irrigation system from dams developed along the Nile²⁶.

Djibouti is one of the most dry and hottest countries without sufficient surface water. Since the country is very small located at the edge of the



Source: JICA Survey Team with GMT Mapping

Figure 2.8.1 The Nile's Watershed

²⁴ The hydrologic data of the Nile region has not been obtained, and the data of both the White Nile and the Blue Nile should be obtained from the concerned government agencies for more detailed analysis. Also then latest information regarding the agreement and cooperation on the Nile water resource use and management.

²⁵ Egypt, Sudan, Ethiopia, Uganda, Kenya, Tanzania, Burundi, Rwanda, the Democratic Republic of Congo are the members of the Nile Basin Initiative (NBI) for the foundation of the agreement.

²⁶ Gezira Scheme 1925 is the largest irrigation development by England.

Horn of Africa, groundwater has high salt content at shallow level. Groundwater also contains fluorine thus it is not suitable for drinking. Water resource is the major constraint to the county.

2.8.2. Water Resource Utilization

The way of water resource utilization is not a simple matter among those countries along the Nile, although its water volume promises industrial development in many ways. Since the water volume is quite high, it is considered not only to utilize for irrigation, living and industrial uses, but also to utilize for hydro-power generation. Sudan because of its irrigation development history has been expanding agro-industry accounting its cotton industry as a major international product as well as other agro-products utilizing the Nile water. Ethiopia and Sudan then both have been developing dams for power generations as well, and this will continue in the future as Ethiopia has a major development project of Grand Ethiopian Renaissance Dam as an example. Such water resource utilization becomes major issue for water rights especially of Egypt and Sudan because of downstream countries. Besides, large areas of the target countries away from the Nile (both White Nile and Blue Nile) and their tributaries have difficulties for water resource access, and this becomes hindrance for industrial and agricultural developments. Such areas including most area of Djibouti need to seek deep well resources for both living and industrial activity and improvement. Under such circumstances, each country has set executing agency(s) as shown in the following Table 2.8.2 and put effort of water resource utilization and management.

Table 2.8.2 Ministries for Water Resource Management

Country	Responsible Agency
Djibouti	Ministry of Agriculture, Water, Fisheries, Livestock and Fisheries Resources (Ministry of Energy and Water)
Ethiopia	Ministry of Water, Irrigation and Electricity
Sudan	Ministry of Water Resources, Irrigation and Electricity
South Sudan	Ministry of Irrigation and Water Resources Ministry of Electricity and Dams

Source: JICA Survey Team

2.9. Education Level and Human Resource

According to the hearings to the government officials of concerned government agencies, the following activities and efforts have been made for human resource development as well as education and trainings besides the country's general effort of education through primary, secondary and high schools as well as university level higher education. Such technical and specialty education and trainings under the human resource development programs should be necessarily continued for better working level human resource and capacity building for sustainable industrial development.

The following Table 2.9.1 illustrates general educational status and condition of each country. Primary school enrolment ratios of the countries except Ethiopia with 85.8% are much lower than the Sub-Saharan Africa ratio. Literacy ratio of all countries (Djibouti with no data) also indicates much lower than that of Sub-Saharan Africa ratio as there could be a link to the enrolment ratio. While the government plans to improve human resource capacity and skill development, it is also highly necessary to improve enrolment ratio to general education.

Table 2.9.1 Comparison of Literacy Ratio and School Enrolment Ratio of each Country

Items	Djibouti	Ethiopia	Sudan	South Sudan	Sub-Saharan Africa
Literacy ratio (% of people ages 15 and above)	No data	49.0	58.6	32.0	60.9
Primary net enrollment ratio (%)	57.4	85.8	53.8	28.1	77.9
Secondary net enrollment ratio (%)	25.4	No data	No data	No data	33.4
Tertiary gross enrollment ratio (%)	5.0	8.1	16.3	No data	8.6

Source: World Development Indicator

Note: 1. Literacy ratio is 2015 data, Sub-Saharan Africa is from 2010 data

2. Secondary net enrollment ratio is 2015 data. Djibouti is from 2008 data, and Sub-Saharan Africa is 2014 data. No data for Ethiopia, Sudan, South Sudan.
3. Tertiary gross enrollment ratio is from 2015 data. Djibouti is from 2011, Ethiopia, Sudan, Sub-Saharan Africa used 2014 data. No data for South Sudan.
4. Tertiary education, whether or not to have an advanced research qualification, normally requires, as a minimum condition of admission, the successful completion of the secondary level education.

Each country's human resource development activities based on the hearings made to the concerned institutes are summarized hereafter.

(1) Djibouti (Ministry of Education and Vocational Training)

Policy of human resource development is set by the Ministry of Labor. There are two professional high schools and one professional training center operational in Djibouti. Trainings are made in two main parts: Hard for mechanical, electrical and transport related engineering skill training, and Soft for commercial and accounting type business administration related skill training. There are some culinary art school as well as each region has a training school. The Ministry has been working with Chamber of Commerce as they provide demand and needs of training program based on the information developed upon member companies' concerns.

(2) Ethiopia

➤ Ministry of Public Enterprises and Human Resource Development

The Ministry mainly develop human resource capacity for public service workers under the Proclamation 515/1999 regulating all activities and programs to develop public human resources. There are three main and operating functions in the country to train leaders for management capacity development under the Capacity Building Strategy 1994: Meles Academy, Ethiopian Management Institute and Ethiopian Civil Service University. There are 35 universities with variety of sectoral training programs. There are 9 region and 2 Addis City administration to manage training programs²⁷. These programs and academic functions are mainly to develop government level human resource capacity, and such programs are also important to improve government operation qualities, such as custom and tax processing and financial program implementations.

➤ Kaizen Institute

Kaizen Institute was established in 2009, and the organization is set to serve all sectors identified in the GTP-II²⁸. The training is of course based on the 5-S philosophy²⁹, this should lead productivity and quality improvement, so that this could be applicable to all prioritized manufacturing sectors and their processing environment, such as leather and textile industry. Generally the Institute trains teachers and trainers in the schools or vocational center/schools, and these trained specialists provide actual training and teaching. Based on TVET program³⁰ the capacity building and training are implemented. Regional Kaizen Institutes also implement training in countryside and rural towns for those companies requesting the program. Kaizen program should be applicable to OSBP as the basic concept is the same for MUDA Elimination, although manufacturing and service sectors have fundamental differences.

²⁷ More specific information should be further requested to the Ministry of Public Enterprises and Human Resource Development.

²⁸ Growth and Transformation Plan II: Described in Chapter-3.

²⁹ This concept was originally created by Toyota Motor Company of Japan to control production environment with five terms with "S": Sort, Set in Order, Shine, Standardize and Sustain.

³⁰ Technical and Vocational Education and Training: Common term for the human resource development program (in particular industrial skill and technical training) that could improve production for job creation and better entrepreneur start-up activities.

➤ Leather, Textile and other Industry Development Institutes

The Institutes' general development plan follows the Policy and Plans of Ministry of Industry and the GTP-II. The Institute provides technical training and educational opportunities in each field of production to concerned people. The Institute provides general supports in three major stages to entrepreneurs: Investment Stage, Production / Processing Stage and Marketing Stage. Quality control of products is not fully achieved for the world market, and the continuous training is necessary to make the industry stronger. These institutes will further enhance workers skills and knowledges of the manufacturing sector, thus these programs should be further strengthened.

(3) Sudan and South Sudan

The government officials of these countries also noted their efforts for human resource development, however the detailed approaches should be further studied to apply for the industrial development effort.

2.10. International Trade by Country

The data hereafter show country by country in the region. As there is no available data for South Sudan, this section does not mention about South Sudan. As a reference, the commodity export and import statistic summary obtained from Ethiopia and Sudan governments are attached as Appendix 7.

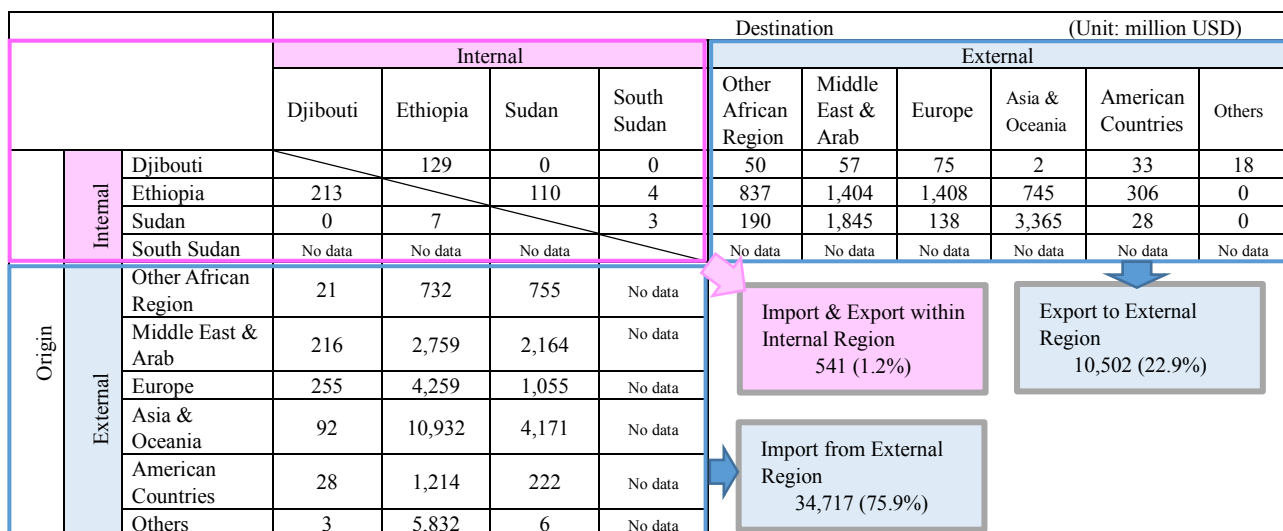
The following Table 2.10.1 illustrates trade balance of the countries, and the reference year of base data applied is the latest possible to obtain from the source. The USD trade value of Ethiopia is the largest in the survey target region. Sudan and Djibouti then follow in this order. In general the trade balance in the survey target region indicates that the import value exceeds much higher than the export value, and the balance shows negative figure. Re-exports of Djibouti share more than half of total export value, so that it expresses that Djibouti is the relay trading country.

Table 2.10.1 Trade Balance of Countries in the Region (Unit: Million USD)

	Djibouti	Ethiopia	Sudan	Kenya	Uganda
Data Year	2009	2015	2015	2013	2015
Import	648	25,815	8,413	16,394	5,528
Export	364	5,028	5,588	5,537	2,267
Re-Export	206	834	1	246	523

Source: UN Comtrade Database

The next Figure 2.10.1 describes that there is only 1.0% of overall regional trade activities accounting intra-region trading oriented amount (at million USD based). All other trading activities are oriented with other regions of the world. Imports from the outside of the target region account 75.9% and exports account 22.9%. Therefore, it is apparent that the trading within the survey target region as well as within the target four countries is very small and limited.



Source: Produced by JICA Survey Team based on following UN Comtrade Database

Figure 2.10.1 Inter- and Intra- Regional Trade Amount (Unit: Million USD)

2.10.1. Djibouti

(1) Import and Export

As for Djibouti, only 2009 is available for data of import and export as shown in the following Table 2.10.2. The amount of re-export accounts for 31.8% of that of import and for 56.7% of that of export.

Table 2.10.2 Import and Export of Djibouti (2009)

Item	2009
Import	647.6
Export	363.7
Re-Export	206.2

Source: UN Comtrade Database

(in million USD)

(2) Items of Import and Export

Following Table 2.10.3 shows the top 10 items of export commodities in value of Djibouti in 2009. The largest share of export commodities in value is “Motor vehicles for the transport of goods,” which accounts for 14.8% of total export value in 2009. The other main export items in value are “Conveyor or transmission belts or belting” and “Agricultural, horticultural or forestry machinery for soil preparation or cultivation.”

Table 2.10.3 Top 10 Export Commodities in Value of Djibouti (2009)

Item	2009
Total Export Value	363.7
Motor vehicles for the transport of goods	53.8
Conveyor or transmission belts or belting	45.0
Agricultural, horticultural or forestry machinery for soil preparation or cultivation	31.5
Milk and cream	29.4
Parts and accessories of the motor vehicles	25.5
Motor cars and other motor vehicles principally designed for the transport of persons	21.7
Food preparations	14.5
Cement	12.8
Palm oil and its fractions	12.1
Articles and equipment for general physical exercise	10.7

Source: UN Comtrade Database

(in million USD)

Following Table 2.10.4 shows the top 10 items of import commodities in value of Djibouti in 2009. The largest share of import commodities in value is “Petroleum oils and oils obtained from bituminous minerals, other than crude” which accounts for 6.3% of total import in 2009. The other main import items in value are “Motor cars and other motor vehicles principally designed for the transport of persons” and “Radar apparatus, radio navigational aid apparatus and radio remote control apparatus.”

Table 2.10.4 Top 10 Import Commodities in Value of Djibouti (2009)

Item	2009
Total Import Value	647.6
Petroleum oils and oils obtained from bituminous minerals, other than crude	40.9
Motor cars and other motor vehicles principally designed for the transport of persons	37.5
Radar apparatus, radio navigational aid apparatus and radio remote control apparatus	33.6
Prefabricated buildings	14.4
Other fruit, fresh	13.9
Bread, pastry, cakes, biscuits and other bakers' wares	13.7
Food preparations	13.6
Cement	13.0
Parts of goods	13.0
Polymers of propylene or of other olefins	12.6

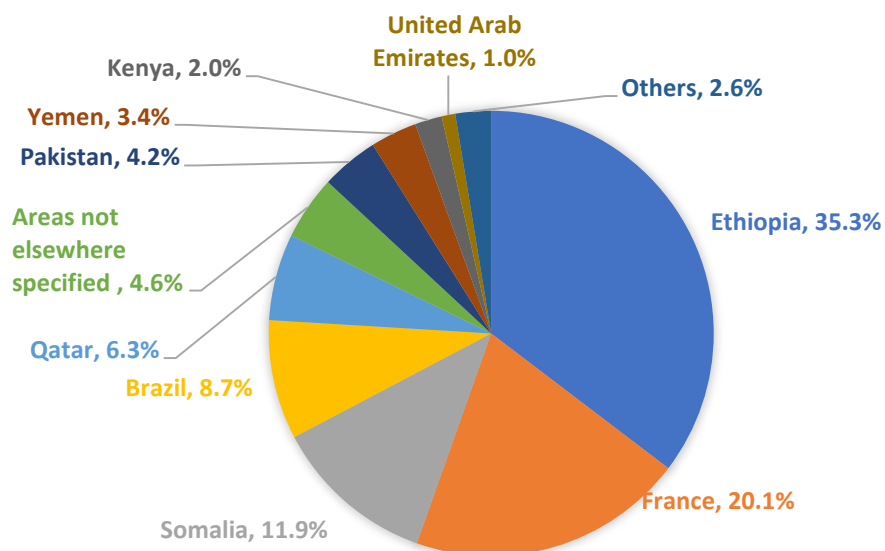
Source: UN Comtrade Database

(in million USD)

(3) Partners of Import and Export

Following Figure 2.10.2 shows the share of export partners for Djibouti in 2009. The largest share of export

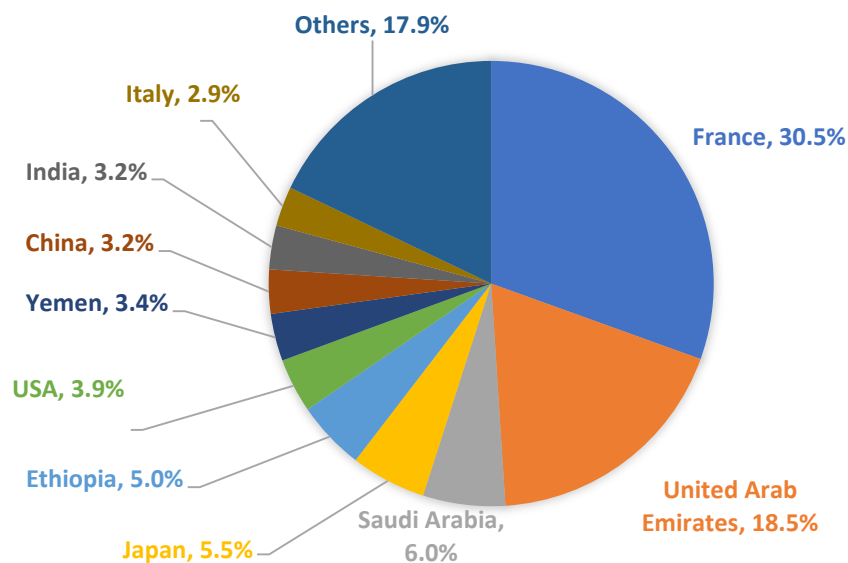
partner for Djibouti is Ethiopia, which accounts for 35.3% of total amount in 2009. The other main partners are France (20.1%) and Somalia (11.9%).



Source: UN Comtrade Database

Figure 2.10.2 Share of Export Partners of Djibouti (2009, Price Based)

Following Figure 2.10.3 shows the share of import partners for Djibouti in 2009. The largest share of import partner of Djibouti is France, which accounts for 30.5% of total amount in 2009. The other main partners are United Arab Emirates (18.5%) and Saudi Arabia (6.0%).



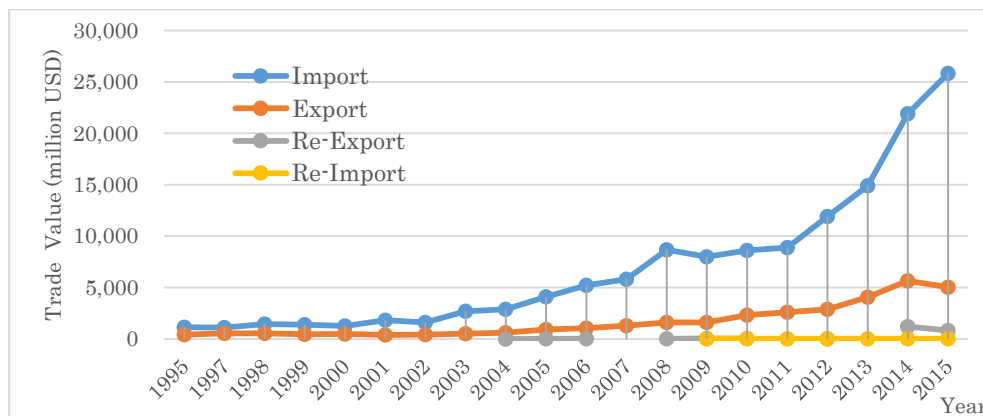
Source: UN Comtrade Database

Figure 2.10.3 Share of Import Partners of Djibouti (2009, Price Based)

2.10.2. Ethiopia

(1) Import and Export

The following Figure 2.10.4 shows the trend of import and export of Ethiopia from 1995 to 2015.



Source: UN Comtrade Database

Note : Re-Export has been made, however the trade value is very small.

Figure 2.10.4 Import and Export of Ethiopia (1995-2015)

Import of Ethiopia is continuously increasing from 2011. During 2003 and 2015, the average increasing rate of trade in USD amount of import of Ethiopia is 25.6%. However, export has not increased much on the other hand, and in 2015, export of Ethiopia decreased by 11.3% from 2014. The amount of export is less than that of import, and the amount of export accounts for 19.5% of that of import in 2015. It expresses that Ethiopia recorded a large deficit of 20.8 billion USD. Both re-export and re-import are not large amount in comparison with import and export in Ethiopia. The amount of re-export accounts for 3.2% of that of import.

(2) Items of Import and Export

Following Table 2.10.5 shows the top 10 items of export commodities in USD amount of Ethiopia in 2015. The largest share of export commodities in value is “Coffee, coffee bean” which accounts for 20.3% of total export in 2015. The other main export items in value are “Petroleum oils and oils obtained from bituminous minerals, other than crude,” “Cut flowers,” “Other vegetables, fresh or chilled” and “Other oil seeds and oleaginous fruits.”

Table 2.10.5 Top 10 Export Commodities in Value of Ethiopia (2015)

Item	2015
Total Export Value	5,027.5
Coffee, coffee bean	1,018.6
Petroleum oils and oils obtained from bituminous minerals, other than crude	693.2
Cut flowers	662.4
Other vegetables, fresh or chilled	568.4
Other oil seeds and oleaginous fruits, whether or not broken	506.7
Dried leguminous vegetables, shelled, whether or not skinned or split	240.7
Live bovine animals	174.8
Gold (including gold plated with platinum)	158.0
Meat of sheep or goats, fresh, chilled or frozen	103.6
Live sheep and goats	85.1

Source: UN Comtrade Database

(in million USD)

Following Table 2.10.6 shows the top 10 items of import commodities in value of Ethiopia in 2015. The largest share of import commodities in value is “Petroleum oils and oils obtained from bituminous mineral, other than crude,” which accounts for 9.0% of total import in 2015. The other main import items in value are “Motor vehicles for the transport of goods” and “Telephone sets.”

Table 2.10.6 Top 10 Import Commodities in Value of Ethiopia (2015)

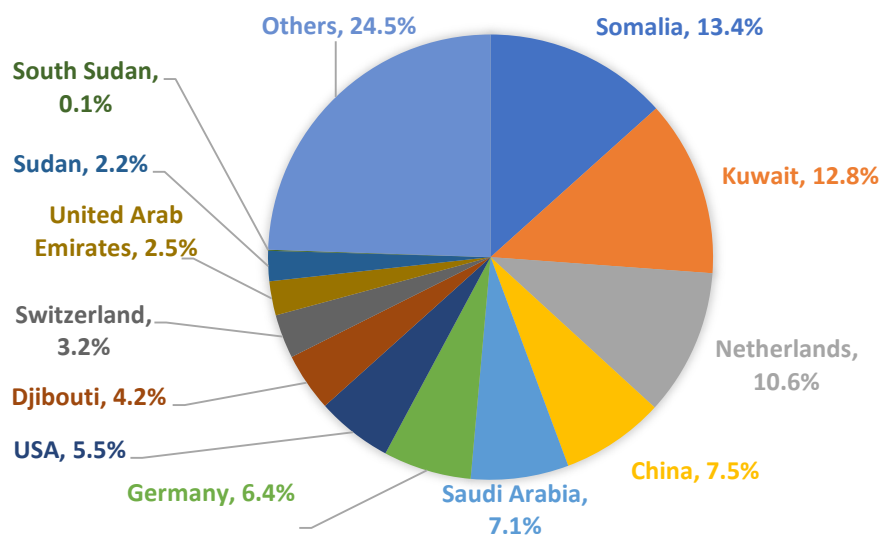
Item	2015
Total Import Value	25,815.3
Petroleum oils and oils obtained from bituminous mineral, other than crude	2,316.5
Motor vehicles for the transport of goods	1,059.8
Telephone sets, including telephones for cellular networks or for other wireless networks	1,058.9
Palm oil and its fractions	1,018.3
Medicaments consisting of mixed or unmixed products for therapeutic or prophylactic uses	522.6
Turbo-jets, turbo-propellers and other gas turbines	497.5
Articles of iron or steel	437.2
Wheat and meslin	433.1
Commodities not specified according to kind	425.6
Motor cars and other motor vehicles principally designed for the transport of persons	414.6

Source: UN Comtrade Database

(in million USD)

(3) Partners of Import and Export

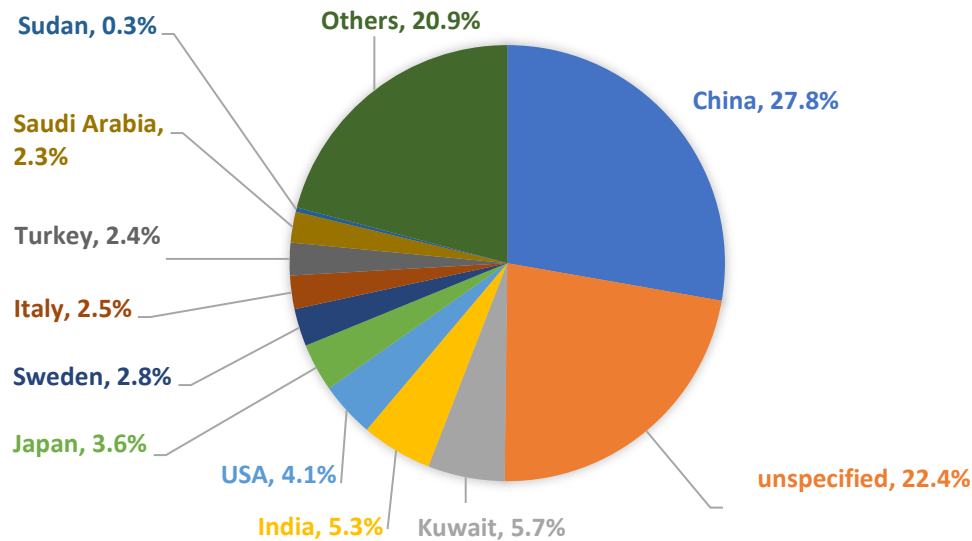
Following Figure 2.10.5 shows the share of export partners for Ethiopia in 2015. The largest share of export partner for Ethiopia is Somalia, which accounts for 13.4% of total amount in 2015. The other main partners are Kuwait (12.8%) and Netherlands (10.6%).



Source: UN Comtrade Database

Figure 2.10.5 Share of Export Partners of Ethiopia (2015, Price Based)

Following Figure 2.10.6 shows the share of import partners for Ethiopia in 2015. The largest share of import partner of Ethiopia is China, which accounts for 27.8% of total amount in 2015. The other main partners are Kuwait (5.7%) and India (5.3%). 22.4% of total amount is unspecified.



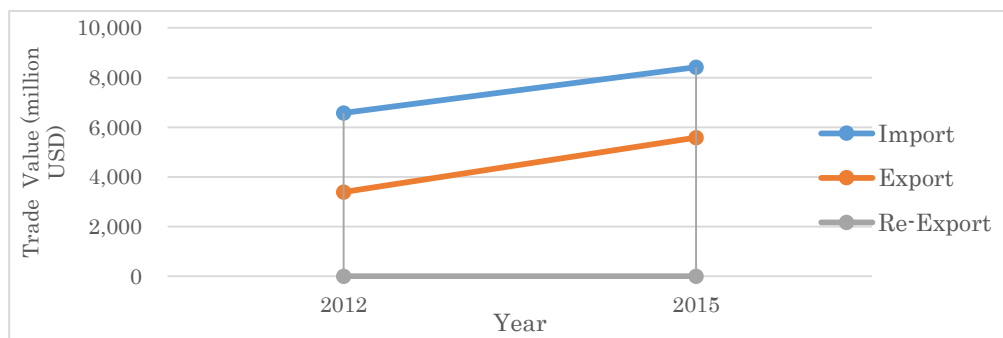
Source: UN Comtrade Database

Figure 2.10.6 Share of Import Partners of Ethiopia (2015, Price Based)

2.10.3. Sudan

(1) Import and Export

Following Figure 2.10.7 shows the value amount of import and export of Sudan in 2012 and 2015. Import of Sudan increased by 28.9% from 2012 to 2015, average 8.5% per year. Export of Sudan increased by 65.1% from 2012 to 2015, average 18.2% per year. The amount of export is less than that of import, and the amount of export accounts for 66.4% of that of import in 2015. Same as Ethiopia, it illustrates that Sudan recorded a deficit of 2.8 billion USD.



