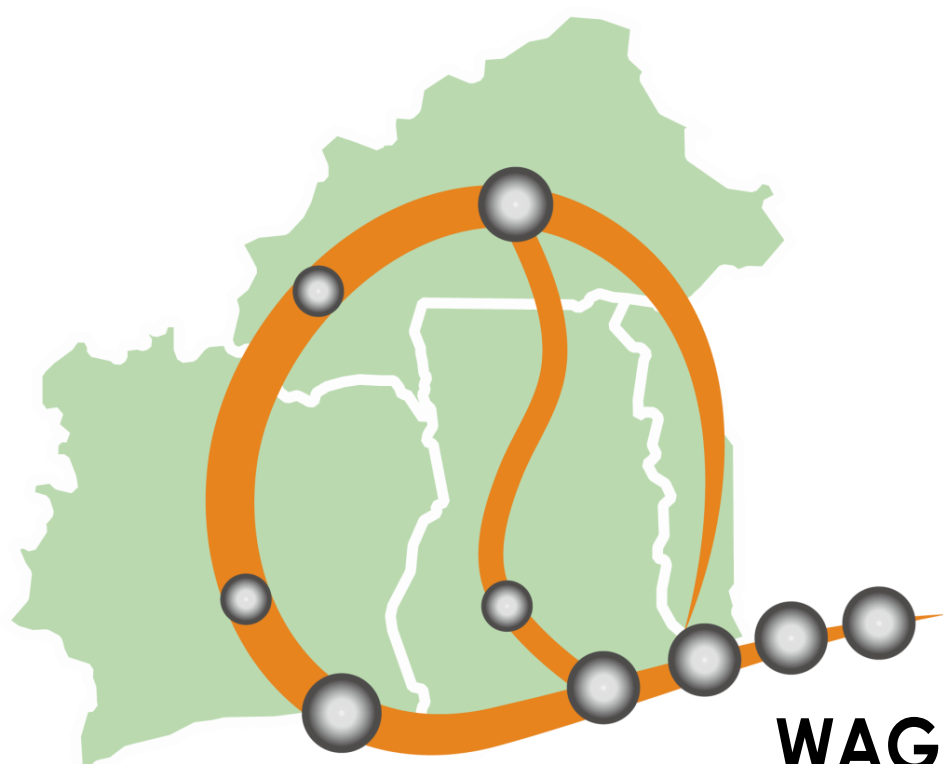


Department of Community Territorial Administration and Transport (DATC)
UEMOA Commission
National Development Planning Commission (NDPC)
Ministry of Roads and Highways (MRH)
Ministry of Finance (MoF)
The Republic of Ghana

THE PROJECT ON THE CORRIDOR DEVELOPMENT FOR WEST AFRICA GROWTH RING MASTER PLAN



**Final Report
Summary**

March 2018

WAGRIC-CACAO

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Oriental Consultants Global Co., Ltd.
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LIST OF ABBREVIATIONS

Abbreviation	English	French
AfDB (BAD)	African Development Bank	Banque africaine de développement -
BOAD (WADB)	West African Development Bank	Banque Ouest Africaine de Développement
BPO	Business Process Outsourcing	-
DATC	Department of Community Territorial Administration and Transport, UEMOA Commission	Département de l'Aménagement du Territoire Communautaire et des Transports, Commission de l'UEMOA
DGSCN	General Directorate of Statistics and National Accounts (Togo)	Direction Générale de la Statistique et de la Comptabilité Nationale (Togo)
ECOWAS (CEDEAO)	Economic Community of West African States	Communauté économique des États de l'Afrique de l'Ouest -
EIA	Environmental Impact Assessment	Évaluation de l'impact environnemental
ENV	Household Living Standards Survey of Côte d'Ivoire	Enquête sur le Niveau de Vie des Ménages en Côte d'Ivoire
FAO	Food and Agriculture Organization of the United Nations	Organisation des Nations Unies pour l'Alimentation et l'Agriculture
FS	Feasibility Study	-
GDP	Gross Domestic Product	Produit Intérieur Brut
GLSS6	Ghana Living Standards Survey Round 6	-
GSS	Ghana Statistical Services	-
HDI	Human Development Index	Indice de Développement Humain
HRD	Human Resource Development	-
ICT	Information and Communication Technology	Technologies de l'Information et de la Communication
IMF	International Monetary Fund	Fonds Monétaire International
INS	National Statistics Office (Côte d'Ivoire and Togo)	Institut National de la Statistique (Côte d'Ivoire and Togo)
INSD	National Institute of Statistics and Demography (Burkina Faso)	Institut National de la Statistique et de la Démographie (Burkina Faso)
JICA	Japan International Cooperation Agency	Agence Japonaise de Coopération Internationale
JTMC-National	National-Level Joint Technical and Monitoring Committee	Comités Techniques Conjoints de Suivi du niveau National
JTMC-Regional	Regional-Level Joint Technical and Monitoring Committee	Comités Techniques Conjoints de Suivi du niveau Régional
kV	kilo Volt	-
MoF	Ministry of Finance (Ghana)	-
MRH	Ministry of Roads and Highways (Ghana)	-
MW	Mega Watt	-
NDPC	National Development Planning Commission (Ghana)	-
OSBP	One Stop Border Post	Postes de Contrôle Juxtaposés
QUIBB	Core Welfare Indicators Questionnaire Survey	Questionnaire des Indicateurs de Base du Bien-Être
RGPH	General Census of Population and Housing	Recensement Général de la Population et de l'Habitat
SME	Small and Medium-sized Enterprises	Petites et Moyennes Entreprises
UEMOA (WAEMU)	West African Economic and Monetary Union	Union Economique et Monétaire Africaine
UN	United Nations	Organisation des Nations Unies
UNDP	United Nations Development Program	Programme des Nations Unies pour le développement
USD	United States Dollar	Dollars Américain
WAGRIC (CACAO)	The Project on Corridor Development for West Africa Growth Ring Master Plan	Le Projet du Plan Directeur de l'Aménagement des Corridors pour l'Anneau de Croissance en Afrique de l'Ouest
WAPP	West African Power Pool	Échanges d'Énergie Électrique Ouest-Africain
ZAAP	Planned Agricultural Zone Development	Zone d'Aménagement Agricole Planifié

Executive Summary

The Project on the Corridor Development for West Africa Growth Ring Master Plan

~ Master Plan on Sub-Regional Corridor Development connecting Four Countries by “West Africa Growth Ring Corridors” based on Sub-Regional Economic Integration for Seeking Development of Economic Sectors oriented to Sub-Regional Markets ~

Target Area for the Master Plan: WAGRIC Sub-Region covering Burkina Faso, Côte d’Ivoire, Ghana and Togo

Major Corridors targeted by the Master Plan: Abidjan-Ouagadougou Corridor, Tema-Ouagadougou Corridor, Lomé-Ouagadougou Corridor and Abidjan-Lagos Corridor

Future Vision for WAGRIC Sub-Region: Inclusive and sustainable development is attained by developing competitive economic sectors and by attracting investment through sub-regional economic and spatial integration

Target Years of the Master Plan: Year 2025 for the Short Term, Year 2033 for the Mid Term and Year 2040 for the Long Term

Present Situation and Issues:

- At present, primary commodities, such as gold, bauxite, manganese, phosphate rock, cacao, cashew, palm oil, rubber and cotton, compose, in terms of commercial value, the majority of export products of the WAGRIC countries.
- In the 2000s, the WAGRIC countries experienced high economic growth due to higher prices and expanded production of the primary commodities. As a result, on the one hand, a large impact was made on the economies of coastal areas. On the other hand, a limited impact was made on the economies of inland areas.
- Although 1,000 km long north-south paved roads of two lanes have been relatively well developed to connect inland areas and coastal areas, long-distance cargo transport modes, such as railways, inland water transport and pipelines, have been poorly developed and not efficiently operated in the WAGRIC sub-region. As a result, transport costs have remained relatively high. Moreover, high-speed transport systems have not been developed yet for connecting inland areas and coastal areas, except for the motorway Abidjan-Yamoussoukro in Côte d’Ivoire. As a result, barriers of transport costs and transport time have been created between inland areas and coastal areas, hindering the development of economic sectors in inland areas.
- In the WAGRIC countries, production areas of primary commodities are mostly located in coastal areas, except for one inland country, Burkina Faso.¹ Although promising mineral resources are identified and cashew and cotton are also grown in inland areas, such production has not been activated due to the barriers of transport costs and travel time between inland areas and coastal areas.
- The production and export of primary commodities cannot contribute to the reduction of regional disparity between inland areas and coastal areas partly because they are subject to

¹ The primary commodities produced in Burkina Faso are gold and cotton. Gold does not depend on land transport from Burkina Faso to coastal areas. Cotton mainly relies on railway between Ouagadougou and Abidjan.

price fluctuations in the world markets, and partly because it is difficult to promote production of primary commodities in inland areas due to the barriers of transport cost.

- Therefore, it is difficult for national economies dependent on primary commodity export to achieve inclusive and sustainable development. For WAGRIC countries, diversification of economic sectors and development of economic sectors in inland areas are large challenges.
- Although WAGRIC countries are connected by transport corridors, economic relations (import and export relations) are relatively weak among neighbouring countries. Markets have not been integrated among neighbouring countries, and resources have not been utilized in an integrated manner among neighbouring countries. This is because the customs union has not been strongly implemented yet, although it has been already institutionalized by UEMOA and ECOWAS. As a result, WAGRIC countries have not been able to attract investments to economic sectors.

Future Socio-Economy, Changes of External Environment and Development Potential for WAGRIC Countries:

- While the population of the WAGRIC sub-region will increase from 77 million in 2015 to about 150 million in 2040, its urban population will reach about 89 million (59% of the total population) in 2040 from 35 million in 2017.
- Since climate conditions vary in the north-south direction in countries neighbouring the Gulf of Guinea, a variety of agricultural products are grown in the WAGRIC countries. In addition, mineral resources are also rich in these countries. Therefore, it is possible for primary commodities to support the growth of the national economies of the WAGRIC countries. At the same time, the size of the middle-income population, which is not small at present, is expected to increase more in the future, contributing to large increases of consumers' demands within the sub-region.
- In addition to the large increase of total population and middle-income population of the WAGRIC countries, the integration of sub-regional markets by strengthening of implementation of the customs union, which has been institutionalized but not yet substantially implemented, could enhance the attractiveness of investments in economic sectors.
- In view of the future circumstances in which very rapid urbanization of the world's rapidly increasing population will result in stasis of the population that is engaged in agriculture, and the gradual wage increase of working population in the emerging economies will make it difficult for them to maintain the price competitiveness of their manufactured products, the WAGRIC countries should gain opportunities to develop their productive capacities for food crops and consumer products targeting their own sub-regional markets.

The Core Issue to be tackled by the Master Plan: A weak relationship between coastal areas and inland areas in terms of economy and transport has been a critical factor creating a difficult and stagnant situation in which to try to develop economic sectors in inland areas. On the one hand, the high growth of the coastal economies has been driven by the production and export of primary commodities in coastal areas. On the other hand, inland areas have been economically stagnated due to isolation from the prosperous coastal economies. This is the core issue to be tackled by the WAGRIC Master Plan.

In other words, the inland areas are handicapped with the barriers of high transport costs and transport time, while the coastal areas have a growth engine for sub-regional economies. It is necessary to develop economic sectors in both inland areas and coastal areas by connecting inland areas and coastal areas in terms of economic sectors and transport for the purpose of creating a good cycle within the sub-regional economies. The key to connect stagnant inland areas and promising coastal areas is development of economic sectors targeting promising sub-regional consumer markets.

Selected Growth Scenario: Three alternative growth scenarios are identified for breaking the barriers of transport costs and transport time between inland areas and coastal areas and for creating good cycles of those economies. Out of the three alternatives, one growth scenario is evaluated as the one which could make the most effective impact on the strengthening of connectivity between inland areas and coastal areas in terms of economy and transport. While seeking a strong sub-regional economic integration, the selected growth scenario aims at

development of economic sectors targeting sub-regional markets and development of corridor infrastructures of both north-south corridors and the coastal east-west corridor for the purpose of strengthening both economic connectivity and transport connectivity between inland areas and coastal areas.

Four Buttons (Four Sets of Necessary Actions): In order to implement the selected growth scenario, the following four sets of necessary actions (four buttons) should be taken in an integrated manner. Buttons A, B and C are intended to initiate and drive corridor development. On the other hand, Button D is for securing inclusiveness and sustainability.

- **Button A: Development of Economic Sectors oriented to Sub-Regional Markets:** By Attracting Investments to Economic Sectors and Utilizing the Potential of Economic Sectors Targeting Sub-Regional Markets, as well as Production of Primary Commodities <<Take Advantage of Growing Sub-Regional Markets>>
- **Button B: Expansion of the Size of Coastal Markets:** By Economically and Spatially Integrating Coastal Markets of Neighbouring Countries and by Promoting Economic Sectors Development <<Strengthening of Growth Engine of Coastal Areas>>
- **Button C: Strengthening of North-South Connectivity:** By Establishment of Less Costly and High-Speed Transport Systems to Connect Inland Production Areas with Coastal Market Areas for Enhancing Competitiveness of Economic Sectors located in Inland Areas <<Strengthening of Connectivity between Inland Areas and Coastal Areas>>
- **Button D: Securing of Inclusive and Sustainable Development:** By Paying Attention to Social, Environmental and Security Aspects of Corridor Development <<For Pro-Actively Responding to Social, Environmental and Security Issues>>

Essential Strategies for Implementing the Selected Growth Scenario:

Ten essential strategies are formulated in order to implement the selected growth scenario. These essential strategies are categorized into the following four groups. These four groups of essential strategies are the four buttons to push for implementation of the selected growth scenario.

(1) Essential Strategies Group No.1 (Button A): Development of Economic Sectors

- Essential Strategy No.1: “Fostering of Various Growth Economic Sectors” that Contribute to Region-Wide Development, including Economic Sectors targeting Sub-Regional Markets, as well as Production of Primary Commodities
- Essential Strategy No.2: “Investment Promotion for Growth Economic Sectors” by Taking Advantage of Integration and Expansion of Sub-Regional Markets
- Essential Strategy No.3: “Development of Basic Infrastructure for Economic Sectors” to Support the Development of Growth Economic Sectors in both Inland and Coastal Areas

(2) Essential Strategies Group No.2 (Button B): Expansion of the Size of the Coastal Market

- Essential Strategy No.4: “Strengthening of Implementation of Customs Union” and “Facilitation of Sub-Regional Trade” on National Borders, Sea Ports and Transport Corridors among the WAGRIC Countries
- Essential Strategy No.5: Strategic Upgrading of Abidjan-Lagos Corridor Transport Infrastructure (Motorways)

(3) Essential Strategies Group No.3 (Button C): Strengthening of North-South Connectivity

- Essential Strategy No.6: Strategic Upgrading for Establishment of Efficient and Region-Wide Cargo Transport Networks (Railways, Multi-Modal Dry Ports, Inland Water Transport and Pipelines)
- Essential Strategy No.7: Strategic Upgrading of Transport Corridor Infrastructure by Emphasising the Importance of High Speed Transport and Services (Motorways, High-Standard 4-Lane Roads, Air Transport and ICT)

(4) **Essential Strategies Group No.4 (Button D): Securing of Inclusive and Sustainable Development**

- Essential Strategy No.8: Supporting of Small and Medium-sized Enterprises, Development of Human Resources for Economic Sectors and Strengthening of Basic Social Services in order to Enable More People to Participate in Emerging Development Opportunities due to Sub-Regional Corridor Development
- Essential Strategy No.9: Development of Systems and Activities of Environmental Management that could Respond to Potential Risks to the Natural and Social Environments that are Increasing across Wide Areas due to Sub-Regional Corridor Development
- Essential Strategy No.10: Strengthening of Security Measures for Maintaining Safe and Secure Societies and Sustainable Economies in the Sub-Region

Essential Strategies and Priority Projects:

Over 350 priority projects are identified for implementing the essential strategies in accordance with the selected growth scenario. At the same time, individual countries' implementation plans are formulated for phased corridor development covering three phases (Short Term: 2018-2025, Medium Term: 2026-2033, and Long Term: 2034-2040). Furthermore, priority projects cutting across the WAGRIC countries are also formulated

Spatial Structure of WAGRIC Sub-Region:

- **Spatial Development through Sub-Regional Economic Integration and Corridor Development**: The WAGRIC Master Plan aims to integrate the four countries economically by strengthening the customs union and physically by corridor development. This master plan seeks not only to develop economic sectors both in coastal areas and inland areas, but also to upgrade the transport infrastructure in north-south corridors and coastal east-west corridor. This effort will transform the spatial structure of WAGRIC Sub-Region.
- **Economic Corridors and Transport Corridors**: There are two types of north-south corridors connecting inland areas and coastal areas. One is an economic corridor and the other is a transport corridor. These different types of corridors have different functions and different forms of development. In economic corridors, transport functions are upgraded so as to break the barriers of transport cost and transport time, and moreover, basic infrastructures are provided so as to develop economic sectors in the cities along the corridors, as well as in other areas along the corridors. On the other hand, in transport corridors, the transport connectivity is strengthened not only between inland areas and coastal areas by improving road conditions, but also for improving accessibility to areas along these corridors.
- **Major Regional Cities**: People, goods and information will get together along north-south economic corridors and major regional cities. Urban functions, corridor infrastructure and basic infrastructures for economic sectors will be provided in those cities, accommodating administration function and service functions for neighbouring agriculture areas, and regional head office functions for private companies, and furthermore attracting manufacturing factories. For these cities, social services and cultural facilities will also be provided for promoting people's settlement in inland areas.
- **West Africa Coastal Mega-Region (Mega Coastal Economic Corridor)**: Abidjan-Lagos Corridor is to be developed into an integrated coastal economic corridor (its population estimated to be 65 million in 2040) connecting coastal economies and cities between Abidjan and Lagos along the approximately 1,000km long motorway. Urban facilities, urban expansion areas, industrial areas and conservation areas should be strategically located along the two axes of existing roads and new motorway. In the super long term (beyond 2040), this area would become a coastal mega-region equipped with a high-speed railway, as well as a motorway.
- **Coastal Metropolitan Areas**: Coastal metropolitan areas, such as Greater Abidjan, Greater Accra, Greater Lomé and Greater Lagos, have been developed along the Abidjan-Lagos

Corridor. These metropolitan areas are located at junctions between north-south economic corridors and coastal corridor. They would enhance international competitiveness by upgrading their urban functions and advancing their economic sectors, as well as attracting soft functions, such as knowledge, information, finance, advanced services, and culture.

Key Points for Initiating and Driving Corridor Development for Individual Countries following the Selected Growth Scenario:

In order to implement the selected growth scenario, it is necessary for the WAGRIC countries together to push the four buttons (to take the four sets of necessary actions) for the purpose of initiating and driving individual countries' corridor development, as well as securing inclusive and sustainable corridor development.

(1) Burkina Faso's Key Points for Initiating and Promoting Corridor Development

[Button A]: Development of economic sectors oriented to coastal consumers' markets of the sub-region should be promoted by making the following efforts:

- Improvement of access roads to agricultural potential areas from north-south corridors to coastal countries (Côte d'Ivoire, Ghana and Togo), and expansion of irrigation schemes in agricultural potential areas for increasing the production and export of existing products (agricultural and livestock products) oriented to sub-regional consumers' markets
- Development of new signature products oriented to middle-income populations of sub-regional markets (agricultural and livestock products and agro-processed and livestock-processed products)

[Button C]: North-south connectivity should be strengthened for reducing long-distance cargo transport costs for development of economic sectors in inland areas by taking the following action:

- Development of Multi-Modal Dry Port in Ouagadougou and Expansion of Multi-Modal Dry Port in Bobo-Dioulasso for combining rail and truck transport for the purpose of expanding rail service areas and increasing rail transport demand, as well as for reducing cargo transport costs

[Button C]: North-south Connectivity should be strengthened by developing a high-speed transportation for attracting investment to economic sectors in inland areas as follows:

- Phased development of motorway from Ouagadougou to Bobo-Dioulasso for strengthening the connectivity with coastal markets of Côte d'Ivoire
- Phased development of high-standard four-lane roads from Ouagadougou toward Togo and Ghana for strengthening the connectivity with coastal markets through Togo and Ghana

(2) Côte d'Ivoire's Key Points for Initiating and Promoting Corridor Development

[Button A]: Development of economic sectors oriented to sub-regional markets should be promoted not only in coastal areas, but also in inland areas by taking the following actions:

- Investment promotion to economic sectors in both coastal areas and inland areas, by appealing of integrated and expanded markets within the sub-region
- Promote the agricultural production of rice, maize, soy bean, fresh vegetable and fresh fruits targeting coastal markets of the sub-region by improvement of access roads to potential agricultural areas from Abidjan-Ouagadougou Corridor and by providing infrastructure including irrigation facilities
- Provision of economic infrastructure, such as electricity, water and industrial parks, for agro-processing industries in Bouaké and Korhogo

[Button B]: Sub-regional markets should be integrated and expanded for creating the enabling environment to attract investment to economic sectors oriented to sub-regional markets by taking the following actions:

- Strengthening of implementation of Customs Union at the national border with Ghana for integrating Côte d'Ivoire's coastal markets with Ghanaian and other coastal markets
- Construction of East Exit Line of Motorway connecting Cocody with Bonoua, which could contribute to the strong connectivity of Greater Abidjan with Abidjan-Lagos Corridor

[Button C]: North-south Connectivity should be strengthened for reducing transport costs and transport time between inland areas and coastal areas, for creating the enabling environment for developing economic sectors in inland areas by taking the following actions:

- Extension of the motorway further north up to Niakaramandougou from Yamoussoukro for reducing transport time between inland areas and coastal areas
- Development of multi-modal dry ports at Suburban Abidjan and Ferkessédougou by combining rail transport and truck transport for expanding service areas of railway both in coastal areas and inland areas, and for reducing transport costs between inland areas and coastal areas

(3) Ghana's Key Points for Initiating and Promoting Corridor Development

[Button A]: Development of economic sectors oriented to sub-regional markets should be promoted not only in coastal areas, but also in inland areas by taking the following actions:

- Investment promotion to economic sectors in both coastal areas and inland areas, by appealing of integrated and expanded markets within the sub-region
- Promotion of development of agriculture targeting sub-regional markets in Northern Zone by attracting investments and by providing infrastructure (including east-west access roads to potential agricultural areas and irrigation facilities) in inland areas from the Central Corridor (Tema-Ouagadougou Corridor) of Ghana
- Strengthening of economic infrastructure, such as electricity, water and industrial parks, for supporting the development of Tamale as a Major Regional City in the Northern Zone for attracting investment to agro-processing industries targeting sub-regional markets

[Button B]: Sub-regional markets should be integrated and expanded for creating the enabling environment to attract investment to economic sectors oriented to sub-regional markets by taking the following actions:

- Strengthening of implementation of Customs Union at the national border with Côte d'Ivoire and Togo for integrating Ghana's coastal markets with neighbouring coastal markets
- Construction of strategically selected sections of Coastal Motorway within Ghana, not only for spatially integrate coastal markets, but also for forming a coastal industrial and urban belt (a coastal economic corridor)
- Formulation of Greater Accra's urban transportation master plan, especially for identifying the location of East-West Motorway within Greater Accra
- Formulation of a road plan for securing the connectivity of the new Tema container terminal with the Abidjan-Lagos Motorway, as well as with Tema-Ouagadougou Corridor (Central Corridor of Ghana)