Source: UN Comtrade Database

Note : Re-Export has been made, however the trade value is very small. Further data collection and analysis is necessary in the next study stage.

Figure 2.10.7 Import and Export of Sudan (2012 and 2015)

(2) Items of Import and Export

Following Table 2.10.7 shows the top 10 items of export commodities in value of Sudan in 2015. The largest share of export commodities in value is “Petroleum oils and oils obtained from bituminous minerals, crude,” which accounts for 53.2% of total export in 2015. The other main export items in value are “Other oil seeds and oleaginous fruits” and “Gold (unprocessed gold, primary processed and gold dust).”

Table 2.10.7 Top 10 Export Commodities in Value of Sudan (2015)

Item	2015
Total Export Value	5,587.5
Petroleum oils and oils obtained from bituminous minerals, crude	2,973.9
Other oil seeds and oleaginous fruits	841.8
Gold (unprocessed gold, primary processed and gold dust)	681.7
Live sheep and goats	497.3

Item	2015
Meat of sheep or goats	119.1
Unused postage, revenue or similar stamps	98.0
Molasses resulting from the extraction or refining of sugar	90.0
Cotton	38.0
Swedes, mangolds, fodder roots, hay, lucerne (alfalfa), clover, sainfoin, forage kale, lupines, vetches and similar forage products	29.1
Petroleum oils and oils obtained from bituminous minerals, other than crude	25.5

Source: UN Comtrade Database

(in million USD)

Following Table 2.10.8 shows the top 10 items of import commodities in value of Sudan in 2015. The largest share of import commodities in value is “Other aircraft (for example, helicopters, aeroplanes),” which accounts for 7.87% of total import in 2015. The other main import items in value are “Cane or beet sugar and chemically pure sucrose” and “Medicaments.”

Table 2.10.8 Top 10 Import Commodities in Value of Sudan (2015)

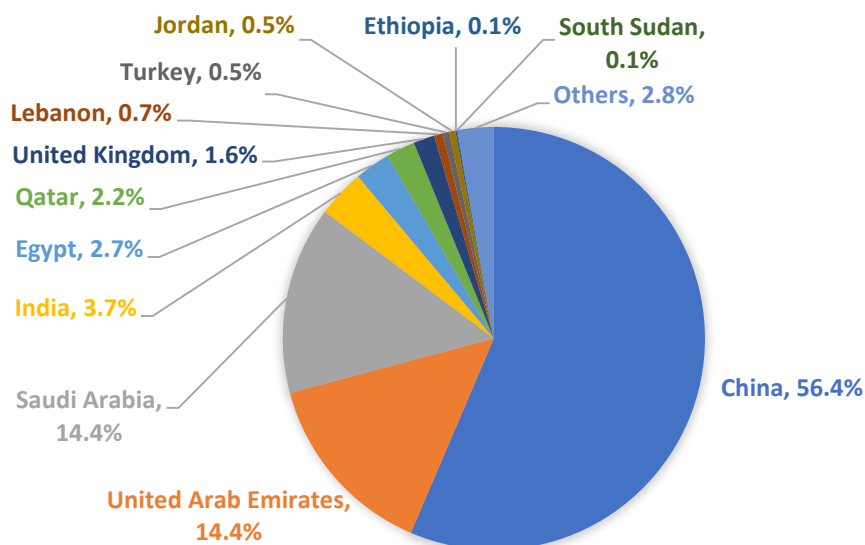
Item	2015
Total Import Value	8,413.4
Other aircraft (for example, helicopters, aeroplanes)	662.5
Cane or beet sugar and chemically pure sucrose	535.8
Medicaments	431.6
Motor vehicles for the transport of goods	276.0
Motor cars and other motor vehicles principally designed for the transport of persons	246.7
Tractors	221.7
Wheat or meslin flour	194.3
Garments	149.7
Sunflower-seed, safflower or cotton-seed oil and fractions thereof	124.2
Polymers of ethylene	123.1

Source: UN Comtrade Database

(in million USD)

(3) Partners of Import and Export

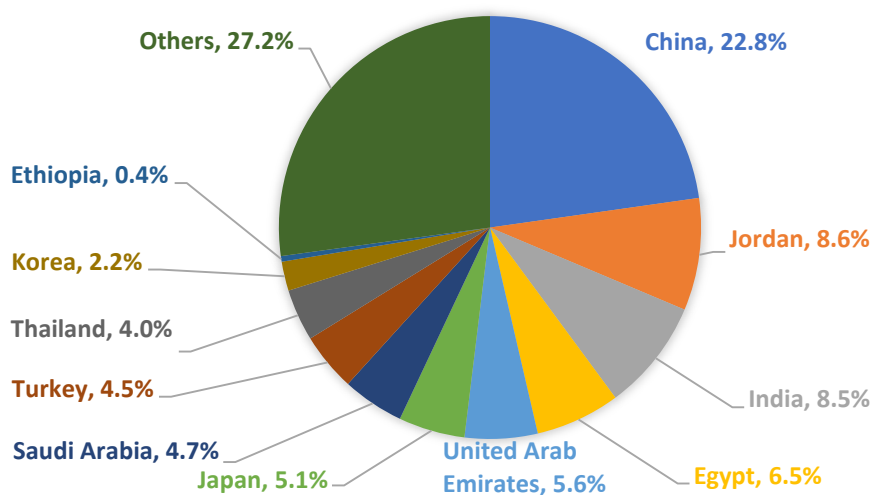
Following Figure 2.10.8 shows the share of export partners for Sudan in 2015. The largest share of export partner of Sudan is China, which accounts for 56.4% of total amount in 2015. The other main partners are United Arab Emirates (14.4%) and Saudi Arabia (14.4%).



Source: UN Comtrade Database

Figure 2.10.8 Share of Export Partners of Sudan (2015, Price Based)

Following Figure 2.10.9 shows the share of import partners for Sudan in 2015. The largest share of import partner of Sudan is China, which accounts for 22.8% of total amount. The other main partners are Jordan (8.6%) and India (8.5%).



Source: UN Comtrade Database

Figure 2.10.9 Share of Import Partners of Sudan (2015, Price Based)

Chapter 3

CHAPTER 3 Industrial and Regional Development Plans of each Survey Target Country

The latest national level development plans of each survey target country have been studied in order to identify current development activities and direction based on the data provided as well as obtained information through the hearings made to the concerned government agencies during the survey conducted. Especially, regional and industrial development plans including policies and direction of developments, urban development and environmental and social considerations as well as the status of the development implementing organizations and budget management of each country are summarized hereafter.

3.1. Regional Development and Industrial Promotion of Djibouti

3.1.1. Development Plan and Policy

Djibouti government and its developments follow two major national plans.

(1) Djibouti Vision 2035

Djibouti Vision 2035 was prepared to realize “more successful, more attractive and more desirable future” of the country taking the spirits of the Strategic Framework for Growth and Poverty Reduction (PRSP) 2004-2006 and National Initiative for Social Development (INSD) 2008-2012 which elevate the country with better development planning instrument with strategic planning, policies and strategies for sustainable development. Through the previous development experiences, the government realized to address the nation’s lack of material and human resources, weakness of water and energy resources, poor performance of the telecommunication and transport sectors, weak economic activities, low competitiveness and insufficient job creation, weak financial capacity, etc. to change and realize the desirable future through decentralization departing from the predominance of the central government.

Having the country’s strategic geographical position, Djibouti is progressively becoming a regional maritime outlet and international trade. The development strategies to be implemented focusing on increasing productive capacities of growing sectors, diversifying economic opportunities, expanding private sector and developing community of the country. The Djibouti Vision 2035 is based on five pillars to promote transformations of the country.

- | | |
|-------------------------------------|--|
| I. Peace and National Unity | IV. Diversifies and Competitive Economy,
Driven by the Private Sector |
| II. Good Governance | V. Regional Integration |
| III. Consolidation of Human Capital | |

The Djibouti Vision 2035 having above five pillars aims to achieve and change the country to an economic, commercial and financial center of the region and international hub that ensure the welfare of the Djibouti people in a peace, safe and clean environment. The general objective is expressed by the terms of “Djibouti, Lighthouse of the Red Sea,” and “Djibouti, Hub Commercial and Logistics of Africa.” GDP Growth pattern is also envisaged as shown in the following Table 3.1.1.

Table 3.1.1 GDP Growth Pattern Forecast in Djibouti Vision 2035 (% Share)

Sector	2012	2022	2035
Agriculture	3.7	4.1	5.0
Manufacturing Industry	2.7	5.8	7.0
Construction and Public Works	14.4	15.0	16.0
Trade and Tourism	16.8	18.3	20.0
Banks and Insurance	13.7	13.8	14.0
Telecommunications	27.6	26.0	24.0
Other Services	2.0	2.0	2.0
Public Administration	19.1	15.0	12.0
Total	100%	100%	100%

Source: Djibouti Vision 2035

(2) SCAPE 2015-2019 (Strategy of Accelerated Growth and Promotion of Employment)

The concept of SCAPE 2015-2019 refers to the Djibouti Visio 2035. After the Djibouti Vision 2035 was adopted by the council of Ministers on March 30, 2014, a new five-year plan providing medium-term

strategic directions and identifying the primary actions to be implemented to achieve the objectives, and this is SCAPE. SCAPE as the national development strategy targets ten major objectives.

- | | |
|--|---|
| 1) Accelerate Growth | 6) Ensure Widespread Coverage of Health Care Essentials |
| 2) Reduce Unemployment | 7) Reduce Inequality of Gender |
| 3) Limit the Extreme Poverty | 8) Resolve the Question of Water |
| 4) Create the Conditions of a Regional Hub | 9) Combat Precarious Housing |
| 5) Better Education and Training | 10) Prepare to Climate Change |

The SCAPE then consists of 19 Sustainable Development Goals (SDG) to make strategic approach. It is a new growth model that relies on (i) accelerated, more balanced and job creating economic growth driven by new sectors, (ii) infrastructure development and rapid removal of constraints to release private sector activities and investors, and (iii) strengthening the human capital. It also relies on mechanism that enhances ministerial accountability in public action as a part of logic performance that binds ministerial budget and all public expenditure into a policy objectives.

The government sets development strategies with SCAPE AXES structure in SCAPE, and that consists major development actions in four categories¹: 1) Economic growth, competitiveness and leading role of the private sector; 2) Human capital development; 3) Public governance and institutional capacity building; and 4) Poles of regional and sustainable development. There are target development sectors together with financial sector, manufacturing sector including handicraft and regional trade, international traded and regional integration. Four target development sectors are a) Economic Infrastructure (energy, water and sanitation, communication, and transport), b) Mining (to identify natural resources to develop in the territory), c) Industry (provides policy and steering capacity to implement adapted actions, and opportunities should be reinforced while reducing costs), and d) Primary Sector.

3.1.2. Industrial Development Plan

According to the above described national development vision and plan, nationwide industrial development plan is formulated to achieve goals of SCAPE.

Djibouti has been facing a major unemployment issue together with regional disparities and poverty. Due to weak urbanization and development plan in the past as well as Djibouti Port based development in logistics and service sector which tended for unbalanced investment and infrastructure development in the country, except capital city of Djibouti most communities in outer areas are in poor livelihood with less food and water access in sever climate condition. Since the country's limited production potential in primary sector and natural resources except some minerals identified², industrial development in the past was so directed with its port oriented logistics services only to serve neighboring country of Ethiopia. Employment opportunity was very limited while government's budget was also limited to generate public development jobs.

Djibouti today looks for options to improve such nationwide condition with strong emphasis on water supply and job creation under the SCAPE and Vision 2035. The government at the same time considers the implementation of the National Strategy for a Green Economy (SNEV) as a complementary to the SCAPE strategy for long term sustainable development.

(1) Service Industry regarding Trade and Logistics

In relation to the Free Zone³ development in the Djibouti Port area (refer to section 3.1.3 hereafter), trade and logistics service concerned of port cargo handling is the largest industry in Djibouti, and the sector is planned to further strengthen and be developed with investment promotion. Ethiopia, especially, is major trade partner and their import and export activities are the top prioritized target for service improvement in trade and logistics sectors.

¹ This includes financial sector, regional trade and manufacturing (including handicraft) sectors and international trade and regional integration.

² As described hereafter, gold, copper, zinc, titanium, bauxite, etc. have been identified.

³ Also called as Djibouti International Free Trade Zone (DIFTZ). Source: Djibouti and the World Japan Edition 2017 obtained from Djibouti Embassy in Tokyo.

(2) Primary Sector

The primary sector is believed to contribute for the improvement of food security and the reduction of poverty through economic diversification. The goals of the sector development policy adopts “latter’s role” because of sever climate condition and the sectors less progress in development. The sector development should contribute to (i) reduce food insecurity and improve nutritional quality of household consumption, (ii) increase production and productivity and revenues, (iii) increase employment with better incentives in rural areas so that migration to the capital area to be reduced, (iv) promote local transformation of products that could be exported (livestock, hides, skin and fish), and (v) preserve natural environment and reestablish the balance of development.

(3) Mining Sector

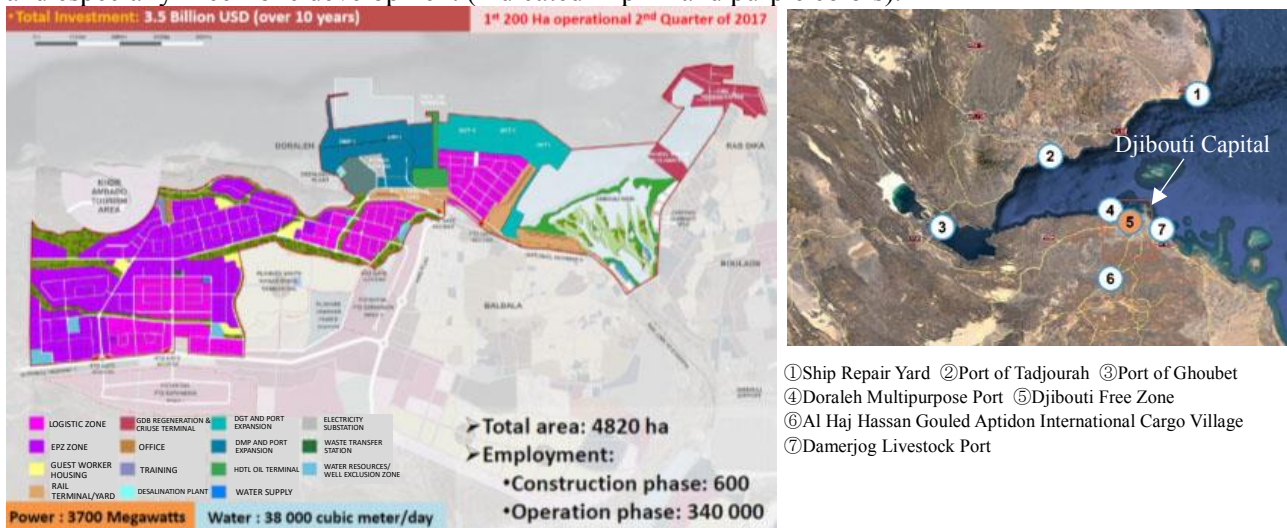
There are number of natural mineral resources in the country, such as gold, perlite, bauxite, copper, zinc, natural gas, etc. Actual mining sector development is starting as gold exploitation licenses have been given to companies, and the government expects more investments to come and boom up the sector more industrialized. More detailed mineral resource map needs to be obtained in the future study.

(4) Regional Industry

The industrialization policy has been developed in an integrated approach including natural and mining resources development. Promoting private sector and creation of a new environment for economic operators as well as promoting local enterprises competing in the regional market are important factors to attract job opportunities. Providing mature policy with proper financial programs and opportunities to reinforce the industrial development are at the necessary actions together with reducing costs of energy, water telecommunication, transportation and labor force.

3.1.3. Development of Industrial Parks and Other Facilities

The government believes that current Free Zone development is the key to enhance future potential of industrial development in Djibouti, although there are several potential areas have been identified in the outskirts of the city as well as Tadjourah. Since the existing port and its expansion area to Doraleh are the most developed and accessible zone with cargo handling facilities, there is no question to raise with the establishment of industrial park and services in the same stretch for best result assurance without large effort to deal with long transport distance. The following Figure 3.1.1 illustrates Djibouti Port area development, and especially Free Zone development (indicated in pink and purple colors).



Source: Djibouti Port Free Zone Authority

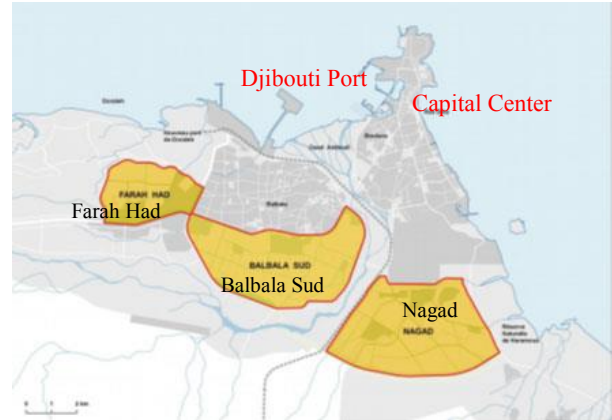
Figure 3.1.1 Djibouti Free Zone Image

3.1.4. Urban Development, Land Use and Environmental and Social Consideration

(1) Urban Development

Djibouti has formulated SDAU (Urban Development Plan)⁴ in December 2015, and the urban and town planning and development follow its land use, zoning patterns, types of building and functions allowed to develop, and others. Especially, Djibouti capital city urban area development, because of fast growing environment, are specially taken into consideration for development having its potential land use being appropriate. Most effective urban development should be implemented under PAU regulation controlling unwanted sprawl of urban expansion to limit loss of natural environment.

The Figure 3.1.2 illustrates major three urban development zones designated for mainly residential development to the capital city of Djibouti, namely Farah Had Zone, Balbala Sud Zone and Nagad Zone. While early developed port area and surrounding capital establishment should tend to be more commercial and business oriented transformation, these new development areas are suburban type development with their own urban centers to link each other. Each of these Zones and development are specifically regulated for Urban Planning and Urban Development. Other regions of the country are also subject for urban development regulation, however the control is not effectively distributed. Therefore, such planning and development control should be set universally to whole country.



Source: Djibouti Urban Development Plan
Figure 3.1.2 Djibouti Town Planning Zone

(2) Environmental and Social Consideration

Any development concerned of environmental impact should be evaluated in accordance with the current Environmental Code of law No.51 in order for environmental protection in which EIA may be required based on the criteria. Any developments and plans will be evaluated for the necessity of EIA or SEA (Strategic Environmental Assessment).

3.2. Regional Development and Industrial Promotion of Ethiopia

Ethiopian government and its developments pursue best effort and maximum benefit to the people of Ethiopia based on “Ethiopia Growth and Transformation Plan II” (so-called GTP-II) which is the second five-year national plan after the GTP-I.

There was a major gap developed between domestic saving and investment expanding in the country, and the gap grown between merchandize export earnings and merchandize import bill, in other words the trade deficit, has been widening during GTP-I implementation period (2010/11-2014/15). Therefore, the government had put major effort to overcome the above issue during the GTP-I implementation stage giving the following four overarching objectives:

- (i) Maintaining at least an average real GDP growth rate of 11% per annum and attaining the Millennium Development Goals (MDGs) by 2014/15,
- (ii) Expanding access and ensuring the qualities of education and health services and achieve MDGs in the social sectors,
- (iii) Establishing conditions for sustainable nation building through the creation of stable democratic and developmental state,
- (iv) Ensuring the sustainability of growth through maintaining macroeconomic stability.

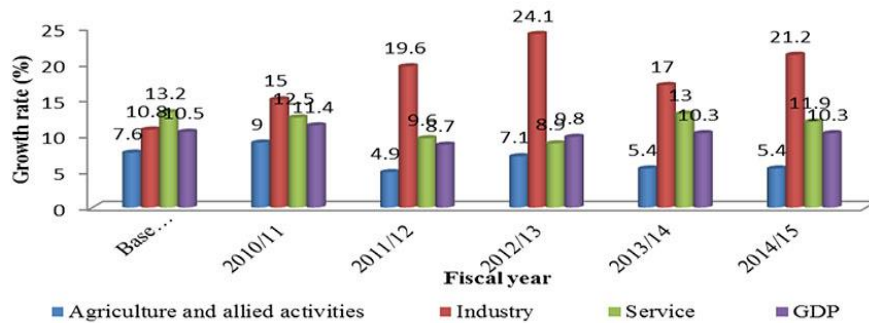
Major macroeconomic goals were set in GTP-I:

- (i) Maintaining broad-based and double digit economic growth within a stable macroeconomic environment,

⁴ Schéma Directeur d’Aménagement et d’Urbanisme (December, 2014): Urban development plan mainly concerns of Balbala Sud, Nagad and Farah Had.

- (ii) Increasing the share of gross domestic saving (GDS) in GDP to 15 percent, and
- (iii) Increasing the share of export in GDP to 22.5 percent.

Real GDP growth during the last 12 years averaged 10.8% per annum, and this is more than double the Sub-Saharan Africa region average during the same period.



Source: Ethiopia GTP-II

Figure 3.2.1 GDP Growth by Major Economic Sectors (2009/10-2014/15)

3.2.1. Development Plan and Policy

Ethiopian Growth and Transformation Plan II

GTP-II is considered to be an important vehicle for Ethiopia’s “Renaissance.” The major objective of GTP-II is to serve the country and its development as a spring board realizing the national vision of “becoming a low middle-income country by 2025,” through sustaining the rapid and inclusive broad economic growth to accelerate economic transformation. The government is fully committed to mobilize the necessary resources including capacity for implementation of the Plan. Modernization in the development of the agriculture sector, expansion of industrial development with primary focus on light manufacturing, significant shift in export development are at the core of the development. The final GTP-II was approved by the council of ministers and endorsed by the Parliament to guide development endeavors in the country during the next five years, 2015/16-2019/20.

National Vision

The country’s vision is to reach the level of “lower middle-income countries” where democracy, good governance and social justice are promised and maintained through people’s participation.

Objectives of GTP-II

- Achieve an annual average real GDP growth rate of 11% within a stable macroeconomic environment and thereby contribute towards the realization of Ethiopia’s vision;
- Improve productivity, quality, and competitiveness of the domestic productive sectors (agriculture and manufacturing industries) and Develop the domestic engineering and fabrication capacity to speed up structural transformation;
- Further solidify the on-going public mobilization and organized participation to ensure the public become both owners and beneficiaries from development outcomes; and
- Deepen the hegemony of developmental political economy by strengthening a stable democratic developmental state

Pillar Strategies

- Sustain the rapid, broad based and equitable economic growth and development witnessed during the last decade;
- Increase the productive capacity and efficiency to reach the economy’s production possibility frontier through concurrently improving quality, productivity and competitiveness of productive sectors (agriculture and manufacturing industries);
- Speed up and catalyze transformation of the domestic private sector and render them a capable development force;
- Build the capacity of the domestic construction industry, bridge critical infrastructure gaps with

particular focus on ensuring the quality of infrastructure services through strengthening the implementation capacity of the construction sector;

- Properly manage and administer the on-going rapid urbanization to unlock its potential for sustaining growth and structural transformation of the economy;
- Accelerate human development and technological capacity building and ensure its sustainability;
- Establish democratic and developmental good governance through enhancing implementation capacity of the public sector and mobilization of public participation;
- Promote women and youth empowerment, ensure their participation in the development process and enable them equitably benefit from the outcomes of development; and
- Build climate resilient green economy.

The Appendix 9 shows the selected GTP-II macroeconomic, social and economic development targets.

(1) Macroeconomic Plan

Macroeconomic Policy Objectives

Major macroeconomic policy objectives are to sustain rapid and inclusive economic growth within a stable macroeconomic environment including maintaining a stable and low inflation, ensuring structural transformation in the economy, consolidating the gains in human development and reducing poverty and unemployment as well as enhancing the share of investment and domestic saving in GDP. The Table 3.2.1 afterward indicates GDP growth scenario expected in GTP-II.

- 1) Maintaining double-digit average economic growth rate of 11% per annum (base case scenario).
- 2) Ensure structural transformation of the economy.
- 3) Maintaining Macroeconomic Stability.
- 4) Increasing the share of gross domestic saving in GDP to 29.6% and by so doing increasing the share of gross domestic investment in GDP to 41.3% by the end of the plan period.

Table 3.2.1 GDP Growth Rate under Base Case Scenario Valued at 2010/11 Price (unit: %)

Sector	Average Performance	Base year	Forecast					Average
	2010/11 - 2014/15	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2015/16-2019/20
Agriculture and allied Activities	6.6	6.4	8.2	8.0	7.9	7.9	7.8	8.0
Industry	20.2	21.7	21.8	20.6	20.0	19.1	18.4	20.0
Manufacturing	14.7	15.8	20.2	21.3	22.0	22.7	23.4	21.9
Large and medium scale Manufacturing	19.2	20.3	20.0	21.3	21.8	22.6	23.4	21.8
Small and micro Manufacturing	4.2	2.9	21.0	21.3	22.6	23.0	23.5	22.3
Service	10.8	10.2	10.3	10.2	10.1	10.0	9.6	10.1
Gross Domestic Product (GDP)	10.1	10.2	11.2	11.1	11.1	11.0	10.8	11.0

Source: Ethiopia GTP-II

(2) Structural Change

Structural transformation is basically characterized by redistributing resources from low productivity to high productivity economic activities.

- 1) Increasing the share of manufacturing industry in GDP, and
- 2) Increasing the share of export earnings in GDP

1) Increasing the share of manufacturing industry in GDP

Manufacturing sector is expected to be the engine of the structural transformation, and is projected to grow at an annual average rate of 21.9 %, while its share in GDP is projected to pick up from 4.8 % in 2014/15 to 8.0 % by 2019/20. The following Table 3.2.2 illustrates expected industry GDP share by GTP-II.

Table 3.2.2 Share of Major Economic Sectors in GDP under Base Scenario (unit: %)

Sector	Average Performance	Base year	Forecast					Average
	2010/11 - 2014/15	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2015/16-2019/20
Agriculture and Related Activities	41.5	38.5	37.5	36.4	35.4	34.4	33.5	35.4
Industry	12.7	15.1	16.6	18.0	19.4	20.9	22.3	19.4
Manufacturing	4.3	4.8	5.2	5.7	6.2	6.9	8.0	6.3
Large and medium scale	3.1	3.7	4.0	4.4	4.8	5.3	5.9	4.9
Small and micro scale	1.2	1.1	1.2	1.3	1.4	1.6	1.8	1.4
Service	45.8	46.3	46.0	45.6	45.2	44.8	44.3	45.1

Source: Ethiopia GTP-II

2) Increasing the share of merchandise export in GDP

Merchandise export is forecasted to grow at an annual average rate of 36.3%, and foreign exchange earnings from the same is expected to pick up from 3.1 billion USD to about 13.9 billion dollars by the end of the planning period. The Table 3.2.3 indicates GDP share of merchandise export value in GTP-II. The total merchandise exports value is expected to increase from 4.9% in 2014/15 to 11.8% in 2019/20.