[Button C]: North-south Connectivity should be strengthened for reducing transport costs and transport time between inland areas and coastal areas, for creating the enabling environment for developing economic sectors in inland areas by taking the following actions:

- Extension of 4-lane high-standard road between Nkawkaw and Kumasi, construction of Greater Kumasi Outer Ring Road and extension of 4-lane high-standard road between Kumasi and Kintampo for reducing travel time between inland areas and coastal areas

- Revitalization of water transport of the Volta Lake in the short term, by combining 1) construction of Tema-Akosonbo Railway, 2) development of Debre Port in the upstream of the Volta Lake and Akosonbo Port in its downstream, 3) rehabilitation of pipelines between Buipe and Bolgatanga
- Revitalization of Western Railway Line (Takoradi-Awaso-Kumasi), Eastern Railway Line (Tema-Boankra-Kumasi) in the short term, and new construction of railway from Kumasi up to northern areas in the mid and long terms

(4) Togo's Key Points for Initiating and Promoting Corridor Development

[Button A]: By utilizing the strength of Lomé-Ouagadougou Corridor and Coastal Abidjan-Lagos Corridor, the development of economic sectors should be promoted in both inland areas and coastal areas, targeting sub-regional coastal markets, by making the following efforts:

- Promotion of agriculture in inland areas, targeting the sub-regional market by developing agro-poles in inland areas including infrastructure, such as access roads and irrigation facilities to potential agricultural areas
- Promotion of agro-processing industries in inland areas by strengthening of infrastructure in Kara and Sokodé (major regional cities) including industrial parks
- Development of industrial and logistics parks in Greater Lomé by taking advantage of Abidjan-Lagos Coastal Motorway to be developed

[Button B]: Sub-regional markets should be integrated and expanded for creating the enabling environment to attract investment to economic sectors oriented to sub-regional markets by taking the following actions:

- Strengthening of implementation of Customs Union at national borders along Abidjan-Lagos Corridor
- Construction of strategically selected sections of Coastal Motorway, especially East-West Motorway in Greater Lomé, for strengthening of logistics function and enhancing locational potentiality for manufacturing sectors in the mid and long terms

[Button C]: North-south connectivity should be strengthened for reducing transport costs and transport time for investment promotion to economic sectors in inland areas as follows:

- Improvement of traffic congestion in surrounding areas of Lomé Port for maintaining of the competitiveness of Lomé Port and Lomé-Ouagadougou Corridor
- Phased upgrading of the north-south corridor road to a 4-lane high-standard road including the construction of 4-lane bypass roads on Lomé-Ouagadougou Corridor
- Phased development of railway between Lomé (Togo) and Cinkasé (Burkina Faso) for reducing long-distance cargo transport costs and by utilizing private sectors' initiatives of iron ore mining and transport for Banjeli

Chapter 1 Introduction

1.1 The Project on the Corridor Development for West Africa Growth Ring Master Plan (Project WAGRIC)

The Project on the Corridor Development for West Africa Growth Ring Master Plan (Project WAGRIC²) is a study project for formulating a strategic master plan for corridor development. The Project WAGRIC deals with development of economic sectors and corridor infrastructure covering four countries, namely Burkina Faso, Côte d'Ivoire, Ghana and Togo. These four countries are referred to as WAGRIC countries or the WAGRIC Sub-Region.

Although the improvement of transport capacity of north-south corridors (Abidjan-Ouagadougou Corridor, Tema-Ouagadougou Corridor and Lomé-Ouagadougou Corridor) is expected to become an important trigger to activate economic sector development along the corridors, in actuality such impact of transport improvement alone is not so substantially large in the case of the WAGRIC countries. Therefore, it is necessary for WAGRIC countries to formulate other types of strategies to promote development of their economic sectors.

Project WAGRIC pays attention to emerging and rapidly growing sub-regional markets of a variety of consumer products. This emergence and growth of sub-regional markets is due to high primary commodity prices and expansion of production of minerals and agricultural products in the 2000s around the world. This trend is expected to continue in the future due to global demand increase for those primary commodities even though price fluctuations take place.

In the WAGRIC Master Plan, promotion of development of economic sectors targeting growing sub-regional markets of WAGRIC countries is recommended, in addition to continued effort at expanding the export of primary commodities, such as minerals, cacao, cashew, oil palm, rubber and cotton, outside of the sub-regional markets (to overseas markets), by integrated implementation of sub-regional economic integration and corridor development.

Through sub-regional economic integration, the WAGRIC Master Plan is designed to promote corridor development for the purpose of strengthening the connectivity of the four countries, the north-south connectivity between inland areas and coastal areas and the east-west connectivity of coastal areas between neighbouring countries, in order to promote development of economic sectors targeting growing consumer markets within the sub-region. By attracting investments to both inland and coastal areas' economic sectors targeting growing sub-regional markets and by strengthening of north-south connectivity, inland economic sectors can be connected to growing coastal markets. By following the growth scenario selected by the WAGRIC Master Plan, the development of economic sectors in inland areas and coastal areas is promoted so as to prevent excessive outmigration from inland areas to coastal areas, and to reduce the increasing speed of regional disparity.

By implementing these strategies and plans on corridor development, the WAGRIC Master Plan will try to achieve "Dynamic and Inclusive Development, as well as Sustainable Development" for seeking balanced socio-economic development between inland countries/ inland areas and coastal countries/ coastal areas in the WAGRIC Sub-Region.

² WAGRIC is an English abbreviation for the Project on Corridor Development for West Africa Growth Ring Master Plan. CACAO is a French abbreviation for Le Projet du Plan Directeur de l'Aménagement des Corridors pour l'Anneau de Croissance en Afrique de l'Ouest.

1.2 Goal of the Project

The goal of the Project is to seek balanced economic development between coastal areas and inland areas in the four countries of the Study Areas by utilising identified development potentials of economic sectors and by solving identified bottlenecks of transport corridors.

The target years of the Strategic Master Plan are the year 2025 for the short term, the year 2033 for the middle term and the year 2040 for the long term.

1.3 Study Areas and Major Target Corridors

The main target countries for the Project are Burkina Faso, Côte d'Ivoire, Ghana and Togo (WAGRIC countries). The WAGRIC Master Plan covers not only the four major corridors of West Africa's Growth Ring Corridors (Abidjan-Ouagadougou Corridor, Tema-Ouagadougou Corridor, Lomé-Ouagadougou Corridor and Abidjan-Lagos Corridor), but also other corridors. (See Figure 1.1 and Figure 1.2)

1.4 Counterpart Organisations and Management Structure for the Project

The Project's management structure has the following two lines:

- The one is for Burkina Faso, Côte d'Ivoire and Togo under the Department of Community Territorial Administration and Transport (DATC: *Département de l'Aménagement du Territoire Communautaire et des Transports*), the UEMOA Commission;
- The other is for Ghana under Ghana's National Development Planning Commission (NDPC) and Ghana's Ministry of Roads and Highways (MRH).

For UEMOA's three countries, at the national level Joint Technical and Monitoring Committees (JTMC-National) are organized by involving a variety of ministries and agencies. The chairs for JTMC-National are from the following ministries:

- Burkina Faso: Ministry of Economy and Finance
- Côte d'Ivoire: Ministry of Economy and Finance
- Togo: Ministry of Development Planning

At the sub-regional level, a Regional-Level of Joint Technical and Monitoring Committee (JTMC-Regional) is composed of representatives of seven ministries from each country and chaired by DATC, UEMOA Commission. Furthermore, a Joint Steering Committee is composed of seven ministers of the three countries.

For Ghana, the chair for the Steering Committee (SC) and Technical Committee (TC) is as follows:

- Ghana: National Development Planning Commission (NDPC)

1.5 Organisation of the WAGRIC Master Plan

The WAGRIC Master Plan is composed of two levels of development strategies and plans. The one is at the sub-regional level and the second is at the individual country level. These two levels of strategies and plans are as follows:

- Sub-Regional Level: Sub-Regional Development Strategies
- Country Level: Individual Countries' Corridor Development Plans

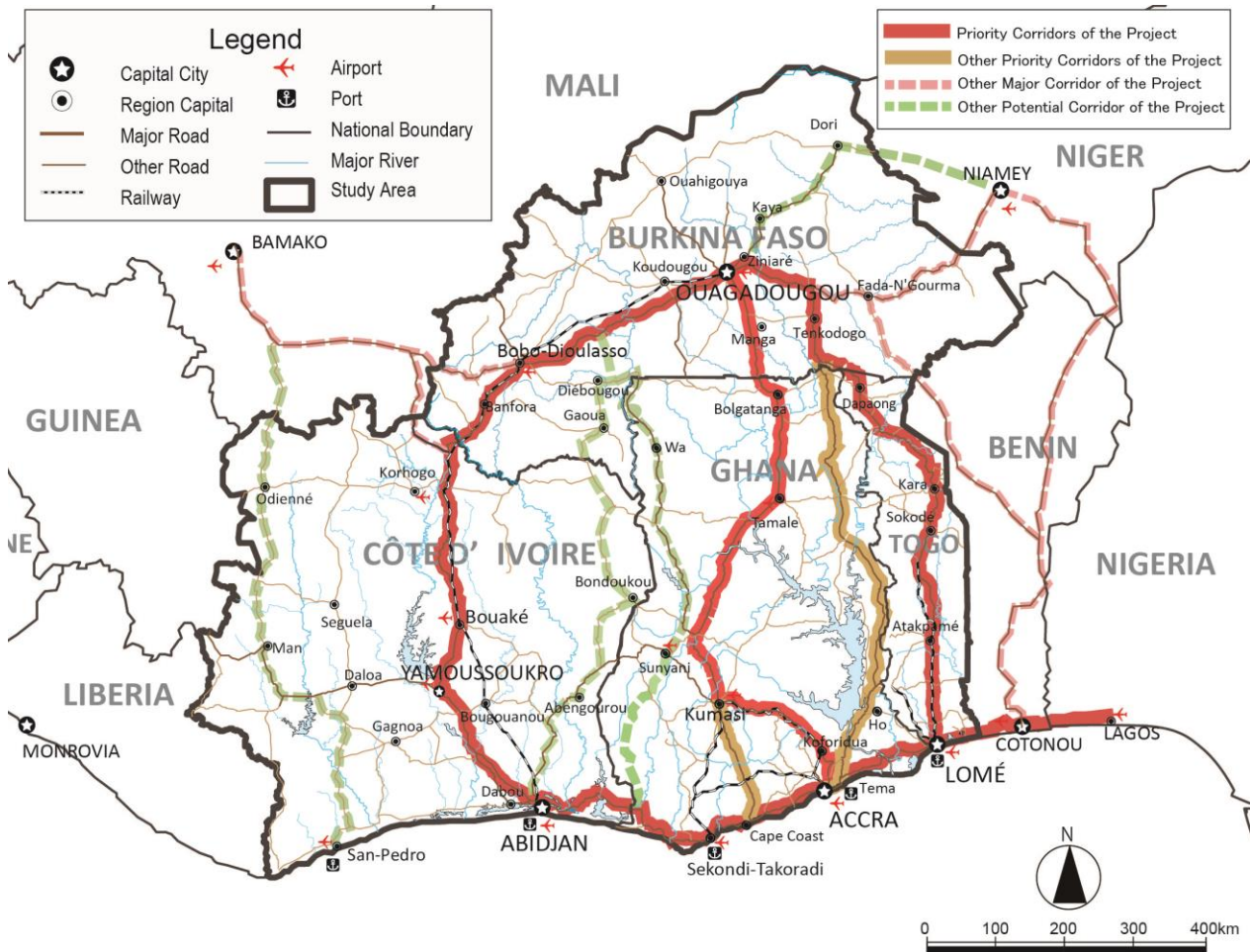
The sub-regional development strategies deal with overall strategies to achieve the goal of the Project. On the other hand, the four individual countries' strategies and plans contain their own corridor development strategies/ plans and priority projects concerning corridor infrastructure and economic sectors in accordance with the sub-regional development strategies.