Table 3.2.3 Projected Share of Merchandise Export Value in GDP (unit: %)

Items	Base year	Forecast				
	2014/15 Performance	2015/16	2016/17	2017/18	2018/19	2019/20
Total Merchandise Exports Revenue	4.9	7.0	8.5	9.7	10.7	11.8
Agricultural Commodity Exports	3.6	4.7	5.3	5.8	6.1	6.5
Regular agricultural Commodity	3.2	4.1	4.7	5.0	5.3	5.5
Flower	0.3	0.4	0.4	0.5	0.6	0.6
Other Agricultural Commodity	0.1	0.2	0.2	0.3	0.3	0.4
Industrial commodity Exports	0.7	1.4	2.3	2.6	3.0	3.6
Manufacturing	0.6	1.2	1.6	2.0	2.5	3.0
Electricity	0.1	0.2	0.7	0.6	0.6	0.5
Mining Export	0.6	0.9	0.9	1.3	1.5	1.7

Source: Ethiopia GTP-II

3.2.2. Industrial Development Plan

(1) Agriculture and Rural Transformation

Smallholder crop and pastoral agriculture development will be enhanced and remain the main source of growth and rural transformation. All rounded support should be provided to educated youth to enable them organize and engage in agriculture investment and productions. The necessary support for domestic and selected foreign investors taking their capacity into consideration should be provided in advance to enable them participate in production in agriculture subsectors such as crop, flower, vegetables and fruits, and livestock transformative development. Pursuing more effective and suitable implementation of further scaling-up strategy to the various agro-ecological development zones⁵ and pursuing holistic measures addressing constraints and challenges related to supply to agricultural productions and utilization of agricultural technologies are necessarily managed.

Major Targets

The following targets are set to achieve the objectives

1) Crop Farming and Pastoral Development

⁵ Updated map(s) should be obtained during the future study.

- Crop Productivity and Production
- Coffee Productivity and Production
- Horticulture productivity and Production
- Livestock Productivity and Production
- Natural Resources Conservation and Utilization
- Improve Production and Productivity through Strengthening Demand Driven Agricultural Research works
- Improve Sustainable National Biodiversity Conservation and Equitable Benefit to the Community
- Food Security, Disaster Prevention and Preparedness

2) Improved Crop Productivity and Production

3) Livestock Productivity and Production

- Livestock Genetic Improvement
- Improve Livestock Health Coverage
- Improve Livestock Feed Production
- Integrate Implementation of Livestock Value Chain⁶ Efficiency

4) Natural Resources Conservation and Utilization

5) Improved Sustainable National Biodiversity Conservation and Equitable Benefit to the Community

6) Food Security Disaster Prevention and Preparedness

7) Agricultural Development in Pastoral Areas

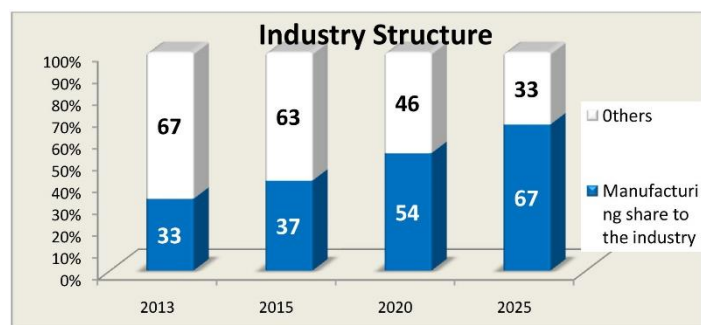
(2) Manufacturing Industry

The objective is to make Ethiopia a leading manufacturing hub in Africa and in the globe. The growth of accelerated manufacturing industry will be promoted through improving the productivity and competitiveness of domestic manufacturing firms as well as expanding new investments mainly in export-oriented manufacturing sector. The strategic directions should improve productivity, quality and competitiveness of both existing and new industries, and ensure structural change.

Building labor intensive light manufacturing industry is globally competitive in terms of productivity, quality and price. Transforming medium and large manufacturing industry should become a reliable source of foreign exchange and building industrial engineering and technological capacity. The government under its roadmap for manufacturing sector development expects doubling the sector share in industry as shown in the Figure 3.2.2.

Industrialization Targets

The industrial value addition is set to increase the share of manufacturing industry in overall GDP. This is to be achieved largely through the integrated and organized activities undertaken in light and agro-processing industries strengthening the linkages between manufacturing and agriculture. Manufacturing sector in particular, the government has established several development institutes to support research, education and training in specific areas, such as leather, textile and coffee industries. The followings are the major sector targets.



Source: Ethiopian Industry Development Roadmap
Figure 3.2.2 Industry Structure Forecast

⁶ Value chain is an integrated and networked production and distribution activities from the origin of products or materials to processing, packaging, stocking and distribution to consumers, etc. to complete the product sales. Where complete integration of activities are effectively set, the product for sale could gain higher value and competitiveness, and these could also be analyzed to identify any issues for improvement.

- Textile and Garment Industry
- Leather and Leather Products Industry
- Metal and Engineering Industry
- Meat, Milk and Honey Industry
- Chemicals and Construction Inputs Industry
- Agro-processing Industry
- Pharmaceutical Industry

(3) Mining Sector

It is planned to increase modern and artisanal systems of gold production as well as other mineral resource mining including marbles, limestone, gemstones (opal, etc.), potassium, natural gas⁷, and others identified for larger volume existence. Through artisanal miners and companies, about 800,000 job opportunities will be created during the plan period. It is expected to increase annual mineral revenue from 152.79 million Birr (Ethiopian currency unit) in 2014/15 to 570.4 million Birr by the end of 2019/20.

In relation to the above, Ethiopian government has been planning to establish fertilizer production center expecting potassium production from the northern mine yard in order to start actual fertilizer production within in two years, and they expect first year production of 600 thousand tons of fertilizer (information by Ministry of Agriculture and Natural Resources). This fertilizer production could be a major replacement to the imported products.

(4) Construction Industry

The objective of the construction industry is in general to enable the sector to play a vital role in speeding up the country's socio-economic development through strengthening the linkages with other productive and service sectors as well as to bring up the sector internationally competitive.

Main Targets

The main target in construction industry is to achieve more than 70% of the construction demand of the country by local contractors and consulting companies.

(5) Trade

The objectives of the sector are to expand implementation capacity through continuously establishing modern, fair and competition based trade system and to create efficient and effective marketing expansion linkages and increasing foreign exchange earnings. The building of modern commodity exchange system will be consolidated, while adding new agricultural products to the system as well. The WTO and regional FTA negotiations will be undertaken to expand reliable market access opportunities.

Major Targets

A new trade registration system is projected to increase through supporting the trade registration and licensing services with information technology.

3.2.3. Development of Industrial Parks and Other Facilities

There are two major development plans of industrial parks in the country. One is the IPDC⁸ lead park development for manufacturing industry establishment, and the other is to setup Integrated Agro-Industrial Parks (IAIP) to formulate more organic utilization of agro-products and processing technologies to concretize value added production system as a part of food value chain development. The following Table 3.2.4 illustrates current development of industrial parks by IPDC, and two maps in the Figure 3.2.3 show the locations of projected developments.

Table 3.2.4 Current Industrial Park Development Status

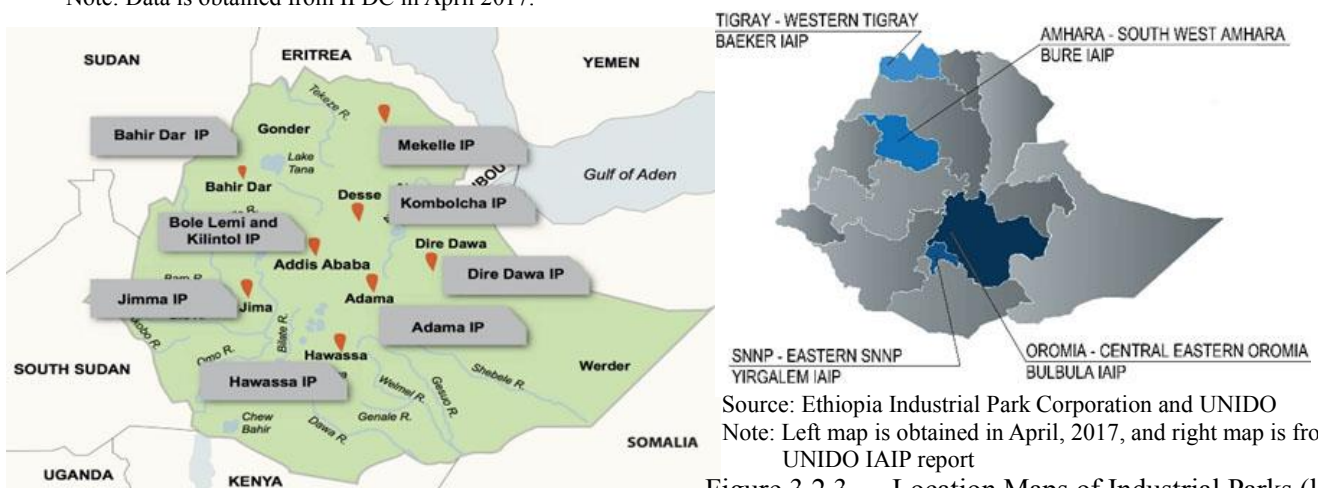
No	Name of Park	Delimited Land Area ha	First Phase Land Area ha	Major Eligible Manufacturing Sector	Construction Comp. Period
1	Bole Lemi I	173.2	173.2	Apparel	Operational Since 2014
2	Bole Lemi II	180	180	Apparel & Textile	2018
3	Hawassa	1,000	140	Apparel & Textile	Operational Since 2017

⁷ Also detailed in Chapter-5.

⁸ Industrial Park Development Commission

No	Name of Park	Delimited Land Area ha	First Phase Land Area ha	Major Eligible Manufacturing Sector	Construction Comp. Period
4	Mekelle	1,000	75	Apparel & Textile	2017
5	Kombolcha	700	75	Apparel & Textile	2017
6	Adama	2,000	120+245	Machinery equipment, Chemical & Apparel and Textile	2017
7	Diredawa	4,000	150	Machinery equipment, Chemical, Vehicle assembly & Apparel and Textile	2017/2018
8	Kilinto	279	279	Pharmaceutical	2018
9	Jimma	1,000	75	Apparel & Textile	2018
10	Debre Birhan	1,000	100	Pharmaceutical, Food and Beverage	2018
11	Bahir Dar	1,000	75	Apparel & Textile	2018
12	Arerti	1,000	150	Home appliance, Apparel & Textile	2018
13	Ayisha	300	75		2018

Source: Ethiopia Industrial Park Development Corporation
Note: Data is obtained from IPDC in April 2017.



Source: Ethiopia Industrial Park Corporation and UNIDO
Note: Left map is obtained in April, 2017, and right map is from UNIDO IAIP report

Figure 3.2.3 Location Maps of Industrial Parks (left) and Integrated Agro-Industrial Parks (right)

3.2.4. Urban Development, Land Use and Environmental and Social Consideration

(1) Urban Development and Housing

GTP-II states that “the supply of land for different urban development programs will be executed in an utmost transparency, accountability and fairness. All urban development programs and resultant urban expansions should ensure equity of farmers and pastoralists by guaranteeing not only sufficient compensation but also rehabilitating such households to warrant better livelihoods afterwards.” The objective of integrated housing development program is to improve urban housing provision and related challenges and to minimize the escalating housing demand by sustainable provision of housing and related services.

The Ethiopian government has series of land use plans that the developments shall meet its component, and the general hierarchy of the plans is the followings:

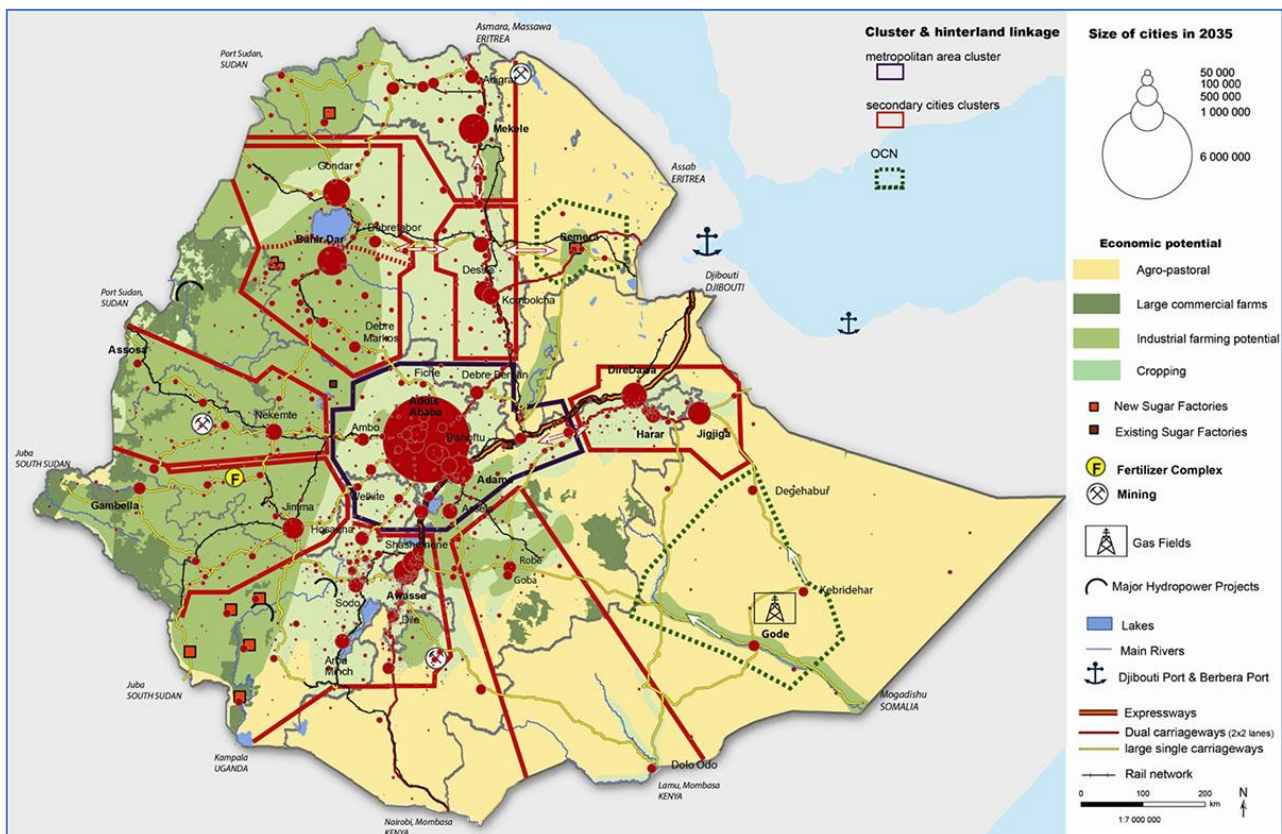
- 3) National Urban Development Spatial Land Use Plan
- 4) Regional Urban Development Land Use Plan
- 5) Citywide Land Use Plan (divided into four: Sketch Plan, Basic Plan, Strategic Plan and Structural Plan)

The Ministry of Urban Planning and Housing has prepared the “National Urban Development Spatial Plan

2016” with World Bank’s support, and overall urban development follows this spatial plan. The Spatial Plan illustrates all GTP-II based development plans for urban, industrial, cluster, rural, agricultural and others, and future development plans should be also in line with the plan. The following Figure 3.2.4 shows basic spatial development concept with urban development nodes with hinterlands and any cluster development potentials.

Making industrial development in line with the industrial and cluster development under the Ministry of Industry, EIC⁹ and IDPC, the land use and physical development should fall into the particular areas of the spatial plan designation, and the development process will be in compliance with the applicable laws, regulations and this National Urban Development Spatial Plan 2016. Primary sector development is also well taken into account as all the maps are illustrated with the production zones and areas as to be considered for production chain.

Currently Proclamation for urban planning and urban plan is under revision in Ethiopia, and it is important to obtain the latest information of law and regulation during the next study stage.



Source: National Urban Development Spatial Plan 2016

Note: Red dots are urban area and industrial development area, and red line framed zones are hinterlands of those development center.

Figure 3.2.4 Cluster and Hinterland Linkage with Urban Development Centers

(2) Environmental and Social Consideration

Ethiopia applies Environmental Law 2000 to the development in the country, and EIA regulation and guideline are referred for actual implementation of EIA preparation which is in general in line with the World Bank’s EIA guidelines. The regional development master plan should consider SEA (strategic environmental assessment). Each sector based development may consider EIA, however each should be evaluated for necessary of EIA.

Currently EIA related laws, regulations and guidelines are under the government review as some important parts should be included. The law not only takes environmental consideration matter but also social consideration as others also take into account. Actual master plan formulation is considered among the countries, the Ministry of Foreign Affairs will become contact point among the countries where

⁹ Ethiopia Investment Commission

environmental and social considerations are concerned besides other major international relations. During the next study stage the latest information regarding the EIA laws and regulations should be obtained for update.

3.3. Regional Development and Industrial Promotion of Sudan

Sudan government and its developments follow the Five-Year Programme for Economic Reform, 2015-2019 (hereinafter referred to as “*the Programme*”). This national development plan was formulated based on the following terms of references.

- The Interim Constitution of 2005
- The Quarter Century (Twenty Five Year) Economic Strategy (2007-2031)
- The objectives and results of the Three-Year Economic Programme for sustainability of economic stabilization (2012-2014)
- The recommendations of the Second Economic Forum 23 to 24 November 2013
- Sudan’s Initiative to achieve the Arab food security
- The speech of H.E the President of the Republic about the reform initiative 27 January 2014
- The proceedings of the hearing sessions with the Sudan workforce Trade Unions General Federation, the Sudanese Businessmen and Employers Federation and the ministers of finance of the country States
- The peace agreements currently in force
- Sudan’s Interim Poverty Reduction Strategy Paper (IPRSP)

3.3.1. Development Plan and Policy

(1) General Objectives and Policies

The “All-Inclusive Vision” of *the Programme* is to achieve a stable increase of the National production and to direct the production for exportation. It also aims to ensure a decent livelihood for all citizens, social justice and the comprehensive balanced development of the nation.

(2) Key Areas of *the Programme*

- The restoration of economic stability and sustainable growth to include the objectives and policies for the sustainable economic growth and the policies of economic stability in the fiscal, monetary and banking sectors as well as the external sector.
- Goods and services sectors
- Infrastructure
- Social welfare
- Human resources development and capacity building
- Scientific research
- Role of the States in *the Programme* implementation
- Development priorities
- The leading role of the private and joint sectors (domestic and foreign) in the economic activity

The Programme forecasts national GDP growth till the year 2019 as shown in the Table 3.3.1 below.

Table 3.3.1 GDP Forecast at Current Prices under *the Programme* (unit: billion SDG)

Sector	2015	2016	2017	2018	2019
Agriculture	205.7 31.7%	262.2 31.8%	319.6 31.8%	372.3 31.8%	425.3 30.9%
Industry	141.7 22.2%	185.0 22.4%	223.6 22.4%	264.4 22.2%	302.5 22.0%
Services	291.5 46.1%	377.4 45.8%	462.1 45.8%	551.7 46.0%	647.3 47.1%
GDP	638.9 100%	824.6 100%	1005.3 100%	1188.4 100%	1375.1 100%

Source: Sudan Five-Year Programme for Economic Reform, 2015-2019

3.3.2. Industrial Development Plan

The Programme identifies particular development plans in each sector to enhance manufacturing sector integrated with available resources of the country. Sector development strategies are also supported by the associated policies. Major sector development plans are described hereafter.

(1) Agricultural Sector

The Programme pursues to increase the production volumes from about 206 billion pounds (93 million tons) in 2015 to about 425 billion pounds (192 million tons) in 2019, at an annual growth rate averaging 6.8%. Prioritized products are:

- Dura (Sorghum): Increasing production from 5.6 million tons in 2015 season to 9.5 million tons by the end of 2019, and increasing productivity by 55%.
- Millet: Raising the production from 890,000 tons in 2015 season to 1.2 million tons by the end of 2019, and increasing the productivity by 14%.
- Wheat: Increasing production from 1 million tons in 2015 season to 3.4 million tons by the end of 2019, and raising the productivity by 36%.
- Cotton: Raising production from 500,000 tons in 2015 season to 882,000 tons by the end of 2019, and stabilizing the productivity at 1,000kg/acre as a fixed rate.
- Sesame: Increasing the production from 400,000 tons in 2015 season to 1.8 million tons by the end of 2019, and raising the productivity by 276%.
- Peanut: Increasing the production from 1 million tons in 2015 season to 1.5 million tons by the end of 2019, and raising the productivity by 25%.
- Sunflower: Increased production from 125,000 tons in the 2015 season to 1.1 million tons by the end of 2019, and raising productivity by 140%.

(2) Livestock Sector

The sector development aims in general to increase number of cattle, sheep (lamb), goats and camels, and targets the exportation of slaughtered and processed meat instead of live animals to mainly Middle East region, such as Saudi Arabia, by the establishing six factories to process, manufacture and export meat from Al-Obeid, El-Gedaref, Kosti, Omdurman, Nyala and El-Fasher. It also aims to increase leather exports from 12.52 million pieces in 2015 to 18.33 million pieces by the end of 2019.

(3) Forest and Timber Production Sector

This sector expects to double the production of Gum Arabic from 150,000 tons in 2015 to 300,000 tons in 2019, and to increase exports from 73,000 tons in 2015 to 200,000 tons in 2019. The government is preparing a strategic plan and implementing feasibility study to establishing raw gum Arabic processing system to export as a final product. The latest information of the sector development plan needs to be obtained in the future study stage.

(4) Oil and Mineral Industries

- *The Programme* aims to increase crude oil production as well as refining by the end of 2019, so that the country may be able to reduce import of oil products from the partners by exporting Nile Blend crude oil. Refinery facilities in Khartoum and Al-Obeid should have enough capacity for the target achievement.
- The mineral resource development aims to increase the production of gold, chromium, clinker, manganese, gypsum, food salt, feldspar and copper during the Programme target period. Especially revenue from the export of gold is expected higher.

(5) Foreign Trade

Since the loss of oil resources by the southern region secession in 2011, the deficit in the balance of trade became the main cause of economic instability affecting the national economy, and substantial imbalance led to a deterioration in the rate of exchange which in turn led to higher inflation. *The Programme* aims to implement policies to achieve surplus in the balance of trade by increasing exports. Particularly, the agrarian industry will export products such as sugar, ethanol, fodders, processed meat and cotton cloths, leather products and Gum Arabic. Moreover, the industrial exports such as petroleum byproducts, mineral

products like gold¹⁰, copper, iron, chromium and cement and building materials are planned. The Programme also aims to raise export growth rate more than the import growth rate in affirmation of self-reliance policy and Sudan ability to overcome the economic instability. The inflow of foreign direct investment (FDIs) will be encouraged and concessional resources for financing development will be attracted.

(6) Manufacturing Industry

The government has been establishing Free Zones in the country and these should attract investors and manufacturing companies in order to shift Sudanese industrial structure from raw material exporting base to value added product exporting, although such industrial development policy has not fully activated due to multiple reasons. Though, there are potential investors from outside, for instance China and Arab region, thus the movement could be gradually picking up. The followings are the planned sector for developments.

- Medicine production (powder, liquids, tablets, capsules)
- Chemical industries production (oxygen, nitrogen oxide, carbon dioxide, ethanol, powdered soap, paints).
- Leather, leather products and artifacts production, processing, manufacturing and exporting
- Spinning, textile and readymade cotton cloths
- Printing and packaging productions, especially the notebook and schoolbooks
- Gum Arabic manufacturing and exporting

3.3.3. Development of Industrial Free Zone

As shown in the Figure 3.3.1, currently two Free Zones are operational in Port Sudan and north of Khartoum (Ghaliya), and four others are under planning for development, which are in Kosti, El Obeid, Geneina and Sidaref (under construction). Sudan has signed of the Free Trade Zone development agreement with Ethiopia for facilitate smooth trading system utilizing manufacturing facility and infrastructure, therefore these Free Zones will function effective between two countries. The map shown on the right illustrates operating or proposed Free Zone locations in Sudan.



Source: JICA Survey Team prepared based on provided information
Figure 3.3.1 Sudan Free Zone Location Map

3.3.4. Urban Development, Land Use and Environmental and Social Consideration

(1) Urban Development

After the 1980 Regional Government Act and all the decentralization acts and laws followed enacted, urban development of the country has been progressing in strategic locations based on the national development plans, which should be in line with the industrial development nodes, according to the government officials. After South Sudan's secession as well as the revenue share under "Comprehensive Peace Agreement" has limited the development slowing down, however the government strategized economic development with infrastructure development to enhance regional networking to enhance those populated areas as the regional centers. It is important to recognize that the decentralization and urban development should take comprehensive steps as the government has limited financial capacity, so that prioritization of the target cities and industrial centers, such as free zones, etc. for investment concentration is necessarily taken into account.

(2) Environmental and Social Consideration

Current enacted law for environmental protection is Environmental Protection Law 2001 and Environmental Health Law 2009 (also, Wild life Law 1986, Water Resource Law 2002, and Forest Protection Law 2002) to follow. Development related EIA guideline is IGAD Trans Boundary EIA Guideline (2012) including SEA

¹⁰ The export volume of gold reached 65% (2012) and 29% (2014), according to the information by JICA.

(Strategic Environmental Assessment) to follow for development in Sudan. There are also Environmental Assessment Protocol and Environmental Assessment Policy that direct development in the country. When developments take place, these should be referred as the basis. According to IGAD EIA guideline, development plans and master plans should be evaluated for the necessity of SEA process.

When EIA is required and submitted, High Council of Environmental and Natural Resources should be the responsible agency to give license to the EIA report for development as the national committee review. EIA review is implemented by the Ministry of Environment, Natural Resources and Urban Development under the High Council.

3.4. Regional Development and Industrial Promotion of South Sudan

After the country's independence from Sudan over 50% of South Sudanese are at poor (55% in rural areas and 24% in urban areas) state, while over 80% of poor households depend on agriculture for their livelihood. Education and health indicators are among the lowest in the world, reflecting the impact of internal conflict and limited provision of social services. Although South Sudan formulated a national development plan 2011, the progress of development has been much lower than expected and much of the planned targets were not met despite the CPA agreement.

3.4.1. Development Plan and Policy

The government of South Sudan has set the long term development vision "SOUTH SUDAN'S VISION 2040" and states that South Sudan aspires to build an exemplary nation by 2040: A nation that is educated and informed; prosperous, productive and innovative; compassionate and tolerant; free, just and peaceful; democratic and accountable; safe, secure and healthy; and united and proud. Further the government formulated South Sudan Development Plan 2011-2013 (SSDP) in line with the Vision 2040 for immediate development action tool.

Due to lack of progress in development plan and actions, the government has re-evaluated the SSDP and extended the period for another three years till 2016. After the time came to the end of plan period last year, the government has started to further extend the plan period, although it has not decided yet. After the second evaluation of the SSDP, the government identified that the current SSDP (2011-2016) could be extended since the planned development are still in line with the general requirement for national development, according to the comments provided by the South Sudanese government officials. Accordingly, the following national plans are the most current plans that the country resides.

- South Sudan Development Plan (SSDP) 2011-2013 (was extended till 2016)
- South Sudan Infrastructure Action Plan

SSDP's overall objective is summarized to ensure that South Sudan becomes a united and peaceful new nation, building strong foundations for good governance, economic prosperity and enhanced quality of life for all by 2014. The major objective actions are:

- Improving governance
 - Institutional strengthening and improving transparency and accountability: To build a democratic, transparent, and accountable Government, managed by a professional and committed public service, with an effective balance of power among the executive, legislative and judicial branches of government.
- Achieving rapid rural transformation to improve livelihoods and expand employment opportunities
 - Rural development supported by infrastructure improvements: Diversified private sector-led economic growth and sustainable development which improves livelihoods and reduces poverty.
- Improving and expanding education and health services
 - Investing in people: To promote the well-being and dignity of all the people of South Sudan by progressively accelerating universal access to basic social services.
- Deepening peace building and improving security
 - Deepening peace and improving security: To defend the sovereignty and territorial integrity of South Sudan, prevent the resurgence of conflict and uphold the constitution by providing equitable access to justice and maintaining law and order through institutions which are transparent, accountable and respect human rights and fundamental freedoms.

In order to achieve the above described objectives, the following key actions are prioritized to enhance the economic functions of the country.

- Develop trade, industry, investments and the private sector
- Increase foreign and domestic investments
- Increase access to private sector financing
- Further improve the legislative framework for economic activities
- Enabling environment
- Join global communication networks
- Further diversify the economy away from oil and from the main cities
- Develop and manage efficient power supply
- Entrepreneurship and capacity-building to engage in economic activities

3.4.2. Industrial Development Plan

The government has set Economic development pillar objective under the SSDP, and it is summarized that “Diversified private sector-led economic growth and sustainable development that improves livelihoods and reduces poverty.” Top five priority program areas are identified under the economic development pillar.

- Agriculture and forestry (to support increased crop production)
- Roads and road transport development (to improve transport and logistic infrastructure)
- Development of energy, mineral and mining sectors (including oil) (to ensure good management of critical oil resources and increase electrical power supply)
- Animal resources and fisheries (to support improved livestock production)
- Water resources management, development, utilization and provision of sanitation services (to improve access to safe water and improved sanitation)

The present oil sector is critical as a source of public revenue and foreign currency earnings, however it contributes direct employment little while job creation is also critical. The oil production will decline quite fast unless new oil mines are exploited and developed quickly. Moreover, such a heavy concentration of economic activity and vulnerability to world price fluctuations may exacerbate economy. Therefore, diversification of income generation is essential and planned to achieve sustained economic development and livelihood for the broad population, to provide opportunities for women and youth as well as men, to create opportunities for returnees and former combatants, and to produce basic goods for daily consumption.

3.4.3. Development of Industrial Parks and Other Facilities

There are two (2) Industrial Export Processing Zones (EPZ) in the country, namely in South Juba and Bentiu, and these could be future manufacturing centers to invite FDIs to utilize domestic resources including oil products. During medium-long term development of the country with more prepared financial support program and appropriate law and regulation package to promote investment and SMEs, these EPZs will be effectively utilized for manufacturing and value-addition industries.

3.4.4. Urban Development, Land Use and Environmental and Social Consideration

(1) Urban Development

There was a conference “South Sudan Town Planning Conference” held in 2007 under USAID support to adopt state based urban and land development, although it refers the planning before the independence. In this conference, each State proposed “Mission of Town Development,” and industrial development mission is also noted for the planning. Since the development is slowly proceeding in the country, such planning concepts may be effective to apply in each State. As the current state development plans are from the period before independence, some of the town planning for development may change the plans, therefore it is important to further study and obtain the latest state level development plans during the next study stage.

(2) Environmental and Social Consideration

The strategic goal of the National Environment Policy 2015 to 2025 ensures the protection, conservation and sustainable use of the natural resources of South Sudan without compromising the framework of inter-generational equity. Any development when implemented shall be a subject for Environmental Impact and Protection Law as well as Land Ownership (resettlement issues) Regulation. Most mining development

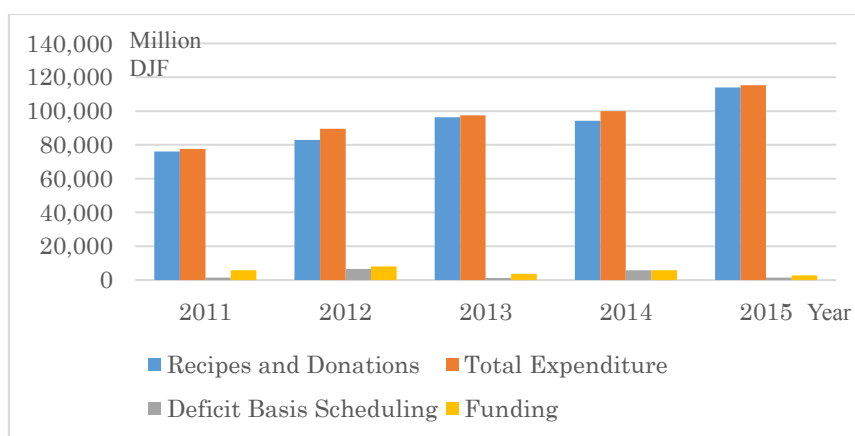
should be subject of EIA. Including EIA and SEA, additional and latest information should be obtained during the next study stage.

3.5. Financial and Budget Condition of the Countries

3.5.1. Financial and Budget Condition

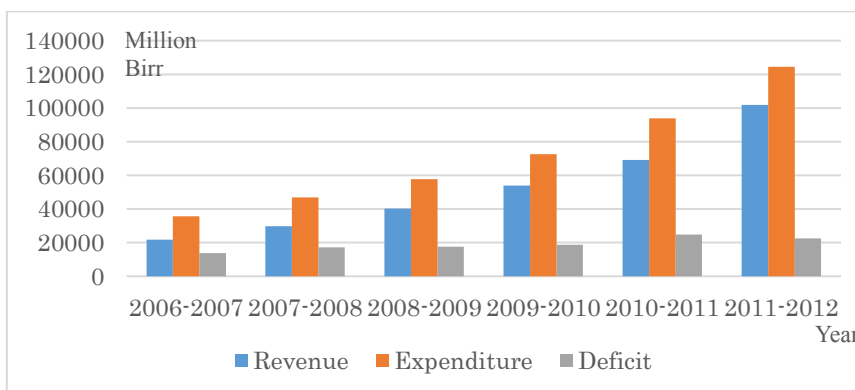
According to the revenue and expenditure balance from IMF data¹¹, all target countries have increasing deficit. The information from IMF indicate different year duration, however the general progression indicates gradual increase.

Both revenue and expenditure are growing in all the countries, South Sudan indicate very sharp increase in expenditure between 2015 and 2016. Trade based deficit is over 10% in Ethiopia, Sudan and South Sudan¹². The following figures illustrates the financial balance of the target countries.



Source: Direction du Budget

Figure 3.5.1 Balance between Revenue and Expenditure of Djibouti

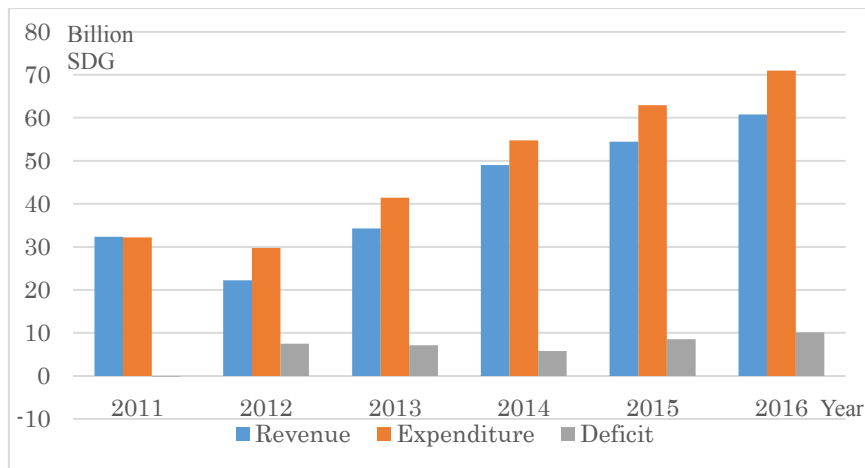


Source: Ministry of Finance and economic Cooperation

Figure 3.5.2 Balance between Revenue and Expenditure of Ethiopia

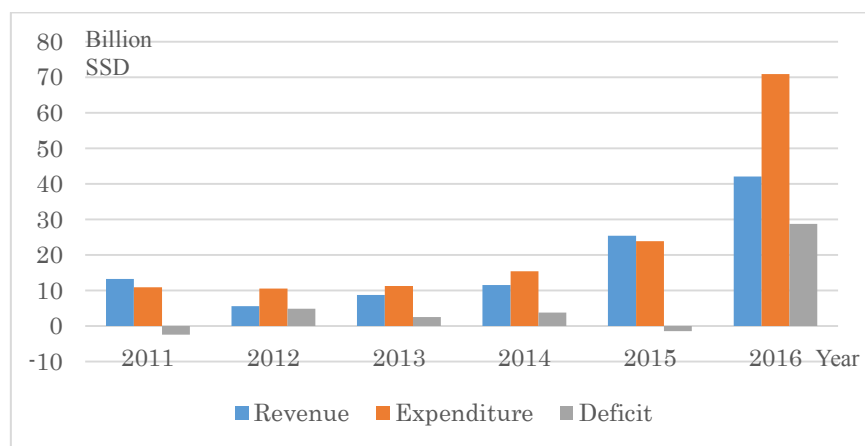
¹¹ Djibouti for instance experienced major increase of public debt from 50% to 85% in last two years, according to the IMF Staff Country Report 2016. Therefore, financial situation of each country shall be studied during the net study stage as well to obtain the latest status of each country.

¹² Djibouti in 2014 recorded public debt at 60% of GDP, Ethiopia in 2016 showed public debt at 54% of GDP, Sudan in 2016 recorded its public debt at 68% of GDP (Source: World Factbook, CIA). Also, IMF Country Report 17/87 describes that Djibouti's debt to GDP ratio has increased from 50% of 2014 to 85% of 2016.



Source: IMF

Figure 3.5.3 Balance between Revenue and Expenditure of Sudan



Source: IMF

Figure 3.5.4 Balance between Revenue and Expenditure of South Sudan

3.5.2. Budget Management System of Each Country

In order to prepare for the future formulation of development strategy and master plan as well as implementation of planned development in the target region and countries, it is important to identify the basic roles of government agencies and to picture the flow of development budget among concerned agencies of each country toward the regional corridor development. According to the survey and hearings made to the government officials, the following conditions are identified.

(1) Djibouti

The Ministry of Economy and Finance takes a role to plan, framework, supervise/monitor public economic activities and control of economy, and the system is centralized. Accordingly, budget will be distributed to each agency based on their development plans and administration. The Ministry of Budget is then in charge of control, check, monitor and use of actual budget by all government agencies including treasury, tax, income, debt, etc. Although the budget allocation is made to each agency, there is a need of approval of budget use by the Ministry of Budget (document submission is mandatory in some particular expenses).

(2) Ethiopia

The Ministry of Finance and Economic Cooperation generally plans economic development, public finance and budget for development, audit operation systems, monitor and evaluation of economic development, improve development planning and budget preparation system and improve information communication system. The ministry distributes finance based on the national development plans of each government agencies, and expenditure is monitored. Besides, state level budget is controlled by each state and regional government under the federal institutional system.

It will be important to identify each development project with appropriate executing body(s) with proper coordination system among state government and federal government agencies.

(3) Sudan

Sudan's state budget is prepared by the state governments and submitted to the central government, Federal Government under the Presidency in compliance with the rules make budget plans for both federal and state governments (ratio: 7:3), then submit to the cabinet. The budget plan should be finally approved by the parliament. After the approval, the draft plan becomes Budget Law within three weeks for publication. Budget shall be distributed in 12 month divided funds to each local or state government according to their development plans. There are two kinds of budgets:

1. General State Budget (direct fund) for local/state governments' official salary and general administration expense.
2. Project based Budget shall be monitored/followed up by the Ministry of Finance and Economic Planning (steering committee - under presidential office - should check and control).

(4) South Sudan

Most revenue should be centered to the Ministry of Finance and Planning (MoFP) as the government pool. State level ministries or local agencies plan development with cost estimate, as "Key Plan" each year, and brought to MoFP as the Ministry to allocate budget or seek financial support if national budget is not enough (under bilateral or concessional based loan, etc.). When a fund is given by, for instance donor, Inter Ministerial Appraisal Committee (chaired by Undersecretary) under the MoFP as a steering committee make decision of the budgeting action.

3.6. Study on Possible Development Implementation Structure of Each Country

In order to prepare for the future formulation of master plan as well as implementation of planned development for the regional corridor development in the survey target countries, it is important to identify the basic roles of government agencies and to understand planning process including approval procedure of each country toward the corridor development. According to the survey and hearings made to the government officials, the following conditions are identified.

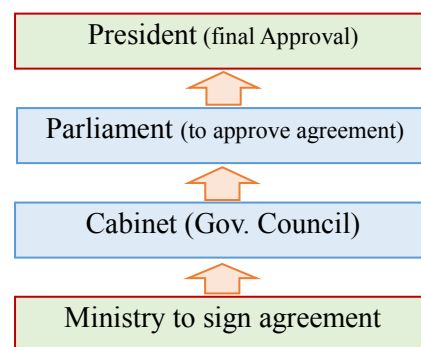
(1) Djibouti

Djibouti government may have some executing options based on the development cooperation and higher regional authority above the countries if any. The Ministry of Economy and Finance may take a lead if the development focuses on economic development with COMESA. When the development focuses on more physical development such as infrastructure among countries, the Ministry of Equipment and Transport may take a lead with technical support from other ministries.

Considering the regional corridor development, currently the government expects the Ministry of Equipment and Transport to take the central and window role for the actual development implementation maybe with Djibouti Ports and Free Zones Authority.

The Working Group or Steering Committee would be formulated with an appropriate agency as a leader on top of all concerned agencies.

Any of the agreed plans, etc. shall be reviewed by the Cabinet, then Parliament and finally by the President. In this regard, politicians may have opposition to the plans or any development, and they may refuse to approve, then the direction may change. Besides, President should be the top of executive member, therefore if decision should go through parliament, normally the plan will be approved and endorsed without complication to become a part of national plan. All concerned agencies should be parts of committee (within Djibouti), and development plans should be well discussed under the environmental consideration policy. The above Figure 3.5.1 illustrates development plan approval procedure in Djibouti.



Source: JICA Survey Team prepared based on the provided information by Djibouti government.

Figure 3.6.1 Approval Procedure of Plans in Djibouti

(2) Ethiopia

Considering international and regional cooperation for the corridor development in total of economic, industrial and infrastructure development, the Ministry of Finance and Economic Cooperation (MoFEC) could be an appropriate central window agency for the master plan formulation together with Ministry of Foreign Affairs (MoFA). Having COMESA and/or IGAD involved in the formulation, MoFEC could still be very effective agency. National Planning Commission (NPC) will be involved in the formulation, but NPC could be coordination agency for plan formulation among other line ministries.

When Ethiopia involves into the regional corridor development master plan formulation, the Working Group among other countries still be organized by many ministries including NPC, MoFEC, MoFA, Ministry of Industry, Ministry of Trade, Customs, etc. as well as infrastructure sector ministries. The Steering Committee might be formed with MoFEC and MoFA on top. It is not clear if the Prime Minister involves to such organization, but there could be a possibility if other country's top is listed as a member. Actual organization structure should be decided at an actual time of actions taken. These information were provided by the officials of National Planning Commission.

Draft Plan(s) prepared by each line ministry to be reviewed under the stakeholder consultation with many fields of concern as Public Consultation (P/C). After the acceptance by the P/C, Council of Ministers (Cabinet) reviews and approve the plan (Prime Minister is the Chair of the Council). After the approval by the Cabinet, the plan should be reviewed by the parliament for approval. When the parliament approves, the plan is sent for validation and enacted. After the plan enacted, NPC in general monitors and evaluates the plan execution and its planned development.

(3) Sudan

The Ministry of Finance and Economic Planning (MoFEP) is responsible to formulate plans and policies, and monitor and evaluate the actions and plans at the national level, and the line ministries as well as states should plan their particular development in line with the national level plans and policy. In this sense the Ministry of International Cooperation may be appropriate to be the window and coordinating agency for the future strategy and master plan formulation with MoFEP's cooperation for corridor development. The development concerned line ministries and the Committee for Sudan Rehabilitation Program may be the member of the formulation members. In case of the scope being small the executing body might be minimum with only targeted sectors, and that could be similar to the OSBP project.

Planning and plan/policy approval approach in Sudan government is Bottom-Up from locality and local government to state level government and to the federal government as a top. Projects are made by local and state level government. Final approval of the plan would be made by the president.

(4) South Sudan

As regional corridor development concerned, there are a few possible government bodies to take window role for international coordination. In case of Northern Corridor development, the Office of the President took the role with coordination work by the Ministry of Foreign Affairs (MoFA). However, if the development considers more on economic development, the Ministry of Finance and Planning instead of MoFA will take the role to work with the Office of the President. The scale and involvement level of the country should highly affect the selection of central coordination agency as well as executing organization structure.

State level ministries and line ministry level (especially by executive level) should prepare the plan(s), then according to the guidelines for plan formulation line ministries' general workshop will be held to determine whether the plan is in line with concerned higher plans and policies. After the review and confirmation by the workshop, the plan should be reviewed by the parliament for approval, and the president will endorse in general procedure.

3.7. Concerned RECs and Relationships to Corridor Development

(Refer to the survey target region map)

The roles of RECs concerning the survey target region could be the central coordinator of master plan formulation or development implementation in the future. Since the target consists of four countries, demarcation of tasks and roles may be more complicated among different institutional and legal systems. The organization of multiple country members may need a coordinator for master plan formulation and

development, thus REC(s) could be considered as a steering or coordinating entity above individual countries. In order to identify the best suitable organization for the master plan Formulation and/or development implementation, understanding philosophy and strategies of concerned RECs is also important for effective future execution. General information of concerned RECs are described hereafter.

(1) COMESA (Common Market for Eastern and Southern Africa)

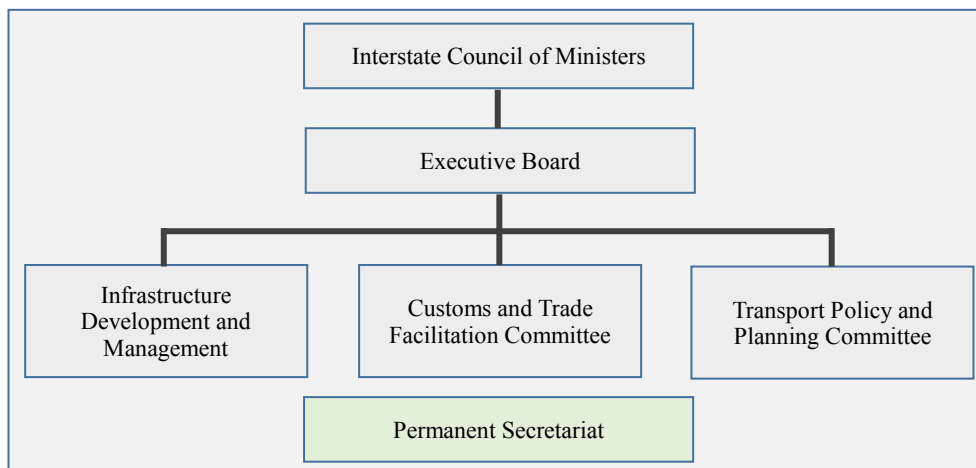
Vision	To develop fully integrated, internationally competitive regional economic community with high living standard for all people to merge into an African Economic Community
Mission	To achieve sustainable economic and social progress through increased cooperation and integration of all development field: trade, customs & monetary affairs, transport, communication & information, technology, industry & energy, gender, agriculture, environment & natural resources.
Members	Burundi, Comoros, Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia and Zimbabwe
Strategy	Three core integration approaches: Market Integration, Production or Project-directed Integration and Development Integration. Market Integration: Focuses market integration through trade liberalization through tariff / non-tariff barrier removal for commercial interaction and investment with the creation of free trade zone. Production or Project-directed Integration: Focuses on the coordinated planning and implementation of productive activities. Development Integration: Focuses on approaches on both production and market integration, while emphasizes equitable development through compensatory and corrective initiatives. Strategy emphasizes the integration of economic space through removal of trade and investment barriers especially for productive sectors, and it is expected that the private sector will play a central role and actions. The development integration agenda consists of: Trade Development, Investment Development, Infrastructure Development, and Science and Technology (S&T) Development. Trade Development: Prioritizes Free Trade Area, Formulation of Customs Union and Formulation of Monetary Union. Investment Development: Prioritizes Industry including MSMEs (micro, small and medium enterprises), Agriculture, Fisheries, Livestock Development, Irrigation Development, Tourism, Industrial & Private Sector Support, and Gender Mainstreaming. Infrastructure Development: Prioritizes Transport Infrastructure, Communication & Information, Meteorological Services, Environment, and Energy. Science & Technology: Prioritizes Research and Development (R&D) considering the increase investment in education and development of networks and links.
Remarks	<ul style="list-style-type: none"> • Djibouti Corridor Authority to be established under COMESA's initiative to connect Djibouti, Ethiopia, Sudan and South Sudan removing physical and non-physical barriers among countries. COMESA's RISM (Regional Support Mechanism) to be put to support implementation of transit transport facilitation instruments. • As of now South Sudan is not a member of COMESA.

COMESA's concept is to support and develop member countries from economic and industrial development, however hard infrastructure development should be anyway foundation of such development. Therefore, COMESA also plans infrastructure development as if these are necessary.

COMESA has completed draft version of "Five (5) Year Djibouti Corridor Development Strategic Plan (tentative title)" in 2016 in order to create framework with concerned countries. MoU for the strategic plan utilization has also drafted with soft-agreement by Djibouti, Ethiopia and Sudan at institutional level. In addition to those three countries, South Sudan lately indicated their interest to join COMESA as a member, so that South Sudan has also been considered as the fourth country for the corridor. This MoU might be signed off sooner, however actual process and progress should be followed for the latest information. COMESA, after the strategic plan formulation, is preparing to establish Djibouti Corridor Authority (DCA). The Strategic Plan cannot be shared since MoU is not signed and the concerned countries' consensus is not

given yet. Future formulation of the regional corridor development master plan needs to have COMESA's Strategic Plan in order to study and synchronize JICA's corridor master plan and COMESA's strategic plan as it should be more effective.

Each beneficially country should deploy designated officials to formulate the body. COMESA will be only facilitating their development activities through financial support and moderation among others when problems occur. However, issues shall be basically sorted out by the concerned countries, and COMESA does not have power to control them. COMESA is not territorial organizer in this regard. When any development power balance is fractured, and weak country needs more support to achieve "One" development, COMESA may facilitate financial management among the countries. Normally economically stronger country(s) should support weak country(s) in some ways. When development takes place among the concerned countries, COMESA stands for sponsor finding in observing wider region. (COMESA itself does not have any financial source for DCA activity at this point.) Draft Strategic Plan includes the following idea of organization structure.



Source: JICA Survey Team prepared based on the Information provided by COMESA
Note: this is only a draft organization structure for reference in the Strategic Plan. (COMESA Director)
Figure 3.7.1 Tentative Organization Structure of Djibouti Corridor Authority

(2) IGAD (Intergovernmental Authority on Development)

Vision	To be premier Regional Economic Community for achieving peace and sustainable development in the region.
Mission	To promote regional cooperation and integration to add value to member states' efforts in achieving peace, security and prosperity.
Members	Djibouti, Ethiopia, Sudan, South Sudan, Kenya, Uganda, Somalia and Eritria
Strategy	<p><u>IGAD Regional Strategy and Implementation Plan 2016-2020</u></p> <p>Aims and objectives of IGAD includes:</p> <ul style="list-style-type: none"> • To promote joint development strategies and harmonize macro-economic policies and programs in social, technological and scientific fields, • To harmonize policies in trade, customs, transport, communications, agriculture, and natural resources & environment, and promote free movement of goods, services and people, • To create environment for cross-border, foreign and domestic investments, • To promote food security and sustainable development of natural resources and environmental protection, and assists member states to combat drought and disasters as well as their consequences, • To develop and improve a coordinated and complementary infrastructure in transport, telecommunication and energy in the region, • To promote peace and stability in the region and create mechanisms to prevent and manage conflicts among member states, • To mobilize resources for the implementation of emergency programs within the cooperative framework,

	<ul style="list-style-type: none"> • To facilitate, promote and strengthen cooperation in research and development as well as science and technology, • To provide capacity building and training a regional and national levels, and • To generate and disseminate development information in the region. <p>The area of IGAD member cooperation includes pillars of:</p> <ul style="list-style-type: none"> • Agriculture, Natural Resource and Environment • Economic Cooperation, Integration and Social Development • Peace and Security, and Humanitarian Affairs • Corporate Development Services
Remarks	IGAD is a major REC in the region, established originally in 1986 as IGADD for drought measure development. IGAD since 1996 takes care of not only drought protection, but also food security as well as inter-trade promotion and conflict control. In 2008 IGAD further expanded its mission to investment, trading and banking environment improvement, and now is preparing for the development of IRIMP (IGAD Infrastructure Master Plan).

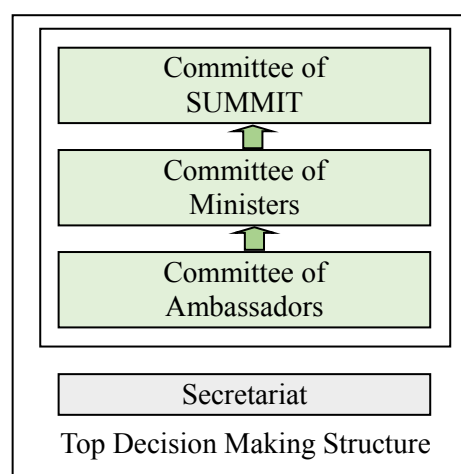
Role of IGAD is to integrate region of the member countries and harmonize trade, transport, environment, peace and security, social and economy, etc. Top Strategy of IGAD is to harmonize in all development in the region, of course considering corridor development.

IGAD has enforcement power over the member countries. Any IGAD decision shall be binding by the Committee of SUMMIT. Actual actions should be taken by focal point ministry. Contact window is Ministry of Foreign Affairs in general. IGAD has close relationships with other RECs or member countries for sustainable development. The relationship should be maintained at the Central Task Force level.

SUMMIT of IGAD is held normally twice a year to make binding decision, but it could be called for urgent matters as well. IGAD also considers to establish Djibouti Corridor Authority and its office, however it is not finalized but it may be fixed in the next Council Ministerial SUMMIT meeting. COMESA has been working on Djibouti Corridor by their own language other than IGAD's study, but these RECs can work closely to have good outcome for the future regional development.