The four countries' corridor development strategies/ plans deal with not only primary north-south corridors and the coastal corridor, but also other corridors, for achieving the goal of the Project. These sub-regional and individual countries' development strategies and plans are formulated as an integrated development master plan.



Source: JICA Study Team

Figure 1.1 ECOWAS Member Countries and Four Countries for the Project



Source: JICA Study Team

Figure 1.2 Four Countries and International Corridors in the Study Areas for the Project

Chapter 2 Future Vision for WAGRIC Sub-Region

A future vision statement for WAGRIC countries has been prepared for formulating the WAGRIC Master Plan. While there are no such official documents, the following statement for the future vision for WAGRIC countries is prepared by interpreting official documents for UEMOA and ECOWAS, as well as those for African Union.³

“Through sub-regional economic and spatial integration, the WAGRIC Sub-Region is to have a competitive economy, attracting investments to their economic sectors and achieving inclusive and sustainable development.”

³ The future visions of UEMOA, ECOWAS and African Union were interpreted from the following documents :
“Summary Report on Regional Economic Programme (PER: Programme Economique Régional) 2006-2010,” UEMOA Commission, July 2006.
“Thematic Pamphlet on ECOWAS Vision 2020” prepared by ECOWAS Commission in 2011.
“Agenda 2063: The Africa We Want” Popular Version, May 2015.

Chapter 3 Existing Conditions and Emerging Development Opportunities of WAGRIC Sub-Region

3.1 Existing Economic and Industrial Conditions of WAGRIC Countries

National economies of the four WAGRIC countries have grown based on overseas export oriented sectors such as mining and traditional and non-traditional agriculture. Especially since the 2000s, the high world price of mineral resources and traditional and non-traditional agricultural products as well as increasing production amount of such products helped the economies of the four countries to achieve a high annual growth rate with effective rate of over 5%. (See Figure 3.1)

As a result, the middle income population in the urban areas increased. (See Table 3.1) The increase of middle income population caused a sudden increase in consumption of imported goods from Europe, Asia, USA etc. such as food, processed food and drinks, daily goods, home electrical appliances and transport machinery. (See Figure 3.2)

The two main export sectors, mining and traditional and non-traditional agriculture, occupy such an important place in total exports that the national economy of each of the four countries cannot function without the dynamics of these two sectors activities. (See Table 3.2 and Table 3.3). On the basis of this finding, and taking into account the list of imported articles and their high import amounts (See Table 3.4), it can be said that the national production of agriculture, livestock and fisheries as well as those of the daily consumer goods manufacturing industry in the four countries are not sufficiently developed to meet their own needs. For example, self-sufficiency rate of rice in 2014 was 49% in Burkina Faso, 68% in Côte d'Ivoire, 38% in Ghana and 54% in Togo (See Table 3.5). As for manufacturing, its share of GDP is relatively high with 13.8% in Côte d'Ivoire, but much smaller in the other three countries, from 5 to 7% (See Table 3.6).

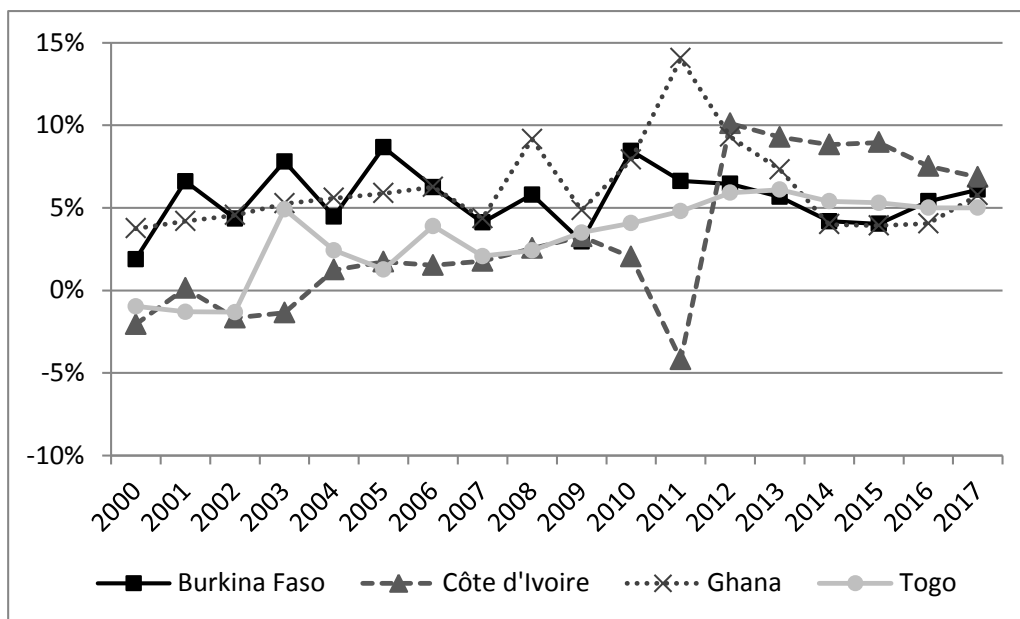
Despite considerable growth of the national economies in the four countries since the 2000s, their per capita GDP ranks as low-income countries for Burkina Faso and Togo, and as middle-income countries for Ghana and Côte d'Ivoire. (See Figure 3.3)

Regarding the poverty rate, despite the economic growth related to mining resources and agricultural products mentioned above, the relatively recent data indicate a high level, 58.7% for Togo (2011), 46.7% for Burkina Faso (2009), and 46.3% for Côte d'Ivoire (2015). Meanwhile, Ghana is experiencing a marked improvement in the poverty rate which is now 24.2% (2012-2013). With regard to the Human Development Index (HDI) in 2015, which includes not only GDP per capita but also poverty and conditions for access to social services, Ghana is ranked in 139th position, Togo in 166th, Côte d'Ivoire in 171st and Burkina Faso in 185th (See Table 3.7).

It must be noted that the level of development of the four WAGRIC countries remains low despite the economic growth achieved through export sectors with global outlets such as mining and traditional and non-traditional agriculture.

The current industrial structure of the four WAGRIC countries, remains heavily dependent on exports of mineral resources and traditional and non-traditional agricultural products, meaning that their national economies are heavily dependent on global economic conditions and world prices of mineral resources and traditional and non-traditional agricultural products. There is also the problem of the low productivity of farmers and workers in urban informal sectors, which still represent the majority of the working population. As a result, these national economies are not able to ensure a certain level of

comfort for their rapidly growing populations. The economic gaps between urban and inland areas continue to worsen, while the urban poor continue to grow.



Note: IMF Estimates the Data of 2016-2017 of Ghana and 2015-2017 of Burkina Faso, Côte d'Ivoire and Togo

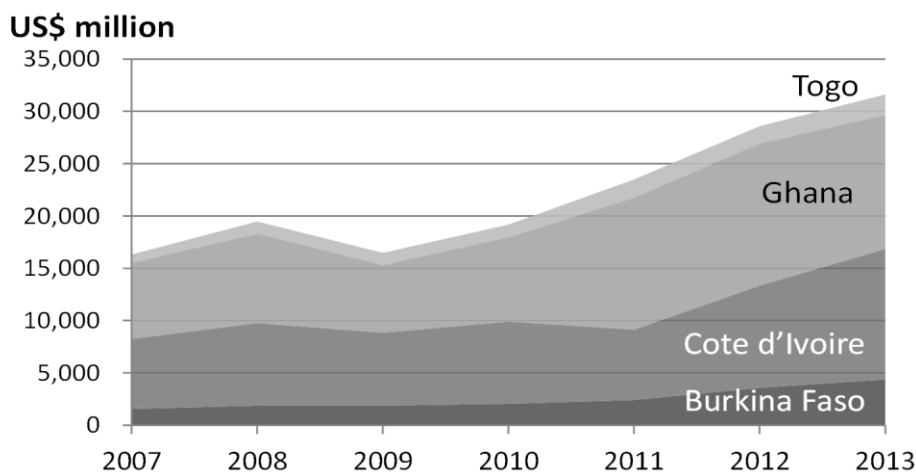
Source: International Monetary Fund (IMF), World Economic Outlook Database, April 2017

Figure 3.1 GDP Growth (Constant Price) of the WAGRIC Countries (2000-2017)

Table 3.1 Middle Income Population (2011): Those who spend US\$ 4 or more per day

WAGRIC Countries	Middle Income Population	% of Total Population	Other Major African Countries	Middle Income Population	% of Total Population
Ghana	4,812,000	19.8%	South Africa	10,017,000	19.8%
Côte d'Ivoire	4,288,999	18.9%	Nigeria	15,894,000	9.9%
Togo	628,000	8.8%	Kenya	6,873,000	16.8%
Burkina Faso	481,000	3.2%	Mozambique	572,000	2.6%

Source: JICA Study Team based on Nomura Research Institute (NRI), March 2013, "Report on Basic Research on Doing Business in Africa" (Based on United Nations, 2011, World Population Prospects, and African Development Bank, "Africa in 50 Years' Time" Low Case Scenario, 2011)



Source: UN Comtrade Database

Figure 3.2 Import Value of WAGRIC Countries (2007-2013)

Table 3.2 Share of Export Value of Agricultural Products and Mineral Resources (2014)

	Year	Export Value (USD Million)	Export Value of Agricultural Products (USD Million)	Export Value of Mineral Resources (USD Million)	Share of Total Export Value		
					Export Value of Agricultural Products	Export Value of Mineral Resources	Others
Burkina Faso	2016	2,520.0	572.9	1,667.1	22.7%	66.2%	11.1%
Côte d'Ivoire	2015	11,844.8	7,225.4	2,880.0	61.0%	24.3%	14.7%
Ghana	2016	10,655.8	3,468.4	6,307.8	32.5%	59.2%	8.3%
Togo	2016	714.9	105.6	196.8	14.8%	27.5%	57.7%

Source: ECOWAS, Regional Ecomac (<http://www.ecomac.ecowas.int/en/index.htm>)

Table 3.3 Production Volume of Major Traditional Cash Crops in WAGRIC Countries (2014)

Rank	Cashew Nuts		Cacao		Oil Palm		Cotton	
	Country	Ton	Country	Ton	Country	Ton	Country	Ton
1	Nigeria*	894,368	Côte d'Ivoire*	1,434,077	Indonesia*	126,684,128	India	20,867,647
2	India	753,000	Ghana	858,720	Malaysia	96,066,760	China	18,534,950
3	Côte d'Ivoire*	531,488	Indonesia	728,400	Thailand	12,434,520	USA	9,791,640
4	Vietnam	245,003	Brazil	273,793	Nigeria*	7,962,213	Pakistan	6,817,178
5	Benin	201,818	Cameroon*	269,902	Colombia	5,531,895	Brazil	4,236,763
6	Philippines	170,853	Nigeria**	248,000	Ecuador	3,468,510	Uzbekistan	3,400,200
7	Republic of Guinea-Bissau*	155,538	Ecuador	156,216	Cameroon*	2,571,881	Turkey	2,350,000
8	Indonesia	131,200	Peru	81,651	Ghana	2,443,270	Australia	2,136,700
9	Tanzania	130,124	Dominican Republic	69,633	Honduras*	2,165,056	Argentina	1,019,653
10	Brazil	107,713	Colombia	47,732	PNG*	2,158,822	Burkina Faso	894,982
11	Burkina Faso*	89,619	PNG*	45,019	Côte d'Ivoire*	1,672,877	Mexico	861,531
12	Mali	72,009	Togo*	30,516	Guatemala*	1,500,000	Greece	810,490
13	Mozambique	63,080	Mexico	26,969	Brazil	1,393,873	Syria	623,390
14	Ghana	50,000	Venezuela	21,735	DR Congo*	1,183,563	Turkmenistan**	590,000
15	Thailand	26,400	Uganda*	20,979	Costa Rica	884,406	Mali	548,696
16	Kenya	22,140	Sierra Leone*	15,879	Guinea*	833,458	Egypt**	525,000
17	Malaysia*	15,228	India	15,000	Mexico	678,935	Myanmar	493,600
18	Guinea*	8,871	Haiti	14,633	China*	678,090	Côte d'Ivoire*	410,000
19	Togo*	7,447	Guatemala	13,109	Peru	617,634	Benin	381,662
20	Senegal*	7,060	Guinea*	9,439	Benin*	586,975	Tajikistan	372,656
21	Madagascar*	7,036	Madagascar*	8,818	Philippines	437,439	Kazakhstan	320,706
22	Sri Lanka	6,378	Liberia**	7,500	Venezuela	407,111	Nigeria	299,700
23	Mexico	4,227	Bolivia	7,164	Angola*	279,688	Cameroon*	250,000
24	Peru	2,757	Tanzania*	5,645	Dominican Republic*	263,050	Tanzania	245,851
25	Gambia*	2,386	Philippines	5,428	Solomon Islands*	238,675	Spain	226,200
26	Angola*	2,028	Republic of Congo**	5,000	Sierra Leone*	209,819	Iran*	185,000
27	Honduras*	1,996	Solomon Islands*	4,825	Liberia*	175,153	Sudan	176,000
28	Myanmar*	1,394	Sao Tome and Principe**	3,200	Paraguay*	150,730	Zambia	120,314
29	El Salvador	1,113	Malaysia	2,665	Togo*	144,687	Bolivia*	117,000
30	Dominican Republic*	695	DR Congo**	2,500	Republic of Congo*	144,205	Ethiopia*	117,000

Source: FAOSTAT

Note: *FAO Estimate, **Unofficial Statistics

Table 3.4 Major Import Items of WAGRIC Countries (2013)

Import Commodities	Burkina Faso		Côte d'Ivoire		Ghana		Togo		Total WAGRIC	
	Import Volume (USD)	(%)	Import Volume (USD)	(%)	Import Volume (USD)	(%)	Import Volume (USD)	(%)	Import Volume (USD)	(%)
Mineral fuels, mineral oils and products of their distillation etc.	1,141,080,634	26.14	3,214,956,719	25.75	472,611,638	3.70	434,328,125	22.08	5,262,977,117	16.65
Nuclear reactors, boilers, machinery etc.	540,323,269	12.38	813,539,337	6.52	1,915,494,343	14.98	161,429,699	8.21	3,430,786,648	10.86
Vehicles other than railway or tramway rolling-stock	372,993,337	8.54	564,391,688	4.52	2,143,039,840	16.76	118,870,072	6.04	3,199,294,937	10.12
Ships, boats and floating structures	91,032	0.00	2,701,729,336	21.64	17,327,003	0.14	36,842,611	1.87	2,755,989,982	8.72
Electrical machinery and equipment etc.	219,393,263	5.03	514,278,206	4.12	950,753,596	7.44	74,003,345	3.76	1,758,428,410	5.56
Cereals	160,430,005	3.68	687,965,858	5.51	540,982,429	4.23	61,819,940	3.14	1,451,198,232	4.59
Plastics and articles thereof	80,579,000	1.85	381,314,494	3.05	471,931,625	3.69	124,992,269	6.35	1,058,817,388	3.35
Articles of iron or steel	171,656,476	3.93	216,755,771	1.74	536,334,840	4.19	86,927,134	4.42	1,011,674,221	3.20
Iron and steel	183,785,514	4.21	187,147,007	1.50	427,580,862	3.34	73,351,566	3.73	871,864,949	2.76

Import Commodities	Burkina Faso		Côte d'Ivoire		Ghana		Togo		Total WAGRIC	
	Import Volume (USD)	(%)	Import Volume (USD)	(%)	Import Volume (USD)	(%)	Import Volume (USD)	(%)	Import Volume (USD)	(%)
Salt; sulphur; earths and stone; lime and cement etc.	136,909,189	3.14	181,474,117	1.45	367,248,874	2.87	94,380,147	4.80	780,012,327	2.47
Pharmaceutical products	203,472,840	4.66	271,553,970	2.18	215,181,633	1.68	86,810,729	4.41	777,019,172	2.46
Fish and crustaceans etc.	10,012,729	0.23	362,650,886	2.91	330,171,894	2.58	30,259,070	1.54	733,094,579	2.32
Miscellaneous chemical products	43,235,095	0.99	142,788,919	1.14	337,915,810	2.64	18,499,694	0.94	542,439,518	1.72
Fertilisers	137,141,540	3.14	144,001,929	1.15	197,528,178	1.54	37,896,916	1.93	516,568,563	1.63
Rubber and articles thereof	77,147,959	1.77	97,546,229	0.78	223,890,091	1.75	14,378,627	0.73	412,962,906	1.31
Optical, photographic, medical or surgical instruments etc.	35,310,769	0.81	73,137,575	0.59	254,032,241	1.99	6,896,606	0.35	369,377,191	1.17
Paper and paperboard	38,989,325	0.89	131,915,419	1.06	162,737,884	1.27	27,247,698	1.39	360,890,326	1.14
Meat and edible meat offal	234,487	0.01	78,798,472	0.63	254,838,782	1.99	11,536,854	0.59	345,408,595	1.09
Animal or vegetable fats and oils etc.	37,675,700	0.86	68,860,205	0.55	186,507,005	1.46	44,954,936	2.29	337,997,846	1.07
Organic chemicals	74,175,649	1.70	73,304,919	0.59	151,647,003	1.19	7,993,672	0.41	307,121,243	0.97
Sugars and sugar confectionery	51,755,883	1.19	15,363,076	0.12	211,522,299	1.65	21,962,047	1.12	300,603,305	0.95
Others	649,037,129	14.87	1,559,509,987	12.49	2,417,955,529	18.91	391,958,067	19.92	5,018,460,712	15.88
Total	4,365,430,824	100.00	12,482,984,119	100.00	12,787,233,399	100.00	1,967,339,824	100.00	31,602,988,169	100.00

Source: UN Comtrade Database

Table 3.5 Rice Production Volume, its Import Ratio and Self-Sufficient Ratio in WAGRIC Countries and their Neighbouring Countries

Country (Year)	Production Volume (1,000 ton)	Import Volume (1,000 ton)	Self-Sufficient Ratio (%)	Ratio of Import Volume (%)
Burkina Faso (2014)*	348	362	49.0%	51.0%
Côte d'Ivoire (2014)*	2,054	953	68.3%	31.7%
Ghana (2014)**	393	644	38.9%	62.1%
Togo (2014)*	148	126	54.0%	46.0%
Mali (2012)*	1,915	422	81.9%	18.1%
Niger (2014)*	109	363	23.1%	76.9%

Source1 (Production Volume): *FAOSTAT, and **Ministry of Food and Agriculture of Ghana, Fact & Figures 2014

Source2 (Import Volume): UN Comtrade Database

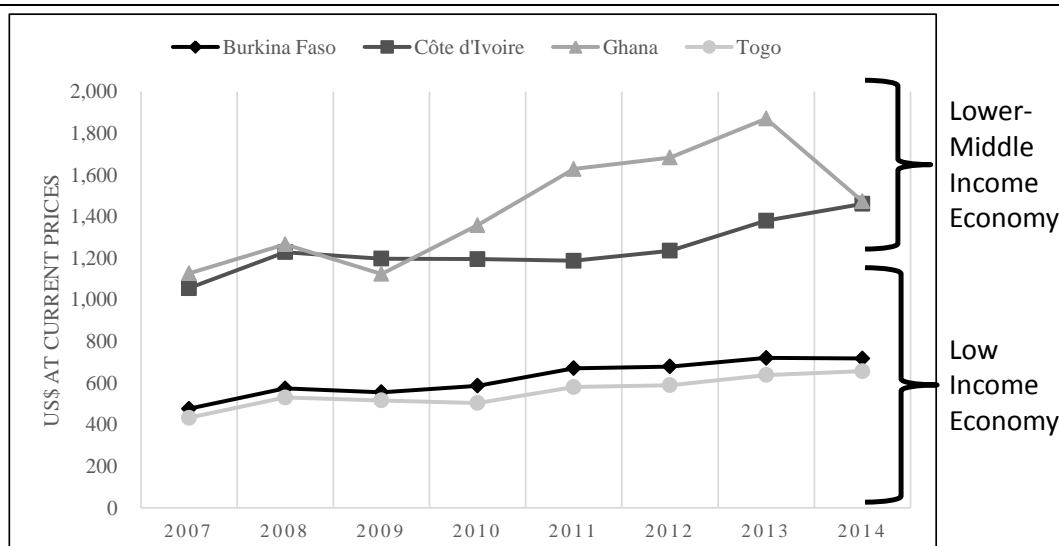
Table 3.6 Share of Manufacturing Sector in Total GDP of Each WAGRIC Country (2014)

	Burkina Faso	Côte d'Ivoire	Ghana	Togo
GDP at Current Market Prices (US\$ Million, 2014)	12,503	33,741	38,616	4,594
Primary Sector	34.7%	26.2%	22.4%	47.4%
Secondary sector	21.9%	23.2%	27.7%	19.6%
Manufacturing	6.3%	13.8%	5.1%	6.5%
Tertiary Sector	43.4%	50.6%	49.9%	33.0%

Source 1(GDP at Current Market Prices): IMF World Economic Outlook Database

Source 2 (Percentage of GDP by Sector of Ghana): Ghana Statistical Service

Source 3 (Percentage of GDP by Sector of Burkina Faso, Côte d'Ivoire and Togo): ECOWAS, Regional Ecomac (<http://www.ecomac.ecowas.int/en/index.htm>)



Source: IMF, World Economic Outlook database. October 2015

Figure 3.3 Transition of GDP per Capita of WAGRIC Countries (2007-2014)

Table 3.7 Human Development Index (HDI) and Poverty Rates of WAGRIC Countries

	Human Development Index (HDI)*	HDI Rank*	Poverty Rate***	
	2015	2015	%	Year
Burkina Faso	0.402	185	46.7	2009
Côte d'Ivoire	0.474	171	46.3	2015
Ghana	0.579	139	24.2	2012-2013
Togo	0.487	166	58.7	2011

Source 1 (HDI): UNDP, Human Development Report 2016

Source 2 (Poverty Ratio):

Burkina Faso: Institut National de la Statistique et de la Demographie (INSD), Annuaire Statistique 2013

Côte d'Ivoire: Institut National de la Statistique (INS), Enquete sur le Niveau de Vie des Menages en Côte d'Ivoire (ENV2015)