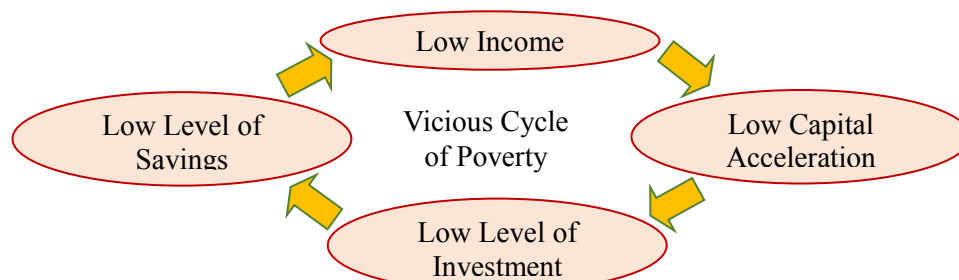
According to the IGAD officials, IGAD Regional Infrastructure Master Plan (IRIMP) formulation will be starting after later summer 2017 at earliest since it is now under the EoI (Expression of Interest) processing. This process should be further followed up.

IGAD's industrial development is now at the planning stage with "value addition" to sectors of Textile, Apparel, Wood fabrication (furniture, etc.), leather and some others. The Concept is based on the AIDA (Acceleration of Industrial Development) of A.U., which pursuing access to cheap processing. There is an avoidable poverty spiral with poor, and this spiral should be reversed to positive flow.



Source: JICA Survey Team prepared based on the provided information

Figure 3.7.2 IGAD SUMMIT Structure



Source: JICA Survey Team prepared based on IGAD Hearing

Figure 3.7.3 Vicious Cycle of Poverty that IGAD tries to avoid

Through IGAD's engagement with countries for regional integration, it is trying to establish Industrial

Research Institute to promote vocational training, technical transfer and machine/equipment supply support center.

(3) EAC (East African Community)

Vison	To make wider and deeper cooperation among partner states and other regional economic communities in political, economic and social areas for mutual benefit.
Mission	To work toward establishing common market and monetary union, then ultimately political federation of the Eastern African States.
Members	Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda
Strategy	Aiming the member State countries' large population, land areas and combined GDP, a large regional economic block realization is envisioned to bear great strategic and geopolitical significance and prospects of renewed and reinvigorated East African Community. It also aims to establish East African Common Market together with consultation on fast tracking process in order to set up East African Federation for powerful and sustainable East African Economic and political Block.
Remarks	EAC was entered into force by the original partner States: Kenya, Uganda and Tanzania in July, 2000. EAC established Customs Union in 2005.

Considering the corridor development target countries, South Sudan is the only member country of EAC, and EAC normally does not highly involve to the exercise of non-member country or region. EAC in general consider "corridor development" as a network development from Ports to the inland regions including landlocked countries. EAC has been studying of corridor development with ports in Mombasa and Dal es Salaam. AGOA (African Growth and Opportunity Act) provides direction for the development as there are multi-methods for export oriented development. Looking at the African region, importing of goods and resources are greater than exporting from inlands. Thus, development should consider to strengthen export oriented trading and industrial structure. The target region has been financially supported by China greatly, and this is necessarily considered to work with or coordinate with Chinese development in some ways. South Sudan should be equally treated from EAC's view, however good relationship between Ethiopia and Sudan is also another key to look at the regional peaceful development. Connecting Juba through Ethiopia should be carefully studied because of Ethiopia-Sudan relationship. Juba may be connected better through Uganda and Kenyan ports. When corridor development is considered, multi-transport network (Redundancy) should be considered even for South Sudan. Natural resources are the matter of each country and EAC does not involve into any decision on resource use and management. Border infrastructure development could be assisted by EAC and other RECs.

(4) NEPAD (AU)

NEPAD is an agency under African Union for actual implementation of many tasks including mapping, monitoring, etc. PIDA is one of the main development plan that is handled by NEPAD, and NEPAD is looking for development opportunities in Trans-Africa Corridor. Under this concept, NEPAD also considers Djibouti corridor which may be connected from Djibouti, Ethiopia then to South Sudan, and the corridor may be connected eventually to western African region. In fact, NEPAD has identified "Djibouti Corridor" as one of the priority projects from this year.

Coordination between NEPAD and COMESA as well as others is a common and usual issues always, and each organization has been trying to sort out such coordination issues. NEPAD has put effort on deploying experts to each REC organization in order to effectively implement plans, and NEPAD is struggling with lack of technical experts to deploy for each REC organization.

Any regional development including corridor development necessarily requires not only hard infrastructure development but also soft infrastructure and program especially aiming trade sector enhancement and strengthening. NEPAD has been working on "Move Africa" projects in the soft-infrastructure development in line with OSBP under the World Economic Forum.

Each REC organization as well as NEPAD should put effort to facilitate good cooperative development among countries, but RECs does not have power to step into such jurisdiction.

When the Project should come to make decision on final target countries for Djibouti Corridor, it should be better (and suggested) to ask opinions of each REC organization to find clear vision. From OSBP point of view, corridor development should consider, of course, road and transport infrastructure, but also look at the

intra-market demand to assist. It might be effective to have good package of OSBP facility/program with transport enhancement at the border between Sudan and Ethiopia.

3.8. Donor Activities

Donor development assistance works and plans have been studied to picture the regional development activities, so that the target sectors and areas of development could be more specific in the target region with clear demarcation and task distribution among donors for the future M/P formulation.

Table 3.8.1 List of Donor Projects

Name of Donor	Project Name	Sector	Country
World Bank	National Urban Development Project (National Urban Development Spatial Plan: March 2016)	Urban Development	Ethiopia
	Ethiopia- Expressway Development Support Project	Transport	Ethiopia
	Ethiopia-Road Sector Development Program APL4	Transport	Ethiopia
	Ethiopia-Transport Sector Project in Support of RSDP4	Transport	Ethiopia
	World Bank-Transport System Improvement Project (TRANSIP)	Transport	Ethiopia
	Sudan-Issues in Urban Development Phase1 - overview of the Urban Landscape	Urban Development	Sudan
	South Sudan Rural Roads Project	Transport	South Sudan
	South Sudan-Eastern Africa Regional Transport, Trade and Development Facilitation Program (SS-EARTTDFP) rehabilitate and develop critical national and rural roads and transport infrastructure, and improve critical urban infrastructure in the major towns that form the national and state capitals of South Sudan	Road	South Sudan
Arab Fund for Economic & Social Development, Saudi Fund	Tadjoura Port Phase 1	Port	Djibouti
African Development Bank	Modjo-Hawassa Road Project Phase I	Transport	Ethiopia
	Bedele-Metu Road Upgrading Project	Transport	Ethiopia
	Rural Travel and Transport Support Project	Transport	Ethiopia
	Woito Namurauth & Konso Yobelo Road Project	Transport	Ethiopia
	South Sudan Infrastructure Action Plan - A Program for Sustained Strong Economic Growth - Full Report	Infrastructure	South Sudan
	Technical Assistance Project including feasibility study and detailed design of the Juba-Mundri-Yambio road	Road	South Sudan
	Kampala-Juba-Addis-Djibouti corridor (feasibility studies and detailed design of Kapoeta-Boma-Raad road)	Road	South Sudan
	Rehabilitation of Jimma - Agaro - Dedessa River	Road	Ethiopia
	Upgrading of Hawassa - Chiko - Yirgachefe - Hageremariam - Yabelo	Road	Ethiopia
	Upgrading of Mega - Moyale	Road	Ethiopia
	Upgrading of Bedele - Metu (Lot 1 & 2)	Road	Ethiopia

Name of Donor	Project Name	Sector	Country
	Construction of expressway Modjo - Meki	Road	Ethiopia
Agence française de développement	Solid Waste Management, Vulnerability and Treatment Program in the Balbala Quarter	Urban Development	Djibouti
	Balbala Integrated Urban Development Program	Urban Development	Djibouti
	Effective Sanitation System in Djibouti	Sanitation	Djibouti
	Construction of New Control Center for the National Electricity Network	Energy	Ethiopia
	Strengthening Ethiopia's National Electricity Network	Energy	Ethiopia
	New Terminal Dedicated to Freight at Addis Ababa Airport	Transport	Ethiopia
	First Bus Service Line for Addis Ababa	Transport	Ethiopia
	New Waste Storage Infrastructure in Addis Ababa	Waste	Ethiopia
	Drinking Water Supply Program for Secondary Towns	Water	Ethiopia
BADEA/OFID/Saudi	New project of Shashamane - Halaba	Road	Ethiopia
China	Doraleh Multipurpose Port	Port	Djibouti
	Damerjob Livestock Port	Port	Djibouti
	Upgrading of Dire Dawa - Dewele	Road	Ethiopia
	Construction of expressway Arsi Negele - Awassa	Road	Ethiopia
	Construction of expressway Adama - Awash	Road	Ethiopia
Chinese Development Bank	Ethiopia-Djibouti Railroad Project	Transport	Djibouti
China Exim Bank	Juba-Terekeka-Yirol-Rumbek	Road	South Sudan
Department for International Development	Sudan-Operational Plan 2011-2015	Institutional	Sudan
IDA	New project of Melkassa - Sodere - Nureaera - Metehara	Road	Ethiopia
	New project of Dembi Dolo - Mugi - KM56 - Gambela (DBST)	Road	Ethiopia
	Construction of expressway Zeway - Arsi Negele	Road	Ethiopia
Islamic Development Bank	Special Program for the Development of Africa	Financing	African Region
KfW Development Bank	Food Assistance to Vulnerable Groups including Refugees	Food	Djibouti
	Urban Water Supply and Waste Water Disposal, 3 Towns in the Amhara Region	Water/Sewer	Ethiopia
	Primary School Construction in Tigray (FC), Rehabilitation of Teacher Training Collage in Oromiya (FC), Primary Education Assistance Project (TC)	Education	Ethiopia
Korea	Construction of expressway Meki - Zeway	Road	Ethiopia
Kuwait Fund	Upgrading of Dadjoura-Balho Highway	Road	Djibouti
United Nations Development Programme	Country Programme Action Plan between the Government of the Republic of Sudan and the United Nations Development Programme 2013-2016	Institutional	Sudan
United Nations	Planning Urban Settlements in South Sudan Basic	Urban	South

Name of Donor	Project Name	Sector	Country
Habitat	Concept	Development	Sudan
United Nations Industrial Development Organization	Integrated Agro-Industrial Parks in Ethiopia Programme	Agro-Industry	Ethiopia
USAID	Construction of Juba-Nimule Road	Transport	South Sudan
	Trunk and feeder road design of 1,000 km	Road	South Sudan
	Feeder Roads Program (ongoing maintenance program)	Road	South Sudan
WFP	Logistics Cluster and WFP Logistics Augmentation in support of the Government of Ethiopia for the Drought Response	Logistics & Transport for Food Security	Ethiopia
JICA	Champion product approach implementation assistance survey in Ethiopia (phase 2)	Industrial Development	Ethiopia
	The project for formulating master plan on development of geothermal energy in Ethiopia	Energy & Power	Ethiopia
	The development study on the strengthening agricultural marketing system in southern nations nationalities and peoples region in the Federal Democratic Republic of Ethiopia	Agricultural Marketing	Ethiopia
	The study on quality and productivity improvement (Kaizen) in the Federal Democratic Republic of Ethiopia	Industrial	Ethiopia
	The Republic of Djibouti, the master plan study for sustainable irrigation and farming in Southern Djibouti	Agriculture	Djibouti
	Data collection survey for geothermal development in the Republic of Djibouti	Geothermal	Djibouti
	The preparatory survey on the rural water supply project in southern Djibouti	Water Supply	Djibouti
	Project for irrigation development master plan (IDMP) in the Republic of South Sudan	Agriculture Irrigation	South Sudan
	Comprehensive agricultural development master plan	Agriculture	South Sudan
	Juba Nile Bridge (Suspended)	Road	South Sudan

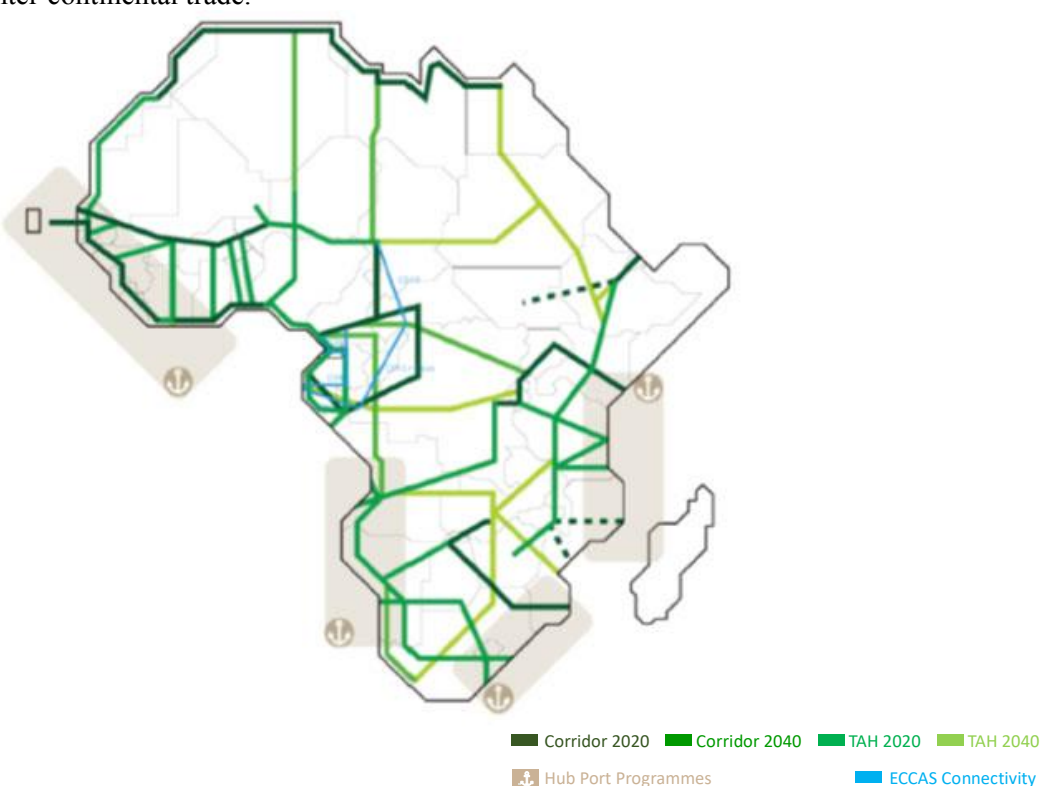
Source: JICA Survey Team

Note: The donor profiles and activities in Ethiopia during 2009 and 2013 with more details could be found in "Profiles of 41 Development Partners in Ethiopia 2009-2013" prepared by Development Assistance Group Ethiopia.

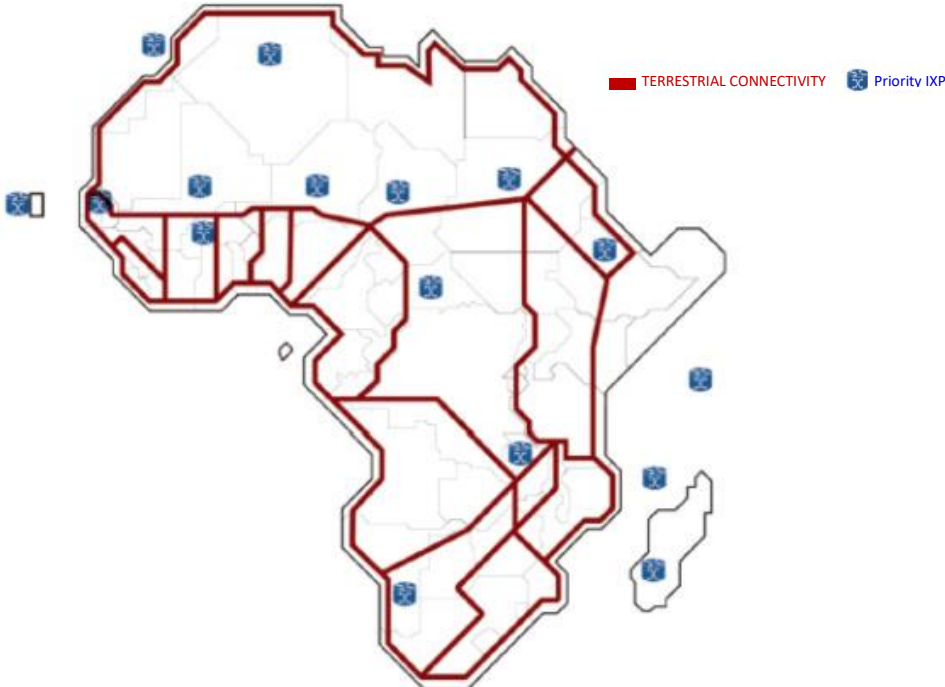
3.9. Concerned Program for the Region: PIDA (the Programme for Infrastructure Development in Africa)

For effective future development integration and coordination to other regional infrastructure development, the following PIDA development programme has been studied.

Infrastructure Outlook 2040

Reason of PIDA	Current status of infrastructure in African region has revealed its lack of development as the analysis indicates the road access rate is only 34%, electricity access rate is only 30%, domestic water access rate is only 4%, and internet penetration rate is only 6%. Infrastructure should play a major role in order for economic development and poverty reduction, so that development and improvement of infrastructure architecture in the region is the must for fully benefit from the integration to the industry and trade. There is an integrated need for product differentiation and value-addition for the continent, and infrastructure development should exploit and advance synergies among sectors. Thus, to strengthening function and effect of infrastructure to enhance the social and economic growth in the African region, the integrated development of infrastructure is necessary.
Priority Action Plan	<p><u>Transport Sector</u></p> <p>The development should link Africa’s major production and consumption centers, provide connectivity among major cities, and open landlocked countries to inter-regional and inter-continental trade.</p>  <p>The map displays the African continent with various infrastructure corridors highlighted in different colors. A legend at the bottom identifies the following elements: Corridor 2020 (dark green), Corridor 2040 (medium green), TAH 2020 (light green), TAH 2040 (yellow-green), Hub Port Programmes (brown circles with arrows), and ECCAS Connectivity (blue lines). The map shows a dense network of corridors connecting major cities and ports across the continent, with a significant increase in the number and complexity of corridors by 2040 compared to 2020.</p>

<p>Priority Action Plan</p>	<p>Energy Sector</p> <p>The sector plans major hydroelectric projects to generate electricity to meet demand resulted from increased consumptions of households, industry and agriculture, and to meet wider access to electricity. Transmission line development for continent's power pool connection and for larger energy trade in the region.</p> <p>■ PIDA PAP 2020 ■ PIDA</p> <p>Transboundary Water Resources (TWR)</p> <p>TWR program aims to develop multipurpose dams and building capacity of lake/river basin organization to plan and develop hydraulic infrastructure.</p>
-----------------------------	---

<p>Priority Action Plan</p>	<p><u>ICT Sector</u> The sector development should help completing Africa’s terrestrial fiber-optic infrastructure and internet exchange points (IXPs) to improve capacity and effectiveness of communication network.</p>  <p style="text-align: right;">Development Map Source: PIDA Infrastructure Outlook 2040</p>
<p>Remarks</p>	<p>The Formulation of PIDA was undertaken by collaborative partnership of AUC (African Union Commission), UNECA (UN Economic Commission for Africa), NPCA (NEPAD Planning and Coordinating Agency) and AfDB (African Development Bank).</p>

Chapter 4

CHAPTER 4 Current Trading Activities and Status of the Target Countries

This chapter illustrates the current trends and status of international trade transactions of the survey target countries. For the purpose, the Study Team refers UN Comtrade Database (<https://comtrade.un.org/>), which is the most fair and reliable source in order to show the actual numbers. Though, there is no appropriate data for the comparison, and only data utilized are of other countries' data for trading with South Sudan. The names of the trading items are based on the international convention of Harmonized Commodity Description and Coding System (HS Convention) and its four digit code and names.

4.1. Main Commodity and Partners of International Trade by Country

4.1.1. Djibouti

(1) Export

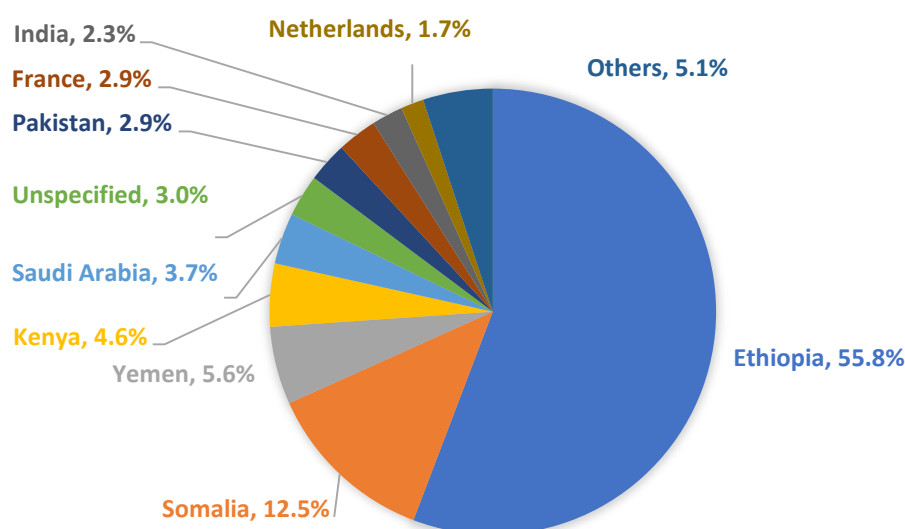
The largest share of export commodities in weight is “Cement,” which accounts for 29.5% of total export in 2009 (Table 4.1.1). The highest trade partner of Djibouti is Ethiopia which accounts for 55.8% of total, mainly “Cement”, “Wheat and meslin” are re-exported (Figure 4.1.1 and Table 4.1.2). The trade of Djibouti are characterized with large amount of re-export oriented trading activities, and re-export to Somalia (12.5%) and to Kenya (4.6%) are at large. Thus, means that Djibouti plays gateway role for both landlocked countries and coastal countries which have ports¹ (Table 4.1.2).

Table 4.1.1 Top 10 Export Commodities in Weight of Djibouti (2009)

Item	Unit: 1000 ton
Total Export Volume ¹⁾	171.1
Cement	50.5
Petroleum oils and oils obtained from bituminous minerals	21.0
Palm oil and its fractions	14.1
Grain sorghum	13.1
Wheat and meslin	12.0
Malt extract	10.6
Food preparations	5.1
Other cast articles of iron or steel	4.1
Cane or beet sugar and chemically pure sucrose	3.8
Ferrous waste and scrap	3.7

Note 1): Some items are not identified in weight.

Source: UN Comtrade Database



Source: UN Comtrade Database

Figure 4.1.1 Share of Export Partners of Djibouti (2009, Weight-Based)

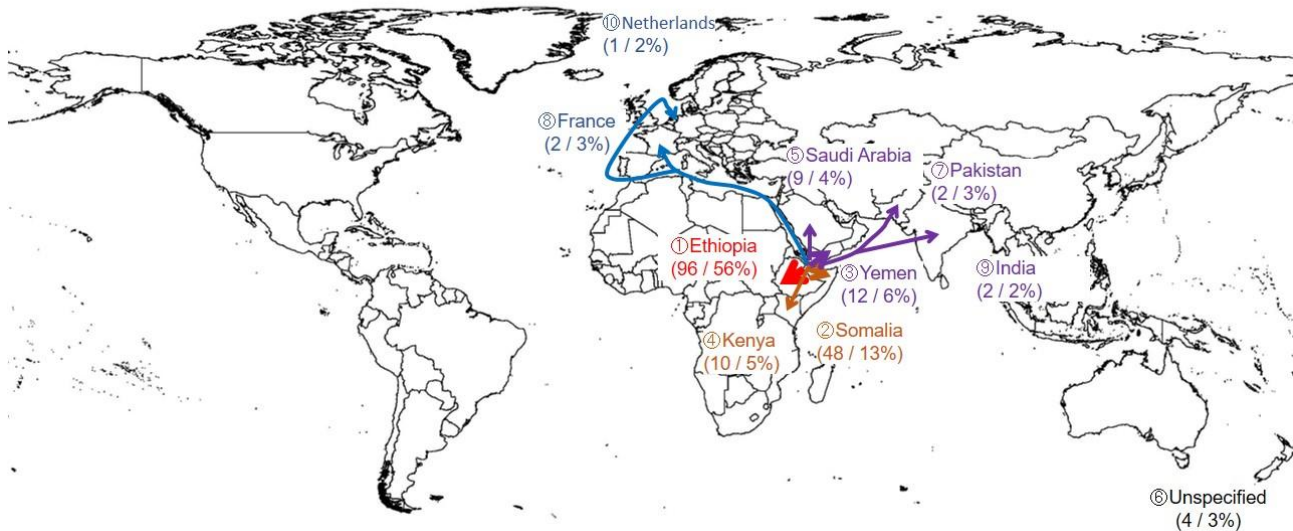
¹ Somalia and Kenya owns sea ports, however there could be land transport trade made from Djibouti.

Djibouti (Export 2009)

Total Export Trade Value
171.1 thousand ton

Above : Name of partner

Bottom : Trade Volume(Unit: thousand ton (included Re-Exports) / Share%)



Source UN Comtrade Database

Figure 4.1.2 Main partner and trade value of export in Djibouti (2009, Weight-Based)

Table 4.1.2 Main partner and Top 3 Trade Commodities (over 1,000ton) of export in Djibouti (2009, Weight-Based)

No	Partner	Commodity	Thousand ton	Commodity	Thousand ton	Commodity	Thousand ton
①	Ethiopia	Cement	48(44)	Wheat and meslin	12(12)	Malt extract	10(10)
②	Somalia	Grain sorghum.	10(10)	Worn clothing and other worn articles.	4(4)	Bran, sharps and other residues	1(1)
③	Yemen	Petroleum oils and oils obtained from bituminous minerals.	9				0.3
④	Kenya	Food preparations	4(4)	Grain sorghum	2(2)	Palm oil and its fractions	1(1)
⑤	Saudi Arabia	Petroleum oils and oils obtained from bituminous minerals	6				
⑦	Pakistan	Cement.	3(3)	Palm oil and its fractions.	2(2)		
⑧	France	Petroleum oils and oils obtained from bituminous minerals	5				
⑨	India	Ferrous waste and scrap	4				
⑩	Netherlands	Cane or beet sugar and chemically pure sucrose.	3(3)				

Source UN Comtrade Database

Note: Numbers in parentheses of the table are trade volume of Re-Export. Numbers in circle refer to the circled numbers in figure 4.1.2.