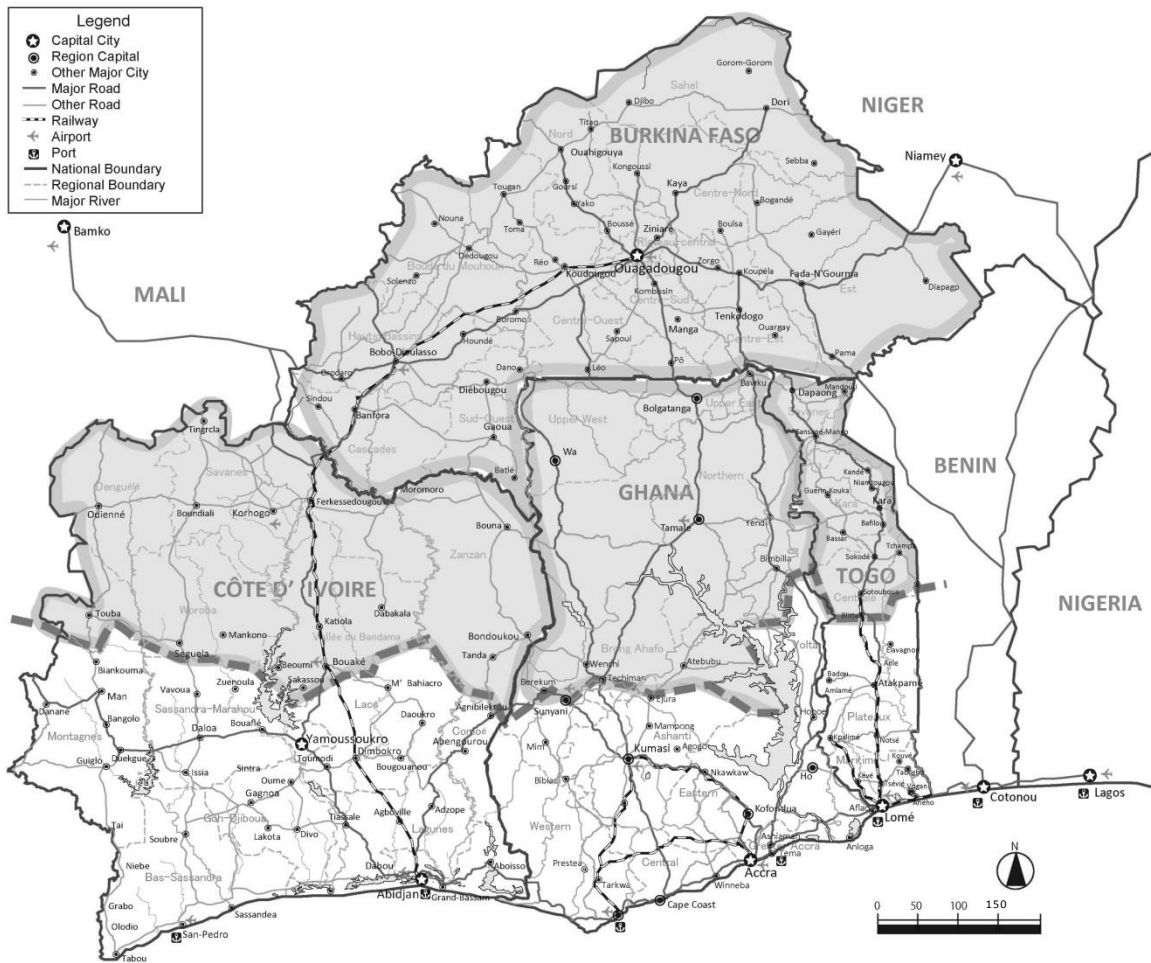
Ghana: Ghana Statistical Service, Ghana Living Standard Survey Round 6(GLSS6)

Togo: Ministre auprès du Président de la République, chargée de la Planification, du Développement et de l'Aménagement du territoire, Questionnaire des Indicateurs de Base du Bien-Etre (QUIBB) 2011

3.2 Present Situation of the Inland Areas in the Coastal WAGRIC Countries and the Provinces of the Inland WAGRIC Country

In the WAGRIC Master Plan, the coastal areas are defined by the following two characteristics: 1) being located away from 300~400 km from the coast and 2) being relatively well served by land transportation. The inland areas are those areas excluding the coastal areas. Based on this criteria, inland areas in coastal countries and provinces in the inland country are identified as follows (See Figure 3.4):

- Burkina Faso: All 12 regions excluding the Centre Region where the capital city Ouagadougou is located (Major cities in rural areas are Bobo-Dioulasso, Koupela-Pouytenga, Banfora, Koudougou, Ouahigouya, Kaya, Houndé, Tenkodogo and Fada N'Gourma)
- Côte d'Ivoire: 12 regions of Poro, Gbêkê, Gontougo, Kabadougou, Worodougou, Bafing, Bagoué, Béré, Bounkani, Folon, Hambol, Tchologo (Major cities in inland areas are Bouaké, Korhogo, Bondoukou, Ferkessédougou and Odienné)
- Ghana: Four regions of Brong Ahafo, Northern, Upper East and Upper West (Major cities in the inland areas are Tamale, Sunyani, Techiman, Wa, Bolgatanga and Kintampo)
- Togo: Two regions of Kara and Savanes (Major cities in inland areas are Kara and Dapaong)



Source: JICA Study Team

Figure 3.4 Inland Areas in WAGRIC Countries

The WAGRIC Sub-Region is less populated in the inland areas of the coastal countries and in the provinces of the inland country compared to the coastal areas. The population density in the extended areas of these inland areas of the coastal countries and the provinces of the inland country is 80 person / km² or less, which is lower than that of the coastal areas of the coastal countries and around the capital of the inland country. It should be noted that most interior areas of Côte d'Ivoire and Ghana have a population density of less than 40 person/km² (See Figure 3.5).

In addition, the population of major cities in the inland areas of the coastal countries and the provinces of the inland country are small. Greater Kumasi (2.5 million inhabitants) in central Ghana and Bobo-Dioulasso agglomeration (800 thousand inhabitants) in the south-west of Burkina Faso are exceptions with some manufacturing clusters. Other cities are sparsely populated with the population as follows: Korhogo in northern Côte d'Ivoire 250 thousand inhabitants, Bouaké in the centre of Côte d'Ivoire 480 thousand inhabitants, Tamale in northern Ghana 490 thousand inhabitants, Kara in northern Togo 120 thousand inhabitants, Banfora in south-eastern Burkina Faso 120 thousand inhabitants. (See Figure 3.7) Administrations and the service sector as well as businesses are dominant in these major cities, but there is little manufacturing development.

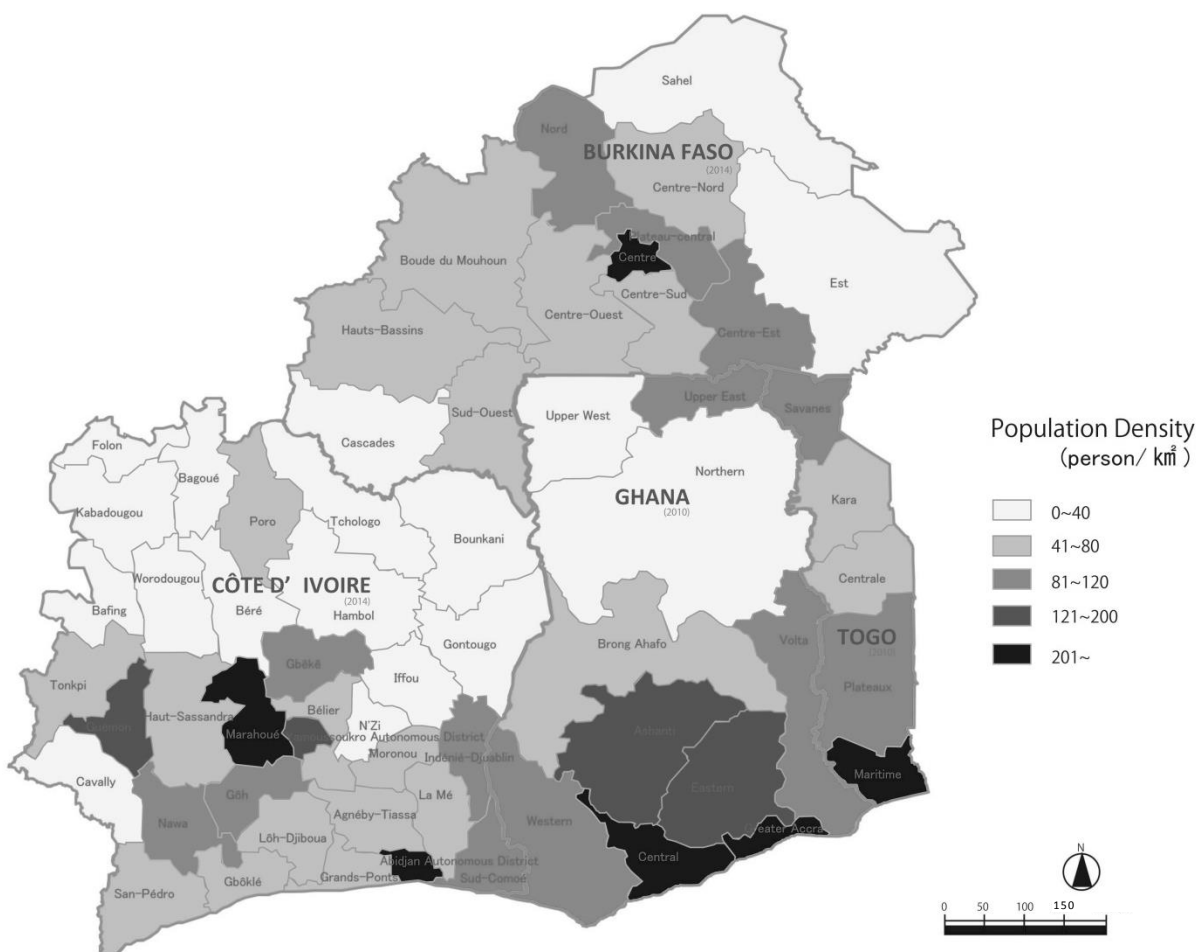
Data showing economic situations in different geographical areas are not so many in WAGRIC countries. Poverty ratios are higher to the north in inland areas of the coastal countries and to the peripheries in the inland country (See Figure 3.6).

In the inland areas of the coastal countries and the provinces of the inland country, low population density, high poverty rates and the small size of the local market make it difficult to improve industrial productivity autonomously or increase the size of

production In such area, besides growing cash crops such as cotton and cashew nuts, most people devote themselves to modest and low-productivity farming and livestock activities, centred on food crops and livestock for self-consumption. The surplus of production is a source of cash income. Under such conditions, it is difficult to establish value chains for agriculture, livestock or fisheries covering production and processing to distribution and sales even if assistance measures for economic sector development or economic infrastructure were implemented.

Some of the inland areas of the coastal countries and provinces of the inland country possess potential for exploiting mining resources and traditional and non-traditional agricultural products (See Figure 3.8). However, there is a large interior space devoid of such potentialities.

If the situation remains unchanged, inland areas / the inland country will remain cut off from the economic development of the coastal areas without ever benefiting from such development and the major cities in the inland areas / inland country will not grow. Consequently, the population exodus from rural area will continue.



Note: Data Year of Each Country is as follows. Burkina Faso: 2014 (Estimate), Côte d'Ivoire: 2014 (Census Data), Ghana: 2010 (Census Data), and Togo: 2010 (Census Data)

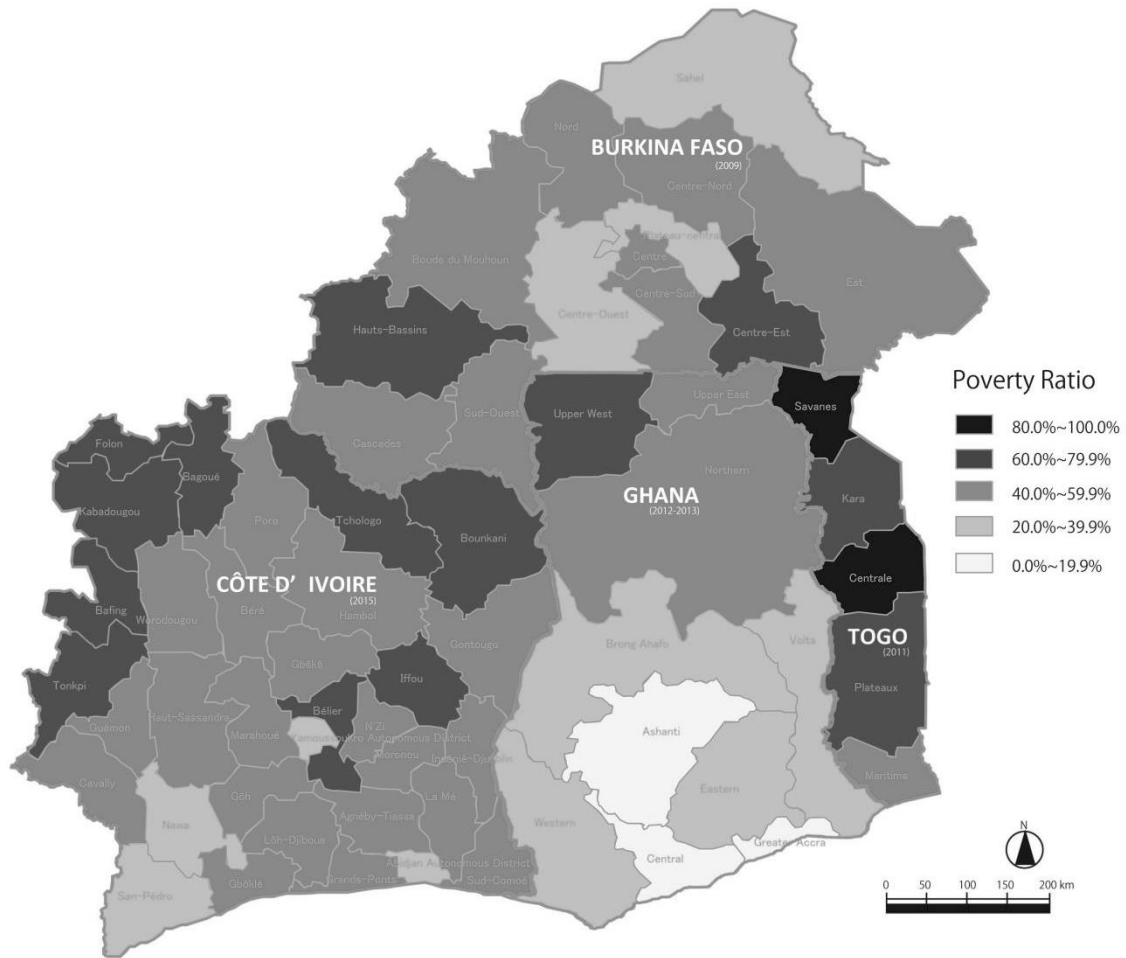
Source 1 (Burkina Faso): INSD

Source 2 (Côte d'Ivoire): INS, RGPH2014

Source 3 (Ghana): GSS, 2013, 2010 Population and Housing Service National Analytical Report

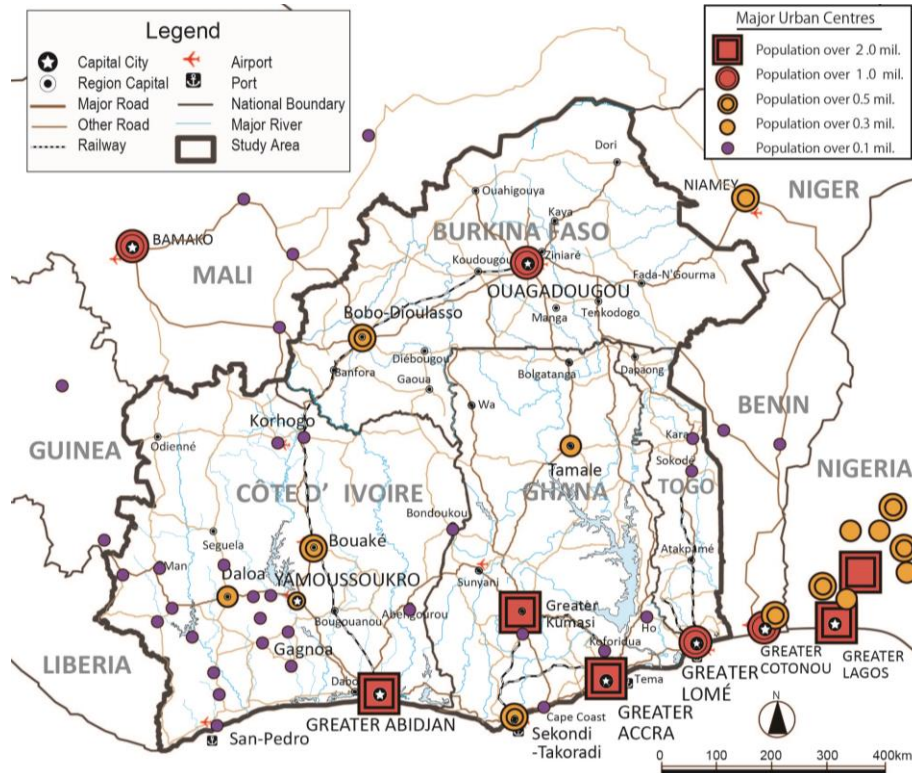
Source 4 (Togo): DGSCN, Recensement Général de la Population et de l'Habitat (RGPH) 2010

Figure 3.5 Population Density by Region in WAGRIC Countries



Note: Data year is as follows: Burkina Faso: 2009, Côte d'Ivoire: 2015, Ghana: 2012-2013, Togo: 2011
 Source1 (Burkina Faso): Institut National de la Statistique et de la Démographie, Annuaire Statistique 2013
 Source2 (Côte d'Ivoire): Institut National de la Statistique (INS), Enquete sur le Niveau de Vie des Menages en Côte d'Ivoire (ENV2015)
 Source3 (Ghana): Ghana Statistical Service (GSS), 2014, Ghana Living Standard Survey (GLSS) Round 6
 Source4 (Togo): Ministère aupres du Président de la République, Charge de la Planification, du Développement et de l'Aménagement du Territoire, Questionnaire des Indicateurs de Base du Bien-Etre (QUIBB) 2011

Figure 3.6 Poverty Ratio by Administrative Region in WAGRIC Countries



Note: Data Year of Each Country is as following Census Years. Burkina Faso 2006. Côte d'Ivoire 2014, Ghana 2010, Togo 2010, Benin 2013, Mali 2009, Niger 2012, Nigeria 2006

Source: JICA Study Team based on

Burkina Faso: INSD, 2009, Analyse des résultats définitifs du RGPH 2006 Theme 2: Etat et Structure de la Population ,

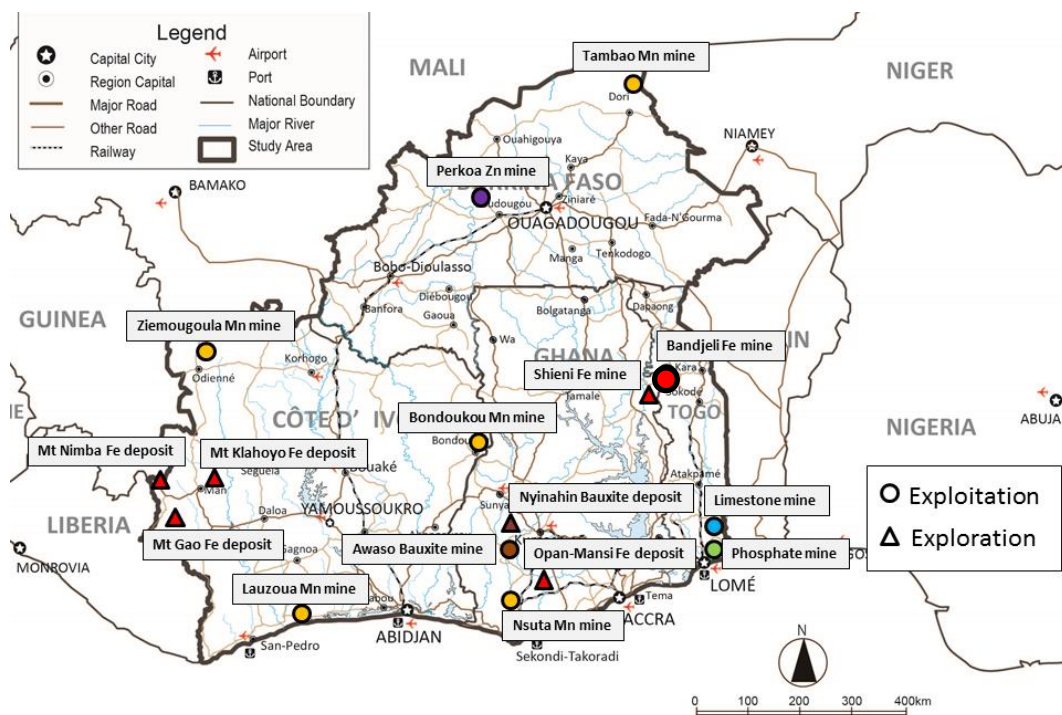
Côte d'Ivoire: INS, RGPH 2014,

Ghana: GSS, 2013, 2010 Population and Housing Census,

Togo: Direction Générale de la Statistique et de la Comptabilité Nationale (DGSCN), Recensement Général de la Population et de l'Habitat (RGPH) 2010

Other Countries: City Population HP

Figure 3.7 Distribution of Cities with Population Over 100,000 in WAGRIC Countries



Note: Manganese (yellow), Iron ore (red), Bauxite (brown)

Source: JICA Study Team based on the information from each country

Figure 3.8 High Potential Mineral Resources and Mines in WAGRIC Countries

3.3 Emerging Opportunities in WAGRIC Sub-Region

(1) Global Population, Urbanization and Food Demand

The world population in 2015 is 7,349 million inhabitants with 54% of the population living in urban areas. In 2050, this will reach 9,725 million inhabitants, of which 66% will be living in urban areas. (See Figure 3.9)

Rural populations will decline in many countries. This will also result in a gradual decline in the workforce in the agricultural sector. Despite the likely improvement in agricultural, livestock and fisheries productivity, it may be difficult in the future to meet the global food demand. Low income population in the rural areas will particularly be affected by the rising prices of agricultural products caused by instability and low production volumes due to climate change, as well as rising agricultural product prices due to wild ups and downs of oil prices. This will accelerate urban expansion.

It will be necessary to increase the volume of food production by 75% in order to meet the world food demand in 2050. The import volume of rice, meat and fish are increasing in WAGRIC countries. However, in the future, such products may be lacking and the prices may rise. Considering the considerable population growth projected in the sub-regions in parallel with that of food demand, it is necessary to increase food production in each WAGRIC country.

(2) Demographic Trends and Demographic Bonuses in Sub-Saharan Africa

Africa is entering the period of benefitting from the demographic bonus⁴. It is expected that Africa will have the longest duration of this bonus which is until 2089. Moreover, after 2025, the labour force in Sub-Saharan Africa will be greater than in other regions of the world and, consequently, Sub-Saharan Africa could become a supplier of economically active populations to the rest of the world. However, the increase in social instability linked to the unemployment of growing number of economically active populations and the difficulty of investing through national savings will not allow for growth equivalent to the successes of Asia East and South-East Asia.

For Sub-Saharan Africa including WAGRIC countries, to benefit from the demographic bonus, the following measures are urgently needed: (1) job creation (improving agricultural productivity, creating employment in high-productivity non-agricultural sectors, etc.); (2) investment in human resources (education, health); (3) development of a financial market (savings). Indeed, the economically active populations of the WAGRIC countries will increase by 30 million people between 2015 and 2025.

(3) Population, Urbanization and Changes in the Lifestyle and Consumption Patterns of the Four WAGRIC Countries

The total population of the four countries will reach around 150 million inhabitants in 2040, of which 59%, or 89 million, are to be in urban areas. (See Table 3.8)

The countries of the Gulf of Guinea benefit from wide differences in climatic conditions from south to north which allows great agricultural diversification. They also possess various and rich mineral resources. The sub-regional economies will thus continue to be supported by primary products.

As a result, with the continuing growth of the already significant middle class populations in the sub-regions, the requirements for meat, fish, dairy products and fresh vegetables will increase considerably (See Figure 3.10, Figure 3.11 and Figure 3.12).