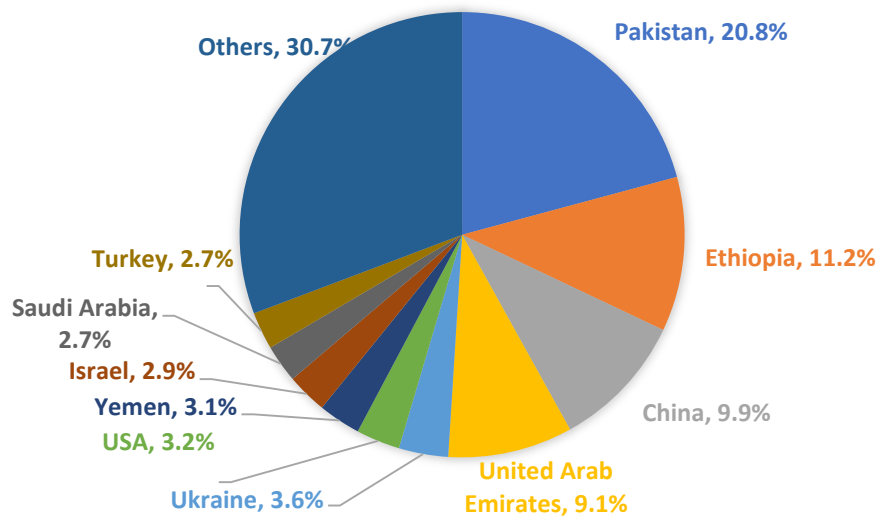
(2) Import

The largest share of import commodities in weight is “Cement,” which accounts for 37.5% of total import in 2009 (Table 4.1.3). The country with the largest import from is Pakistan (20.8%) and “cement” is mainly imported. Ethiopia (11.2%) and China (9.9%) share also at large (Figure 4.1.3). The reason why the largest volume of imported and exported commodity is the same is because of the large amount of re-export. Commodities imported from, for instance, Pakistan, Ethiopia and China are directly exported as transit goods to Ethiopia, Somalia, etc. (Figure 4.1.4 and Table 4.1.4).

Table 4.1.3 Top 10 Import Commodities in Weight of Djibouti (2009)

Item	Unit: 1000 ton
Total Import Volume ¹⁾	327.5
Cement	122.8
Other fruit, fresh	40.3
Cereal groats, meal and pellets	12.0
Cane or beet sugar and chemically pure sucrose	7.3
Other bars and rods of iron or non-alloy steel	7.0
Rice	5.9
Pasta	5.7
Cereal flours other than of wheat or meslin	5.2
Wheat or meslin flour	4.8
Malt extract	4.6

Note 1): Some items are not identified in weight.
Source: UN Comtrade Database



Source: UN Comtrade Database

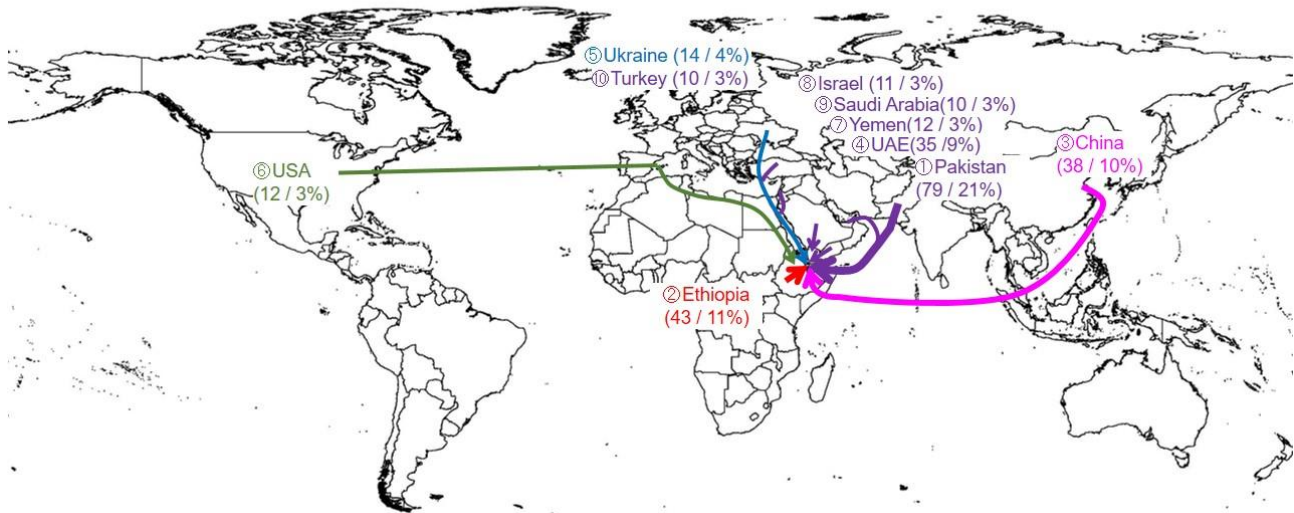
Figure 4.1.3 Share of Import Partners of Djibouti (2009, Weight-Based)

Djibouti (Import 2009)

Total Import Trade Value
327.5 thousand ton

Above : Name of partner

Bottom : Trade Volume(Unit: thousand ton USD (included Re-Imports) / Share%)



Source UN Comtrade Database

Figure 4.1.4 Main partner and trade value of import in Djibouti (2009, Weight-Based)

Table 4.1.4 Main partner and Top 3 Trade Commodities (over 1,000ton) of import in Djibouti (2009, Weight-Based)

No	Partner	Commodity	Thousand ton	Commodity	Thousand ton	Commodity	Thousand ton
①	Pakistan	Cement.	74	Cane or beet sugar and chemically pure sucrose.	2	Rice.	1
②	Ethiopia	Other fruit, fresh.	39	Dried leguminous vegetables.	2	Feeds	1
③	China	Cement.	27	Panels, boards, tiles, blocks and similar articles .	1	Woven fabrics of synthetic filament yarn.	1
④	United Arab Emirates	Cement.	7	Panels, boards, tiles, blocks and similar articles .	2	Motor cars and other motor vehicles principally designed for the transport of persons.	2
⑤	Ukraine	Cereal groats, meal and pellets.	4				
⑥	USA	Cereal flours other than of wheat or meslin.	4	Malt extract	3	Food preparations.	1
⑦	Yemen	Cane or beet sugar and chemically pure sucrose.	1	Organic surface-active agents	1	Soap	1
⑧	Israel	Cement	11				
⑨	Saudi Arabia	Milk and cream(Non-concentrated)	2	Milk and cream (concentrated)	1	Fruit juices and vegetable juices.	1
⑩	Turkey	Other bars and rods of iron or non-alloy steel.	5	Pasta	2	Wheat or meslin flour.	1

Source UN Comtrade Database

Note: Numbers in circle refer to the circled numbers in figure 4.1.4.

4.1.2. Ethiopia

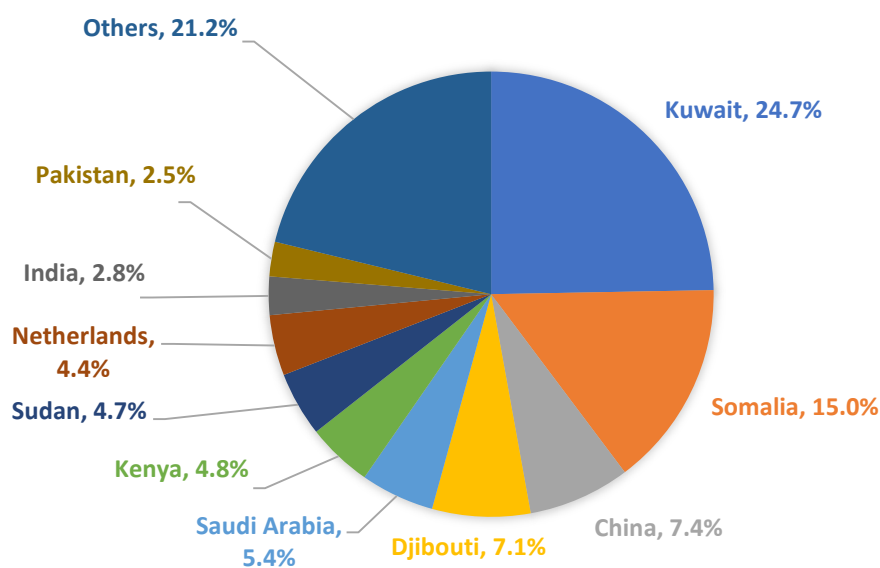
(1) Export

The largest share of export commodities in weight is “Petroleum oils and oils obtained from bituminous minerals²,” which accounts for 26.7% of total export in 2015 (Table 4.1.5). “Dried leguminous vegetables,” “Other oil seeds and oleaginous fruits,” “Coffee” and “Cement” are the following major exported items in fact (Table 4.1.6). Kuwait is the largest export trading country for Ethiopia with 24.7% of share, and “Petroleum oils and oils obtained from bituminous minerals” are at the largest volume of export (Figure 4.1.5 and Table 4.1.6).

Table 4.1.5 Top 10 Export Commodities in Weight of Ethiopia (2015)

Item	Unit: 1000 ton
Total Export Volume ¹⁾	2,711.8
Petroleum oils and oils obtained from bituminous minerals	723.1
Dried leguminous vegetables	339.0
Other oil seeds and oleaginous fruits	329.6
Coffee	234.3
Cement	227.8
Cut flowers and flower buds	146.9
Potatoes	127.1
Other vegetables	94.7
Live bovine animals	86.1
Tomatoes	49.5

Note 1): Some items are not identified in weight.
Source: UN Comtrade Database



Source: UN Comtrade Database

Figure 4.1.5 Share of Export Partners of Ethiopia (2015, Weight-Based)

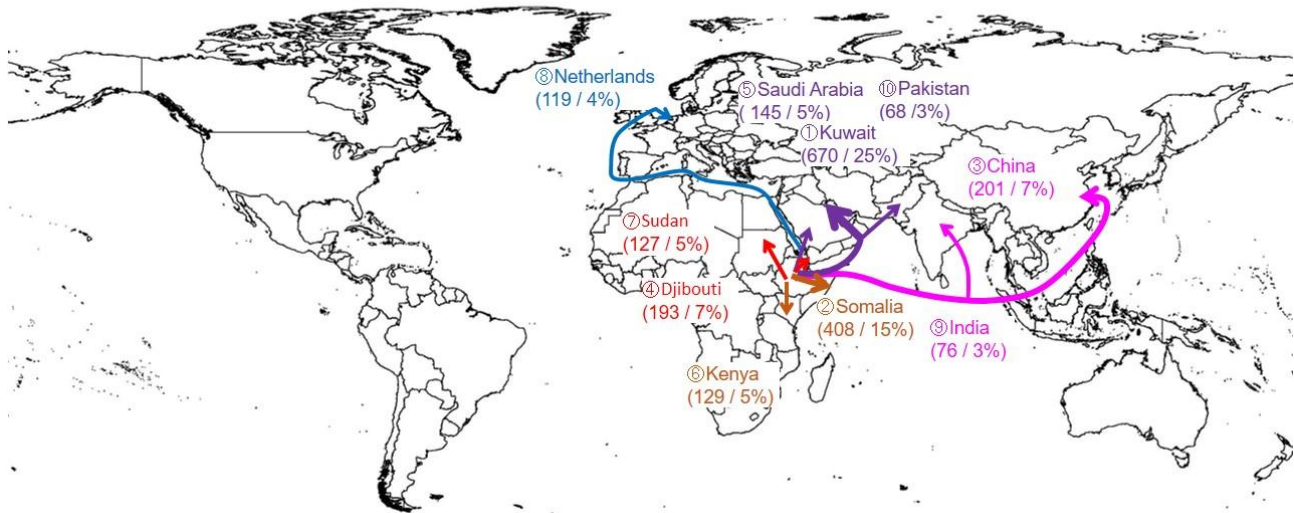
² There could be several commodities included in a category, and the data accuracy should be further studied.

Ethiopia (Export 2015)

Above : Name of partner

Bottom : Trade Volume(Unit: thousand ton USD (included Re-Exports) / Share%)

Total Export Trade Value
2,711.8 thousand ton



Source UN Comtrade Database

Figure 4.1.6 Main partner and trade value of export in Ethiopia (2015, Weight-Based)

Table 4.1.6 Main partner and Top 3 Trade Commodities (over 1,000ton) of export in Ethiopia (2015, Weight-Based)

No	Partner	Commodity	Thousand ton	Commodity	Thousand ton	Commodity	Thousand ton
①	Kuwait	Mineral fuels, mineral oils and products of their distillation	668 (668)	Live animals (sheep and goats).	1	Live trees and other plants(cut flowers).	1
②	Somalia	Edible vegetables and certain roots and tubers (Potatoes)	112	Edible vegetables and certain roots and tubers (Other vegetables)	79	Cement	54
③	China	Oil seeds and oleaginous fruits.	187	Plastics and articles thereof	4	Cotton	1(1)
④	Djibouti	Cement	91	Edible vegetables and certain roots and tubers (Potatoes)	15	Edible vegetables and certain roots and tubers (Other vegetables)	15
⑤	Saudi Arabia	Mineral fuels, mineral oils and products of their distillation	55 (55)	Coffee, tea, matte and spices.	44	Live trees and other plants(cut flowers).	14
⑥	Kenya	Cement	82	Edible vegetables and certain roots and tubers (Dried leguminous vegetables)	40	Oil seeds and oleaginous fruits	5
⑦	Sudan	Edible vegetables and certain roots and tubers (Dried leguminous vegetables)	68	Wood and articles of wood	33	Coffee, tea, matte and spices.	11
⑧	Netherlands	Live trees and other plants(cut flowers).	108	Edible vegetables and certain roots and tubers (Dried leguminous vegetables)	3	Edible vegetables and certain roots and tubers (Leguminous vegetables)	3
⑨	India	Edible vegetables and certain roots and tubers (Dried leguminous vegetables)	54	Oil seeds and oleaginous fruits	16	Coffee, tea, matte and spices.(Ginger)	2
⑩	Pakistan	Edible vegetables and certain roots and tubers (Dried leguminous vegetables)	65	Coffee, tea, matte and spices.(Seeds)	1	Coffee, tea, matte and spices.(Tea)	1

Source UN Comtrade Database

Note: Numbers in parentheses of the table are trade volume of Re-Export. Numbers in circle refer to the circled numbers in figure 4.1.6.

(2) Import

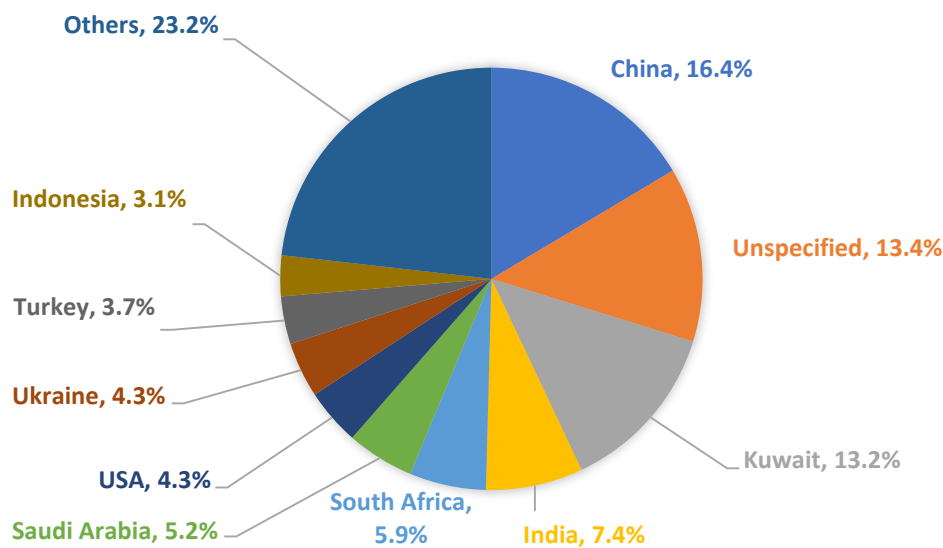
Import volume in Ethiopia has steeply increased in early 2000, and reached at 26% per year growth ratio in 2015 (refer to Figure 2.10.4). The largest share of import commodities in weight is “Petroleum oils and oils obtained from bituminous minerals,” which accounts for 20.2% of total import in 2015 (Table 4.1.7). However, import partner countries are Kuwait and Saudi Arabia as the same to export, so that the data should be further analyzed for accuracy. China is the largest trading country for imports with 16.4% of share, and “Mineral or chemical fertilizers containing two or three of the fertilizing elements” are imported at large volume³. These are re-exported from Djibouti port (Figure 4.1.7 and Table 4.1.8).

Table 4.1.7 Top 10 Import Commodities in Weight of Ethiopia (2015)

Item	Unit: 1000 ton
Total Import Volume ¹⁾	13,279.1
Petroleum oils and oils obtained from bituminous minerals	2,687.7
Wheat and meslin	1,259.0
Palm oil and its fractions	703.8
Coal; briquettes, ovoids and similar solid fuels manufactured from coal.	515.0
Other bars and rods of iron or non-alloy steel	506.9
Mineral or chemical fertilizers containing two or three of the fertilizing elements	431.9
Cane or beet sugar	401.0
Petroleum coke, petroleum bitumen and other residues	359.8
Rice	284.2
Mineral or chemical fertilizers	278.3

Note 1): Some items are not identified in weight.

Source: UN Comtrade Database



Source: UN Comtrade Database

Figure 4.1.7 Share of Import Partners of Ethiopia (2015, Weight-Based)

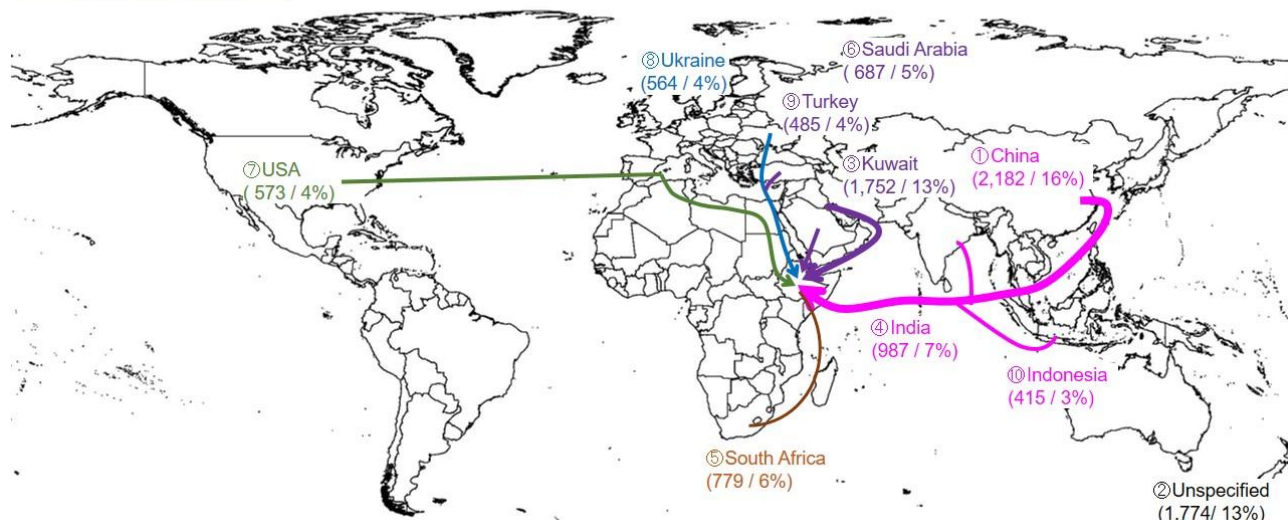
³ These are not the specific items for import, but there are large number of commodities are imported.

Ethiopia (Import 2015)

Total Import Trade Value
13,279.1 thousand ton

Above : Name of partner

Bottom : Trade Volume(Unit: thousand ton USD (included Re-Imports) / Share%)



Source UN metadata

Figure 4.1.8 Main partner and trade value of import in Ethiopia (2015, Weight-Based)

Table 4.1.8 Main partner and Top 3 Trade Commodities (over 1,000ton) of import in Ethiopia (2015) (Weight-base)

No	Partner	Commodity	Thousand ton	Commodity	Thousand ton	Commodity	Thousand ton
①	China	Fertilisers	223	Iron and steel (Semi-finished products)	194	Iron and steel (Other bars and rods)	126
③	Kuwait	Mineral fuels, mineral oils and products of their distillation	1,750	Furniture	1	Articles of iron or steel (Structures and parts of structures)	1
④	India	Cereals	247	Sugars and sugar confectionery	217	Iron and steel	129
⑤	South Africa	Mineral fuels, mineral oils and products of their distillation (Coal)	515	Mineral fuels, mineral oils and products of their distillation (Petroleum coke)	246	Paper and paperboard	5
⑥	Saudi Arabia	Mineral fuels, mineral oils and products of their distillation	528	Fertilisers	50	Plastics and articles thereof	26
⑦	USA	Cereals (Wheat and meslin.)	234	Cereals (Grain sorghum)	143	Mineral fuels, mineral oils and products of their distillation (Petroleum coke)	99
⑧	Ukraine	Cereals (Wheat and meslin.)	395	Iron and steel (Other bars and rods)	76	Iron and steel (Flat-rolled products)	49
⑨	Turkey	Iron and steel (Other bars and rods)	295	Articles of iron or steel (Railway or tramway track construction material)	34	Preparations of cereals, flour, starch or milk	31
⑩	Indonesia	Animal or vegetable fats and oils and their cleavage products	301	Soap	28	Miscellaneous chemical products	17

Source UN Comtrade Database

Note: Numbers in circle refer to the circled numbers in figure 4.1.8.

4.1.3. Sudan

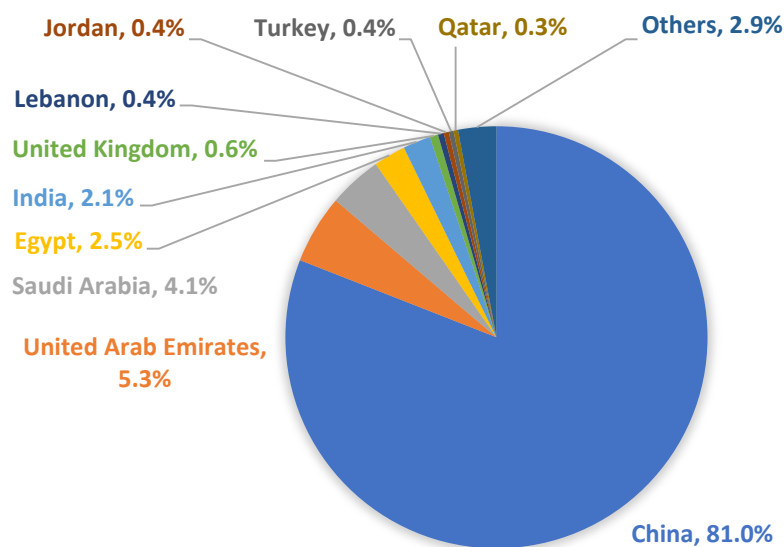
(1) Export

The largest share of export commodities in weight is “Petroleum oils and oils obtained from bituminous minerals, crude,” which accounts for 78.5% of total export in 2015 (Table 4.1.9). China is the largest export trading country with 81.0% of share, and “Petroleum oils, and oils obtained from bituminous minerals, crude” are exported mainly. UAE and Saudi Arabia follow China, and “Cereal straw and husks “Live sheep and goat” as well as “Swedes, mangolds, fodder roots” are mainly exported (Figure 4.1.9 and Table 4.1.10).

Table 4.1.9 Top 10 Export Commodities in Weight of Sudan (2015)

Item	Unit: 1000 ton
Total Export Volume ¹⁾	5,220.6
Petroleum oils and oils obtained from bituminous minerals, crude	4,099.8
Other oil seeds and oleaginous fruits	296.5
Live sheep and goats	155.3
Cereal straw and husks	143.1
Swedes, mangolds, fodder roots, hay, lucerne (alfalfa), clover, sainfoin, forage kale, lupines, vetches and similar forage products	132.2
Uncoated paper and paperboard	80.8
Petroleum oils and oils obtained from bituminous minerals, other than crude	33.8
Molasses resulting from the extraction or refining of sugar.	33.3
Dried leguminous vegetables	26.4
Cotton	25.4

Note 1): Some items are not identified in weight.
Source: UN Comtrade Database



Source: UN Comtrade Database

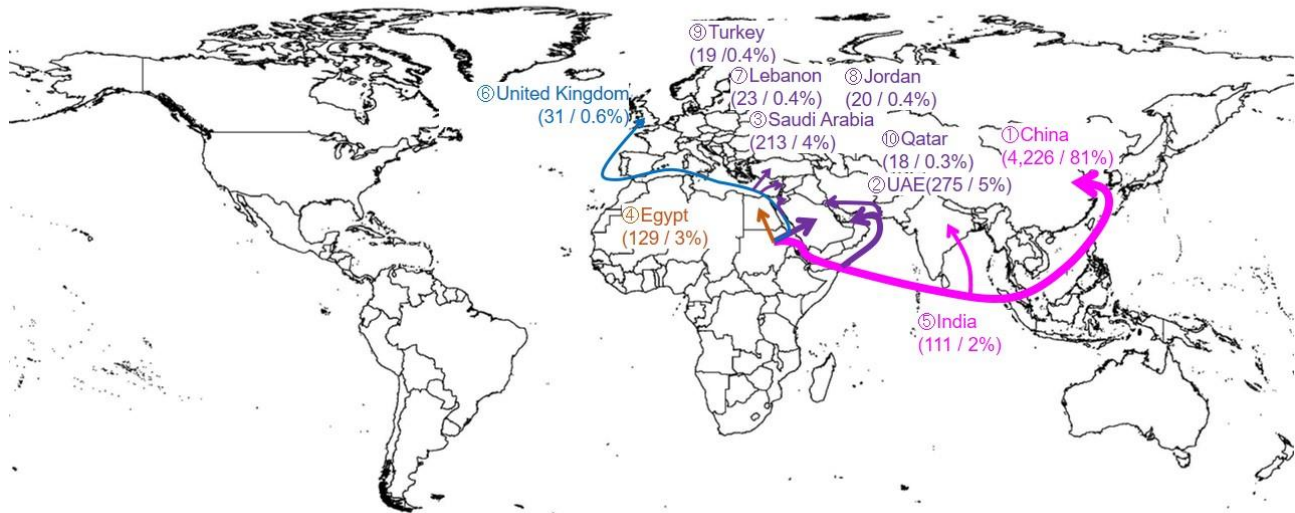
Figure 4.1.9 Share of Export Partners of Sudan (2015, Weight-Based)

Sudan (Export 2015)

Above : Name of partner

Bottom : Trade Volume(Unit: thousand ton USD (included Re-Exports) / Share%)

Total Export Trade Value
5,220.6 thousand ton



Source UN Comtrade Database

Figure 4.1.10 Main partner and trade value of export in Sudan (2015, Weight-Based)

Table 4.1.10 Main partner and Top 3 Trade Commodities (over 1,000ton) of export in Sudan (2015, Weight-Based)

No	Partner	Commodity	Thousand ton	Commodity	Thousand ton	Commodity	Thousand ton
①	China	Petroleum oils and oils obtained from bituminous minerals, crude.	4,100	Other oil seeds and oleaginous fruits	57	Petroleum oils and oils obtained from bituminous minerals	31
②	United Arab Emirates	Cereal straw and husks, unprepared, whether or not chopped, ground, pressed or in the form of pellets.	141	Swedes, mangolds, fodder roots, hay, lucerne (alfalfa), clover, sainfoin, forage kale, lupines, vetches and similar forage products	111	Other oil seeds and oleaginous fruits	6
③	Saudi Arabia	Live sheep and goats.	155	Other oil seeds and oleaginous fruits	40	Recovered paper or paperboard.	6
④	Egypt	Other oil seeds and oleaginous fruits	82	Meat of bovine animals	19	Cotton	10
⑤	India	Uncoated paper and paperboard	81	Dried leguminous vegetables	18	Other oil seeds and oleaginous fruits	5
⑥	United Kingdom	Molasses resulting from the extraction or refining of sugar.	33				
⑦	Lebanon	Other oil seeds and oleaginous fruits	23				
⑧	Jordan	Other oil seeds and oleaginous fruits	18	Fruit, nuts and other edible parts of plants	1		
⑨	Turkey	Other oil seeds and oleaginous fruits, whether or not broken.	14	Cotton	2	Waste, parings and scrap, of plastics.	1
⑩	Qatar	Swedes, mangolds, fodder roots, hay, lucerne (alfalfa), clover, sainfoin, forage kale, lupines, vetches and similar forage products	14	Cereal straw and husks	2	Melons and papayas (papayas), fresh.	1

Source UN Comtrade Database

Note: Numbers in parentheses of the table are trade volume of Re-Export. Numbers in circle refer to the circled numbers in figure 4.1.10.

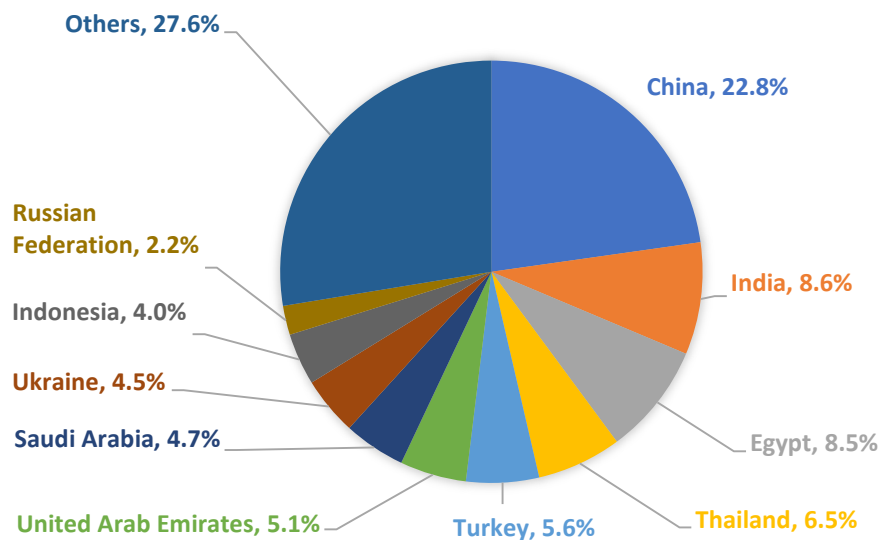
(2) Import

The largest share of import commodities in weight is “Cane or beet sugar and chemically pure sucrose,” which accounts for 22.8% of total import in 2015 (Table 4.1.11). China is the largest import trading country same as export (22.8%) with wide variety of commodities are traded. Besides, “Cane or beet sugar and chemically pure sucrose” imported from India and Thailand shares at large⁴ (Figure 4.1.11 and Table 4.1.12).

Table 4.1.11 Top 10 Import Commodities in Weight of Sudan (2015)

Item	Unit: 1000 ton
Total Import Volume ¹⁾	5,417.8
Cane or beet sugar and chemically pure sucrose	1,235.0
Wheat or meslin flour	381.8
Mineral or chemical fertilizers, nitrogenous	168.3
Rice	135.3
Dried leguminous vegetables	131.7
Sunflower-seed, safflower or cotton-seed oil and fractions thereof	130.8
Petroleum gases and other gaseous hydrocarbons	117.1
Semi-finished products of iron or non-alloy steel	104.3
Glazed ceramic flags and paving, hearth or wall tiles	89.1
Polymers of ethylene, in primary forms.	80.8

Note 1): Some items are not identified in weight.
Source: UN Comtrade Database



Source: UN Comtrade Database

Figure 4.1.11 Share of Import Partners of Sudan (2015, Weight-Based)

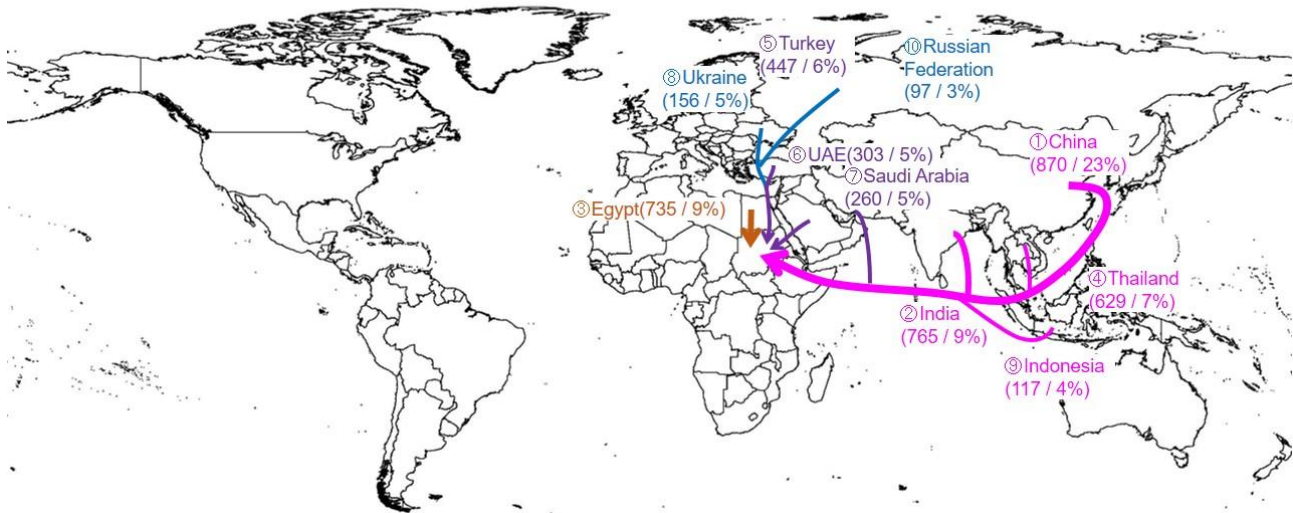
⁴ These are not the specific items for import, but there are large number of commodities are imported.

Sudan (Import 2015)

Total Import Trade Value
5,417.8 thousand ton

Above : Name of partner

Bottom : Trade Volume(Unit: thousand ton USD (included Re-Imports) / Share%)



Source UN Comtrade Database

Figure 4.1.12 Main partner and trade value of import in Sudan (2015, Weight-Based)

Table 4.1.12 Main partner and Top 3 Trade Commodities (over 1,000ton) of import in Sudan (2015, Weight-Based)

No	Partner	Commodity	Thousand ton	Commodity	Thousand ton	Commodity	Thousand ton
①	China	Flat-rolled products of iron or non-alloy steel	39	Sulphates.	38	New pneumatic tyres, of rubber.	37
②	India	Cane or beet sugar and chemically pure sucrose.	516	Rice.	23	Other sugars, including chemically	21
③	Egypt	Rice.	94	Petroleum gases and other gaseous hydrocarbons.	94	Glaziers' putty, grafting putty, resin cements, caulking compounds and other mastics	81
④	Thailand	Cane or beet sugar and chemically pure sucrose.	603	Air conditioning machines, comprising a motor-driven fan and elements for changing the temperature and humidity.	3	Quicklime, slaked lime and hydraulic lime	3
⑤	Turkey	Wheat or meslin flour.	336	Dried leguminous vegetables, shelled.	27	Yeasts .	7
⑥	United Arab Emirates	Petroleum oils and oils obtained from bituminous minerals, other than crude	67	Mineral or chemical fertilisers, nitrogenous.	61	Petroleum oils and oils obtained from bituminous minerals, crude.	14
⑦	Saudi Arabia	Polymers of ethylene, in primary forms.	49	Mineral or chemical fertilisers, nitrogenous.	26	Cane or beet sugar and chemically pure sucrose.	24
⑧	Ukraine	Sunflower-seed, safflower or cotton-seed oil and fractions thereof	72	Semi-finished products of iron or non-alloy steel.	72	Ground-nut oil and its fractions	5
⑨	Indonesia	Lard stearin, lard oil, oleostearin, oleo-oil and tallow oil	58	Coconut (copra), palm kernel or babassu oil and fractions thereof.	13	Uncoated paper and paperboard	11
⑩	Russian Federation	Sunflower-seed, safflower or cotton-seed oil and fractions thereof	55	Wheat or meslin flour.	21	Semi-finished products of iron or non-alloy steel.	11

Source UN Comtrade Database

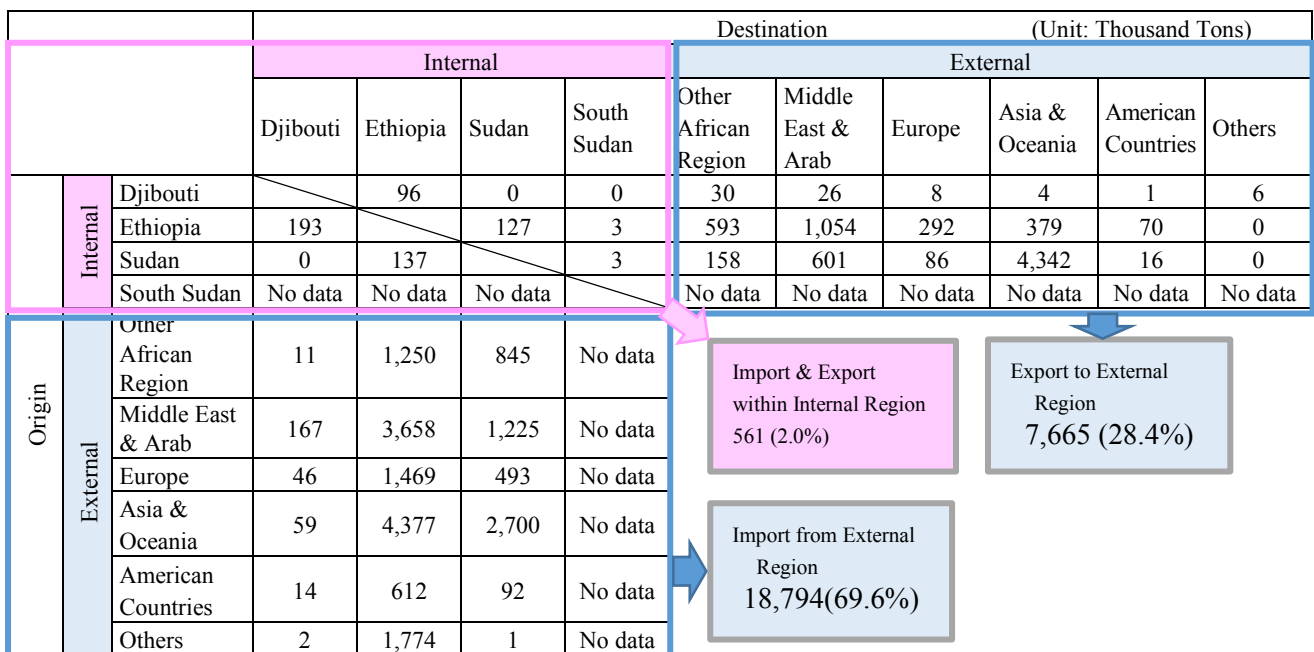
Note: Numbers in circle refer to the circled numbers in figure 4.1.12.

4.1.4. South Sudan

South Sudan has strong relationship for trading with Uganda and Kenya, and crude oil is the largest export item sharing over 95%, according to the reference data “Draft South Sudan Trade Policy Framework (August 2014)” which was obtained from the Ministry of Trade and Industries, although there is no comprehensive data organized in UN Comtrade Database for South Sudan.

4.2. International Transactions among the Countries in the Target Region

As illustrated in the Chapter 2, transaction price value among the target countries only shares about 1.2% (Figure 2.10.1). The following Figure 4.2.1 describes the volume based transaction amount among the target countries shares only 2.0%. Among the 2.0% intra-regional trading, transaction between Ethiopia and Djibouti as well as from Ethiopia to Sudan are large. The imported volume from the outside the survey target countries is 69.6%, and exported volume is 28.4%. Thus, the total volume traded within the survey target countries is very small and limited.



Source: JICA Survey Team prepared based on the UN Comtrade Database

Note1: Numbers indicated in the small colored boxes (561, 7,665 and 18,794) describe the volume of trades made among the four countries (pink box), the volume of imports from outside the target countries (lower left small blue box), and the volume of exports to the outside countries (above right small blue box).

Note2: Numbers shown are based on the data in 2009 for Djibouti, in 2015 for Ethiopia and in 2015 for Sudan.

Figure 4.2.1 Intra- and Inter-regional trading amount (Volume Based)

Major commodity flows and distributions among the target countries are studied as follows. In order to focus on the major trade activities, commodity flows over 1,000 tons per year are targeted. Generally the distribution from country-A to country-B should indicate the same in the view of the distribution of country-B to country-A, however the statistics indicate quite different⁵. Therefore, the study was made based on more reliable data of exports. Thus, some values illustrated are different from the value indicated in the section 4.1 as to be noted.

(1) Ethiopia-Djibouti

The largest volume flow from Ethiopia to Djibouti is “Cement,” and the following items are vegetables and food matter, such as live animal (Table 4.2.1). On the other hand from Djibouti to Ethiopia, all the commodities are re-exported, and “Cement⁶” and “Wheat and meslin” exceed 10 thousand tons, and “Malt

⁵ Illegal imports are normally excluded from the registration in order to escape from taxation, while illegal exports are accounted. Therefore, it is common to know that illegal export much exceeds import volume.

⁶ Data obtained for Ethiopia is from 2015 and for Djibouti is 2009 only available, and the reason that Ethiopia-Djibouti trade indicates “cement” is the top commodity for Ethiopia’s import and Djibouti’s export could be caused by the difference of those data year. This may imply that Ethiopia’s cement export due to over production could increase when production exceeds market demand.

extract” and “Palm oil and its fractions” are close to 10 thousand tons of re-export (Table 4.2.2).

Table 4.2.1 Transaction from Ethiopia to Djibouti (over 1,000 ton/year)

Item	Trade Volume (ton)
Cement	91,141.0
Potatoes	15,378.1
Other vegetables	15,340.3
Live bovine animals	15,143.3
Onions, shallots, garlic, leeks and other alliaceous vegetables	13,110.2
Tomatoes	10,177.5
Bananas	4,759.9
Citrus fruit	3,550.3
Other live animals	2,866.8
Carrots, turnips, salad beetroot, salsify, celeriac, radishes and similar edible roots	2,626.9

Source: UN Comtrade Database

Table 4.2.2 Transaction from Djibouti to Ethiopia (over 1,000 ton/year)

Item	Trade Volume (ton)
Cement	47809.9 (43809.9)
Wheat and meslin	12000.0 (12000.0)
Malt extract	9575.3 (9575.3)
Palm oil and its fractions	9292.2 (9292.2)
Other cast articles of iron or steel	4084.6 (4084.6)
Rice	1948.2 (1948.2)
Insulated wire, cabl and other insulated electric conductors	1874.1 (1871.9)
Motor cars and other motor vehicles principally designed for the transport of persons	1772.9 (1759.8)
Malt	1353.7 (1353.7)
Soap	1295.9 (1295.9)

Source: UN Comtrade Database

Note: Numbers in parentheses of the table are trade value of Re-Export

(2) Ethiopia-Sudan

The largest item from Ethiopia to Sudan is “Dried leguminous vegetable,” followed by “Wood” and “Coffee” (Table 4.2.3). On the other hand, in the item from Sudan to Ethiopia, “Petroleum oils and oils obtained from bituminous minerals, other than crude” is remarkable followed by “Onions, shallots, garlic” (Table 4.2.4).

Table 4.2.3 Transaction from Ethiopia to Sudan (over 1,000 ton/year)

Item	Trade Volume (ton)
Dried leguminous vegetables	68,311.8
Wood	33,095.2
Coffee, whether or not roasted or decaffeinated	11,080.5
Pepper of the genus Piper	1,608.9
Vegetable materials of a kind used primarily for plaiting	1,557.0
Rubber and articles thereof	1,549.7
Flours and meals of oil seeds or oleaginous fruits, other than those of mustard	1,388.0
Ginger, saffron, turmeric (curcuma), thyme, bay leaves, curry and other spices	1,346.5

Source: UN Comtrade Database

Table 4.2.4 Transaction from Sudan to Ethiopia (over 1,000 ton/year)

Item	Trade Volume (ton)
Petroleum oils and oils obtained from bituminous minerals, other than crude	117,832.3
Onions, shallots, garlic, leeks and other alliaceous vegetables, fresh or chilled	12,465.0
Waters	1,764.0
Petroleum gases and other gaseous hydrocarbons	1,500.0

Source: UN Comtrade Database

(3) Ethiopia-South Sudan

The largest item from Ethiopia to South Sudan is “Undenatured ethyl alcohol of an alcoholic strength,” but no items over 1,000tons/year is from South Sudan to Ethiopia (Table 4.2.5).

Table 4.2.5 Transaction from Ethiopia to South Sudan (over 1,000ton/year)

Item	Trade Volume (ton)
Undenatured ethyl alcohol of an alcoholic strength	1,381.9

Source: UN Comtrade Database

(4) Sudan-South Sudan

“Petroleum oils and oils obtained from bituminous minerals” are exported from Sudan to South Sudan (Table 4.2.6). Although those two countries have been dealing with the political conflicts, minimum trade to fulfil the basic living needs is conducted in between.

Table 4.2.6 Transaction from Sudan to South Sudan (over 1,000 ton/year)

Item	Trade Volume (ton)
Petroleum oils and oils obtained from bituminous minerals, other than crude	2,495.0

Source: UN Comtrade Database

(5) Ethiopia-Kenya

The largest item from Ethiopia to Kenya is “Cement” followed by “Dried leguminous vegetables” (Table 4.2.7). Some chemicals are among others exceeding 1,000 tons exported from Kenya to Ethiopia, however the data is not enough to identify the purpose of the chemical use (Table 4.2.).

Table 4.2.7 Transaction from Ethiopia to Kenya (over 1,000 ton/year)

Item	Trade Volume (ton)
Cement	82,160.3
Dried leguminous vegetables	39,548.9
Oil seeds and oleaginous fruits	4,530.0

Source: UN Comtrade Database

Table 4.2.8 Transaction from Kenya to Ethiopia (over 1,000 ton/year)

Item	Trade Volume (ton)
Saturated acyclic monocarboxylic acids and their anhydrides, halides, peroxides and peroxyacids	4,938.2
Carbonates	2,575.0

Source: UN Comtrade Database

(6) Sudan-Uganda

“Coffee” over 40 thousand tons exported from Uganda to Sudan every year (Table 4.2.9). This trade should be made through South Sudan, therefore it is necessary to further study the actual trade route during the next stage survey. By the way, there is no items exceeding 10 thousand tons of export from Sudan to Uganda.

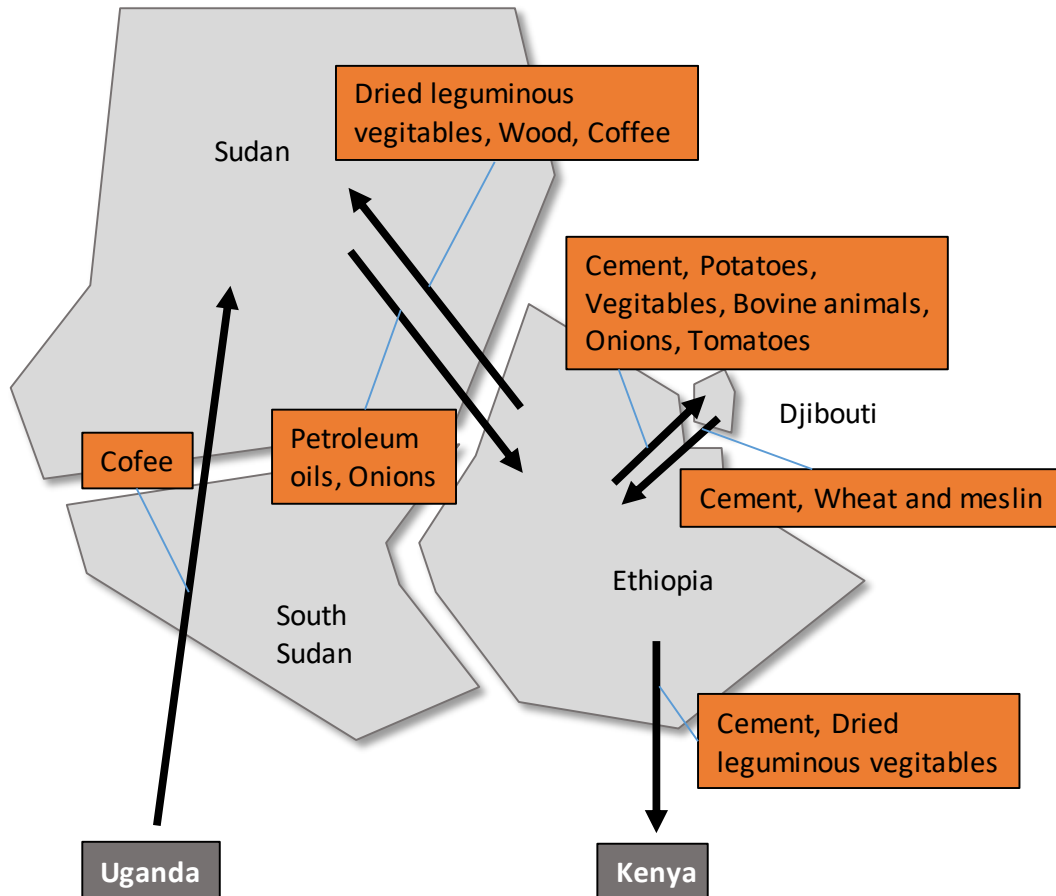
Table 4.2.9 Transaction from Uganda to Sudan (over 1,000 ton/year)

Item	Trade Volume (ton)
Coffee	40,149.9
Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing or scouring preparations, candles and similar articles, modelling pastes	4,395.1
Wheat or meslin flour	1,425.5

Source: UN Comtrade Database

(7) Summary of regional trade volume

According to the study above, target countries have very limited trading volume accounting 2.0%. Top major traded commodities between two countries are summarized in the following Figure 4.2.2 (trade flow over 10 thousand tons per year). The items indicates over 10 thousand tons are made between Ethiopia and Djibouti, Sudan, Kenya and Uganda, and between Uganda and Sudan. Ethiopia mainly exports “Cement,” “Dried leguminous vegetables,” and “Wood.” “Cement” from Djibouti to Ethiopia, “Petroleum oils and oils obtained from bituminous minerals” from Sudan to Ethiopia and “Coffee” from Uganda to Sudan are mainly exported. It is considered that Ethiopia becomes both origin and destination among others in the survey target region for trading.



Source: JICA Survey Team prepared based on the UN Comtrade Database

Note: Orange colored boxes concerns trade over 10,000 tons.

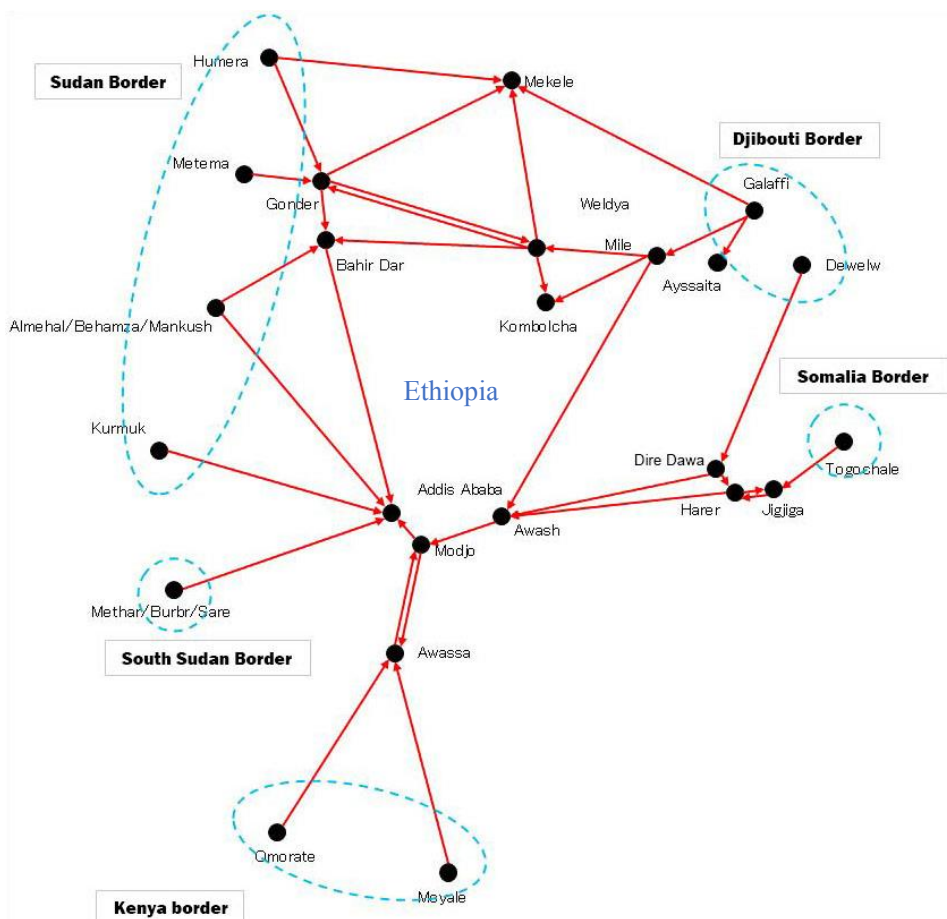
Figure 4.2.2 Trade commodities among the Target Countries (over 10 thousand tons per year)

4.3. Current Trading Activities in Ethiopia

4.3.1. Major Trading Route

With regard to the transport route and trade volume in the target countries as described earlier, trading and logistics volumes between Ethiopian and Djibouti as well as Ethiopia and Sudan indicate large amount. There are 24 transportation routes in Ethiopia as shown in Figure 4.3.1. By breakdown them there are 11 routes via Djibouti, 2 routes via Kenya, 2 routes via Somalia, 8 routes via Sudan, 1 route via South Sudan, so the routes via Djibouti and Sudan are major corresponding to the transport volumes.

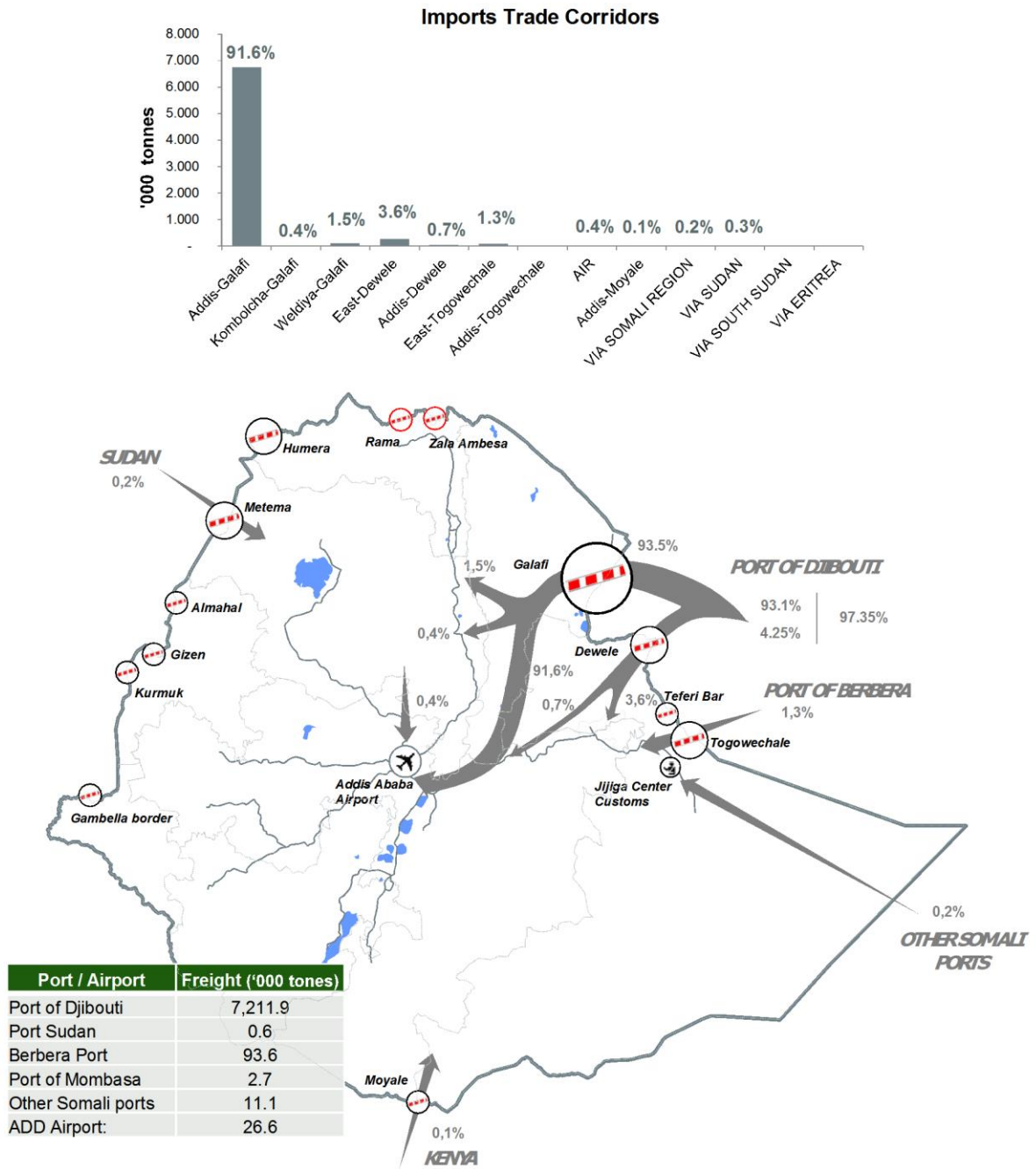
According to Figure 4.3.2 and Figure 4.3.3, which are analysis of imports and exports by route, 93.5% of imports and 58.3% of exports are via Galaffi, which is the most major intermediate point of Ethiopia-Djibouti trade trunk route, followed by imports via Dewele from Djibouti, exports via Togowechale in Somalia, Humera and Motema in Sudan.



No	Partner Country	Customs Transit Routes	Length (km)
1	Djibouti	Galaffi-Mile-Awash-Modjo-Addis Ababa	710
2		Dewele-Dirdawa-Awash-Modjo-Awassa	846
3		Galaffi-Mile-Awash-Modjo-Awassa	833
4		Galaffi-Mile-Weldya-Mekele	592
5		Galaffi-Mile-Weldya-Gonder	747
6		Galaffi-Mile-Weldya-Bahirdar	686
7		Galaffi-Mile-Kombolcha	315
8		Galaffi-Mekele	446
9		Galaffi-Ayssaita	202
10		Dewele-Dirdawa-Awash-Modjo-Addis Ababa	723
11		Dewele-Dirdawa-Harer-Awash-Modjo-Awassa	771
12	Kenya	Moyale-Awassa-Modjo-Addis Ababa	842
13		Omorate-Awassa-Modjo-Addis Ababa	698
14	Somalia	Togochale-Jigjiga-Harer-Awash-Modjo-Addis Ababa	821
15		Togochale-Jigjiga-Harer-Awash-Modjo-Awassa	355
16	Sudan	Humera-Mekele	680
17		Metema-Gonder-Weldya-Kombolcha	736
18		Metema-Gonder-Mekele	777
19		Metema-Gonder-Bahirdar-Addis Ababa	954
20		Humera-Gonder-Bahirdar-Addis Ababa	991
21		Kurmuk-Addis Ababa	780
22		Almehal/Behamza/Mankush-Addis Ababa	681
23		Mankush-Bahidar-Addis Ababa	917
24	South Sudan	Methar/Burbr/Sare-Addis Ababa	744

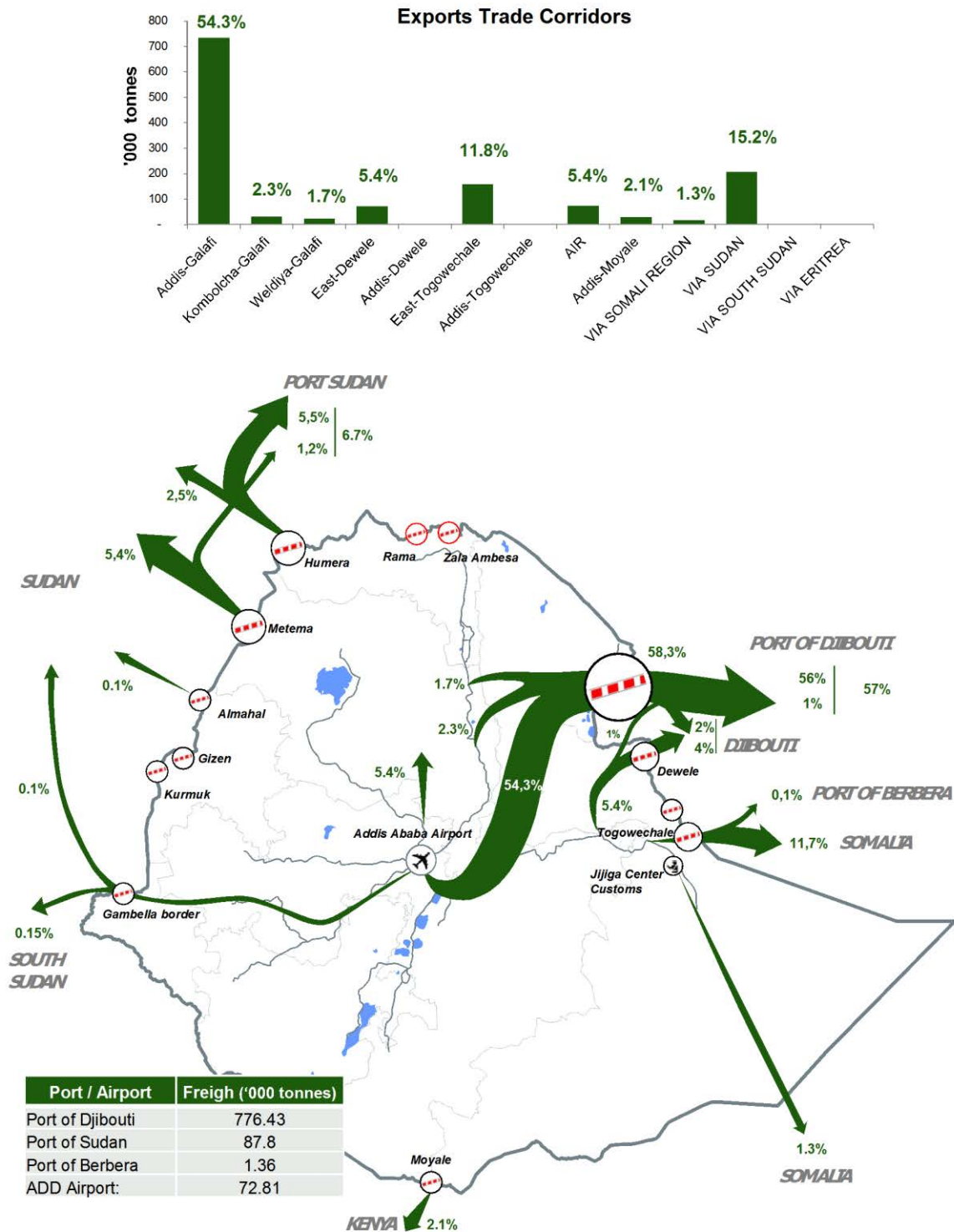
Source : Prepared by survey team based on Ethiopian Customs Guide

Figure 4.3.1 Major trading routes in Ethiopia



Source: ALG based on data from Revenues and Customs Authority

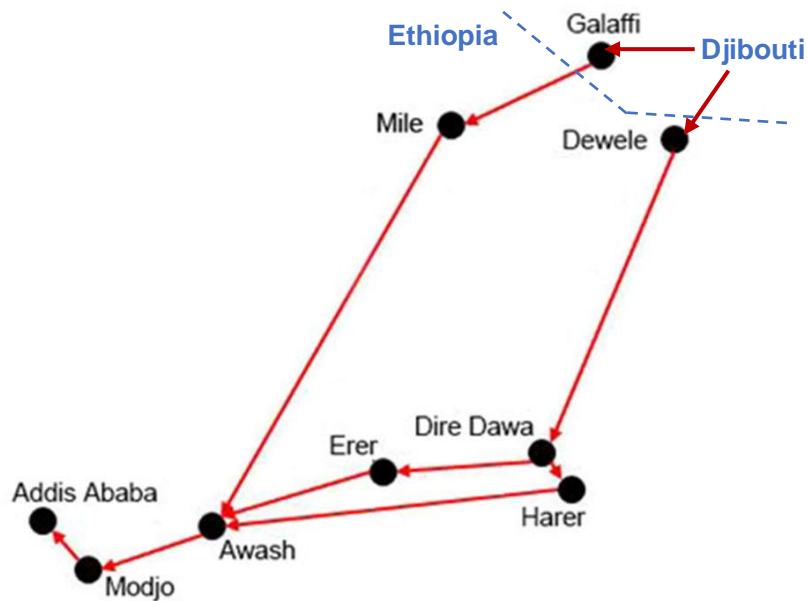
Figure 4.3.2 Major import route to Ethiopia



Source: ALG based on data from Revenues and Customs Authority

Figure 4.3.3 Major export route from Ethiopia

As mentioned above, currently Galaffi is the major route point for transportation between Ethiopia and Djibouti, and it's the trunk line of the Corridor. However, the route from Djibouti border to Dewele then Direddawa - Awash - Modjo - Addis Ababa is shorter in distance. The reasons why the route via Galaffi is chosen are that the entire stretch is connected by maintained road to some extent and the area is mostly flat topographically. If the road via Dewele improves in the future, it is expected that the route will be shorter in terms of time and the transportation cost will be lower as shown in Table 4.3.1. In the next survey stage, it is necessary to clarify the allocation of demand sharing these three routes considering the railway development influence.



Source: JICA Survey Team prepared based on the data and information obtained
Figure 4.3.4 Alternative routes between Ethiopia and Djibouti

Table 4.3.1 Comparison of alternative routes between Ethiopia and Djibouti

	Galaffi-Addis Ababa	Dewele-Addis Ababa (via Harer)	Dewele-Addis Ababa (via Erer)
Length (km)	870	805	747
Length of paved road (km)	870	585	374
Length of unpaved road (km)	0	220	373
Current transport time (hours)	13.38	31.00	43.05
Import composition (%)	93.5	4.3	
Import Items	All kind of imports		All kind of imports
Export composition (%)	58.3	5.4	
Export Items	Oil seeds, Coffee, Livestock		Vegetables, Coffee
Estimation time with improvement (hours)	13.38	12.38	11.49
Time reduction (%)	0%	60%	73%

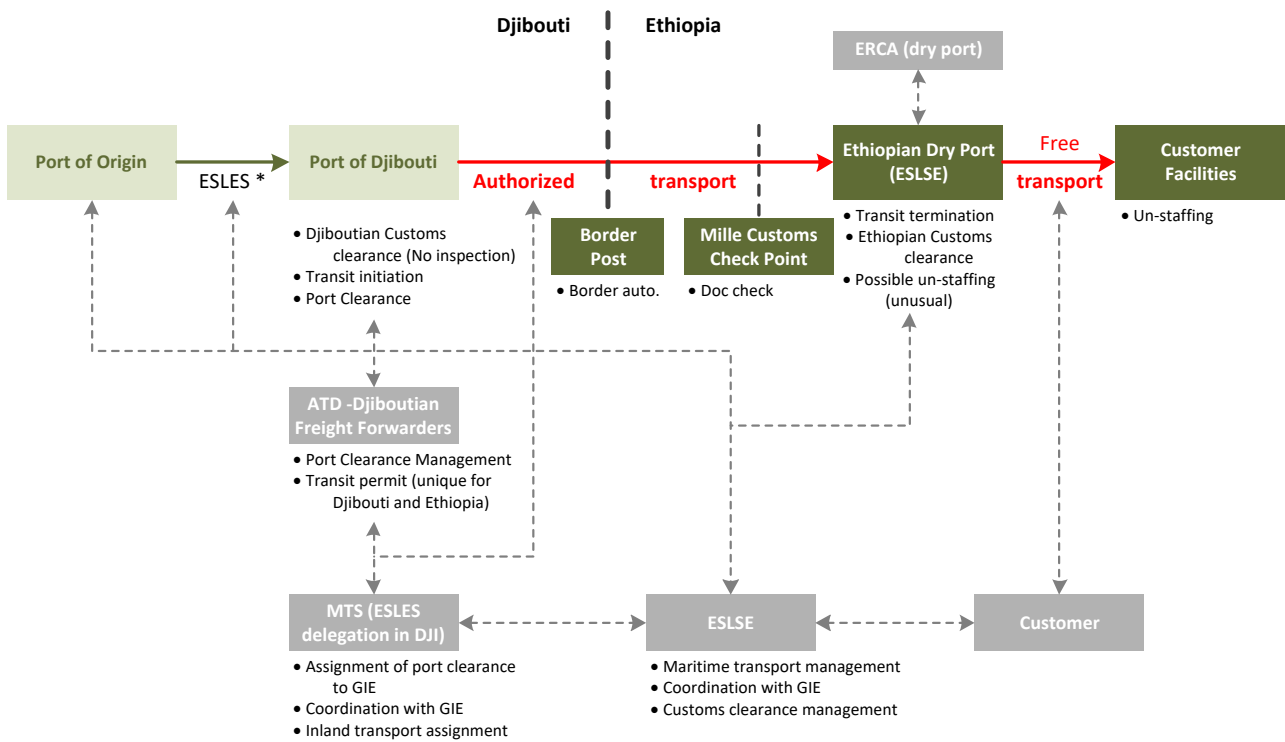
Note: Transport times are estimated with 65km/h in paved road and 10km/h in unpaved road respectively.
Source: JICA Survey Team prepared based on the information from Ethiopian Customs Guide

4.3.2. Transport cost and time

Import and export cargos in Ethiopia are classified into two categories; Unimodal cargo and Multimodal cargo, and each has own procedure. Although exports are only Unimodal cargo, imports are classified as Unimodal cargo or Multimodal cargo by items to carry. Container cargo and RO - RO cargo are classified as Multimodal cargo, and other (bulk cargo) are classified as Unimodal cargo.

Multimodal cargo transportation is a system established in 2010 by ESLSE⁷. Cargo landed in Djibouti Port is transported directly to destination (Dry Ports) in Ethiopia. Only transportation permission is obtained at the Djibouti port, all the other customs procedures are carried out at the Dry Ports in Ethiopia as shown in the following Figure 4.3.5. This system has drastically reduced the waiting time at Djibouti Port.

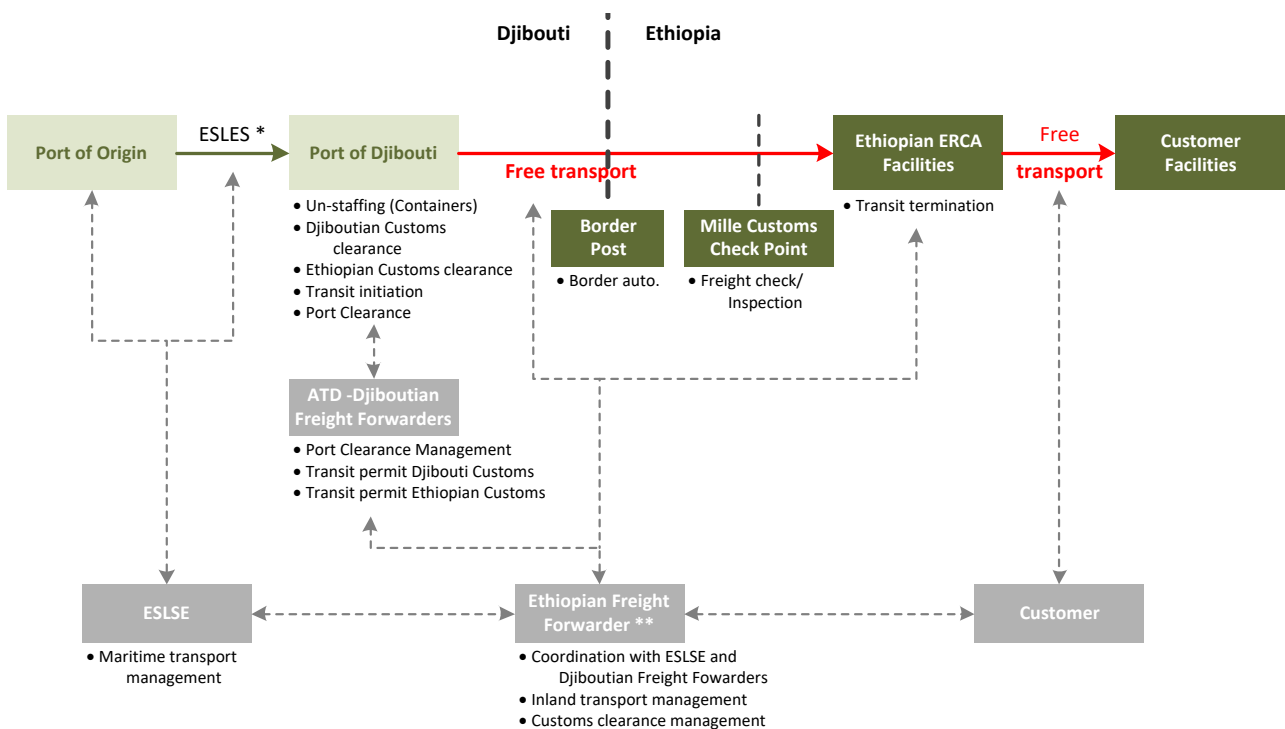
⁷ Ethiopian Shipping and Logistics Service Enterprise



* In case Ethiopian Shipping Lines (ESLSE) does not serve the port of Origin, it subcontracts the maritime service to an international carrier.
Source: ALG

Figure 4.3.5 Process of Multimodal import

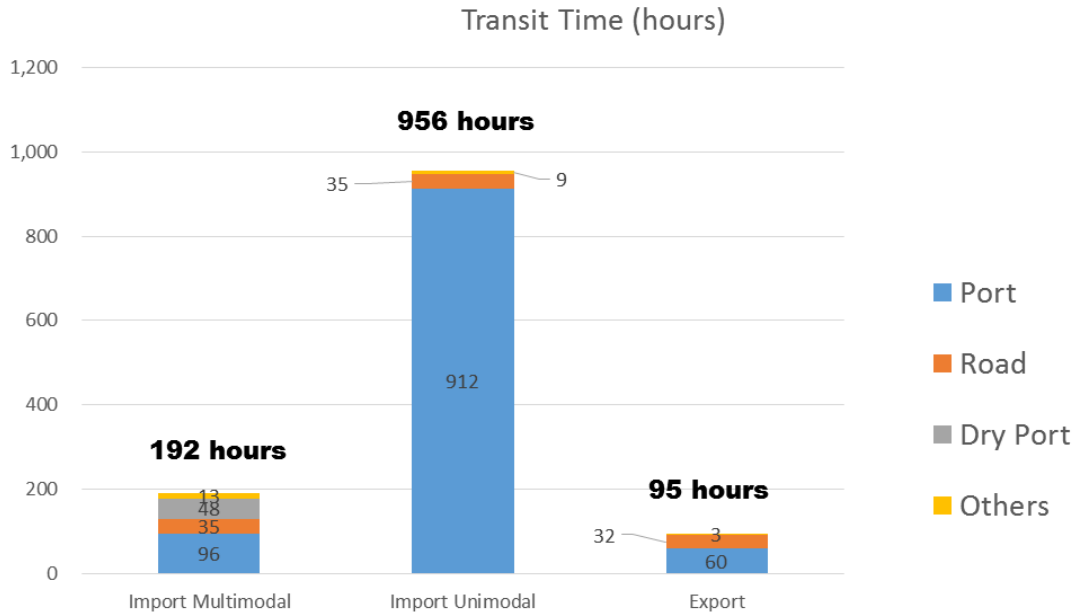
On the other hand, Unimodal cargo transportation requires customs clearance by both Djibouti and Ethiopia countries at Djibouti Port, resulting in longer waiting time at Djibouti Port as shown in Figure 4.3.6 and Figure 4.3.7.



* In case Ethiopian Shipping Lines (ESLSE) does not serve the port of Origin, it subcontracts the maritime service to an international carrier.
** ESLSE can also provide Freight Forward services.

Source: ALG

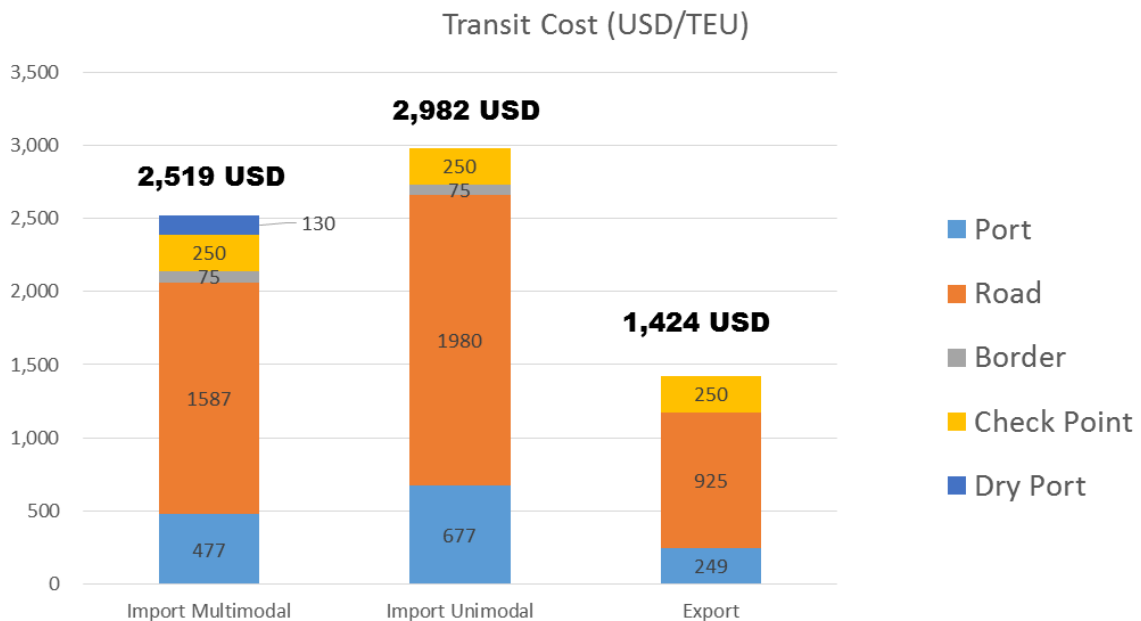
Figure 4.3.6 Process of Unimodal import



Source: National Logistics Strategy, Maritime Affairs Authority

Figure 4.3.7 Comparison of transportation time

The transportation cost of 20ft container importing and exporting is shown in Figure 4.3.8. The transit cost of Import Multimodal cargo is cheaper than imported Unimodal cargo. Procedures at the port with fewer check items make cheaper handling costs at the harbor. In addition, the regulated multimodal cargo transport pricing schemes further reduce overall costs. On the other hand, export cost is much cheaper than import. This is because export procedures are simpler than import's, and in terms of land transportation costs, price competition affects due to less export cargoes than import cargoes.



Source: National Logistics Strategy, Maritime Affairs Authority

Figure 4.3.8 Comparison of transportation cost

4.3.3. Current Activities of International Donors in Ethiopia (example: WFP)

WFP (World Trade Programme) in Ethiopia is currently making large efforts to support 8 million people who are in severe poverty or food insecurity. The food transport volume handled in the last year by WFP was approximately 750,000 metric tons, in which 80,000 tons were procured in Ethiopian market in 2016, and the amount in this year will be much reduced to about 300,000 to 400,000 metric tons in 2017 as estimated. Currently most food imports are made through Djibouti Port, and the use of Berbera Port, Port Sudan and Mombasa Port for the purpose is very rare. However, it is noted by the WFP representative that the use of Berbera Port may increase in the future because of its more affordable cost charged. As DP World won the port operation license in 2015, the use of Berbera Port could be considered more reliable for increased commodity volume in the future. Besides, food supply to South Sudan is currently made by air-drop supply using parachute drop method from the air, because of bad road condition. However this air-drop method cost quite high, therefore it is considered for the last option for emergency, for instance.

WFP noted major issues concerned of transportation and logistics activities: 1) Traffic congestion along the corridor network; 2) Too much time consumed during loading and unloading at the Djibouti Port; and 3) Lack of capacity and vulnerability of warehouse or storage for food stock. Especially, WFP noted that large amount of food was thrown away as decayed after maximum five months of cargo holdings by the port customs authority. It is highly recommended that the customs processing at the port must be improved for better services in much shorter time.

There are recommendations and concerns made by the WFP representative for the future regional corridor development in the survey target countries.

- Diesel locomotive test run was made between Djibouti and Addis Ababa railway route with 2,000 metric ton transportation. Accordingly the followings are identified as concern: Last part of the railway to the port is not completed, and transportation cost is much higher than the road truck transport.
- Commonly problems of the transportation and logistics are considered as Djibouti side origin, however number of issues in Ethiopian side are also identified as well. Number of trucks available in Ethiopia is enough for operation, but the operation of trucks are not well organized in systematic way, thus loading time in Djibouti Port side takes many days and could be over a week. RTA (Road Transport Authority) together with Maritime Authority of Ethiopia is currently strategizing the system installation for effective tracking system of trucks in order to solve the loading coordination issues.
- WFP currently studying to set up storage or warehouse facility in some locations, such as Adama, to reduce loss of time through overall flow of logistics activities. There are many issues existing in overall logistics flow, and these should be improved.



Source: World Food Programme webpage

Figure 4.3.9 Entry Import Gate Map (part)