Moreover, the size of the national markets of the sub-regions represented by the national populations of 2015 is modest: 19 to 28 million inhabitants in Ghana, Côte d'Ivoire and Burkina Faso and 7 million in Togo. However, the attractiveness of the industry for

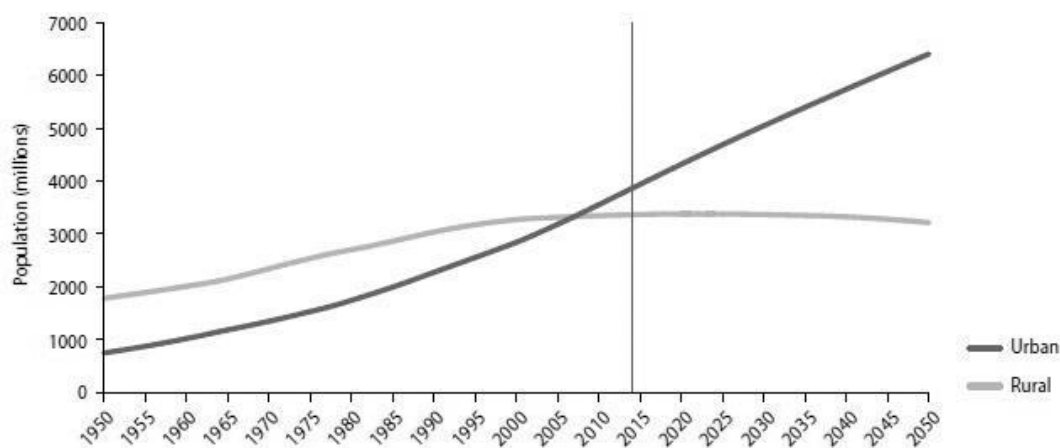
⁴ Demographic bonus is when the growth rate of the labour force exceeds that of the population as a whole and the economic growth is accelerating.

investors can be enhanced by integrating markets in the WAGRIC Sub-Regions through the consolidated implementation of the customs union which is already institutionally ready but not fully implemented at the customs.

The urbanization rates of the four WAGRIC countries in 2040 are forecast to become as follows: 48% for Burkina Faso, 65% for Côte d'Ivoire, 65% for Ghana and 55% for Togo.

The increase in food demand of the urban population and the growing middle-class populations will accompany the increase in the consumption demand.

Globally, the number of people engaged in the agricultural sector will not increase, because of the urbanization, despite the considerable population growth in the world. Moreover, the increase in wages in the emerging countries will make it difficult to maintain the competitiveness of exports from these countries. Given these circumstances, the four WAGRIC countries will have opportunities to develop food production and consumer goods manufacturing which until now have remained dominated by imports in each country and within the WAGRIC Sub-Regions.



Source: The Department of Economic and Social Affairs of the United Nations Secretariat, 2014, World Urbanizations Prospects 2014 Revision

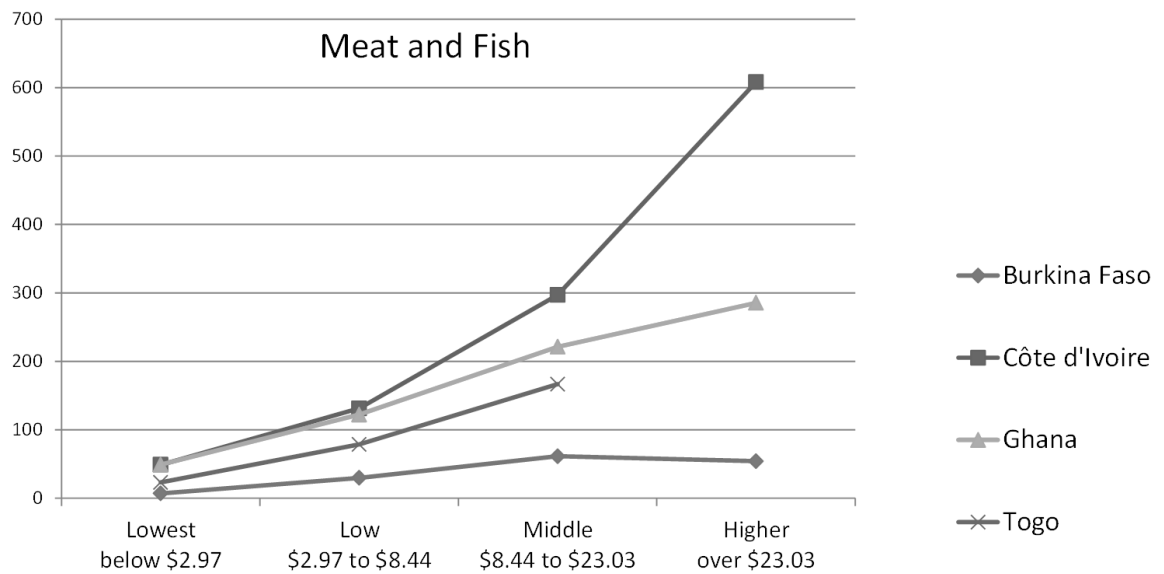
Figure 3.9 Transition of Urban Population in the World (1950-2050)

Table 3.8 Urban Population in WAGRIC Countries

		2015	2040
Burkina Faso	Urban Population (thousand)	5,670	19,820
	Share of Urban Population	29%	48%
Côte d'Ivoire	Urban Population (thousand)	11,609	15,780
	Share of Urban Population	49%	65%
Ghana	Urban Population (thousand)	13,169	17,416
	Share of Urban Population	53%	65%
Togo	Urban Population (thousand)	2,860	7,822
	Share of Urban Population	39%	55%
WAGRIC Countries	Urban Population (thousand)	35,019	89,330
	Share of Urban Population	45%	59%

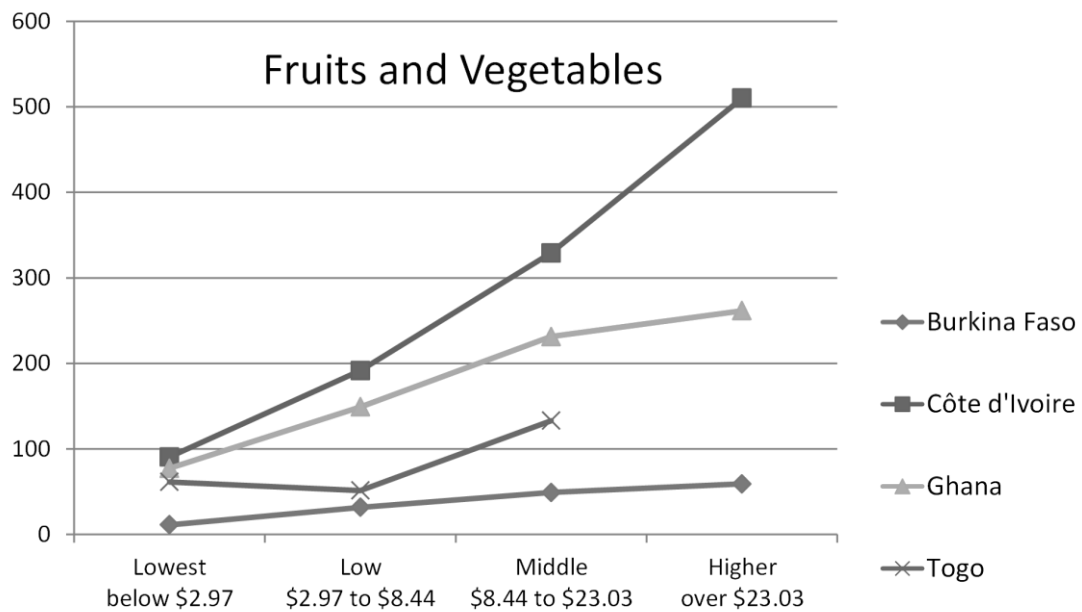
Source: JICA Study Team based on Census of Each Country and UN World Urbanizations Prospects 2014 Revision

(US\$ per capita) (annual)



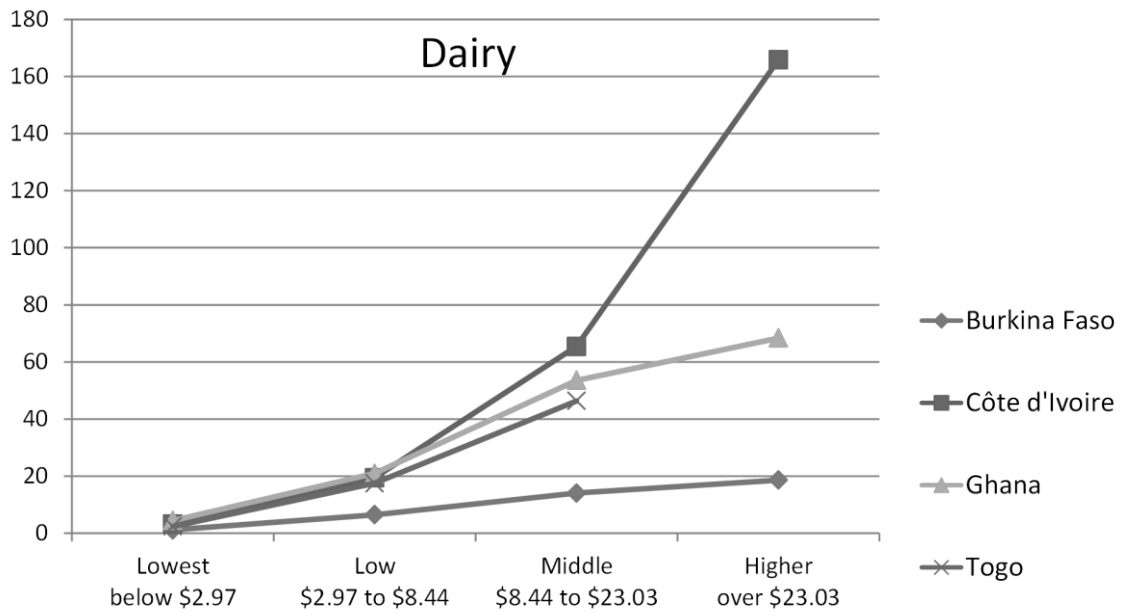
Source: World Bank, Global Consumption Database (World Bank estimates based on national household consumption or expenditure surveys)

Figure 3.10 Consumption Difference between Income Groups: Meat and Fish (USD per capita/year)



Source: World Bank, Global Consumption Database (World Bank estimates based on national household consumption or expenditure surveys)

Figure 3.11 Consumption Difference between Income Groups: Fruits and Vegetables (USD per capita/year)



Source: World Bank, Global Consumption Database (World Bank estimates based on national household consumption or expenditure surveys)

Figure 3.12 Consumption Difference between Income Groups: Dairy products (USD per capita/year)

Chapter 4 Strategic Objective: Aim of Master Plan

4.1 Introduction

The WAGRIC Master Plan is composed of sub-regional development strategies and individual countries' corridor development plans for achieving the sub-region's future vision described in Chapter 2.

In order to formulate such a master plan, it is necessary to clarify a "Strategic Objective", which is the aim for formulating the master plan.

4.2 Implications of Present Situation of WAGRIC Sub-Region and the Future Vision of WAGRIC Sub-Region for "Strategic Objective"

In Chapter 3, the present situations of WAGRIC Sub-Region are characterised from two perspectives, namely, 1) national economy of individual countries and 2) development situation of inland areas/ inland countries. The first characteristic is too dependent on production and export of primary commodities (mineral resources development and traditional/ non-traditional agriculture for export). The other is regional disparities between inland areas and coastal areas, as well as underdevelopment of inland areas. Based on this understanding of the present situation of WAGRIC Sub-Regions, this section identifies what should be aimed at in the formulation of necessary actions to be recommended by the WAGRIC Master Plan.

Since their national economies are highly dependent on export of mineral resources and traditional/ non-traditional agricultural products to areas outside of the sub-regional markets, it was difficult for WAGRIC countries not only to improve the poverty situation remaining in individual countries but also to prevent expanding regional disparities and social disparities. See Section 3.1.

Among the major reasons for such underdeveloped economic situations of individual countries of WAGRIC Sub-Region are 1) underdevelopment of the manufacturing sectors that could generate higher value addition (See Section 3.1 and Table 3.6) and 2) low productivity of the economic sectors in inland areas of coastal countries and rural areas of inland countries (See Section 3.2 and Tables 5.1 and 5.2).

Due to the above circumstances, individual national governments acknowledge the need to diversify economic sectors by promoting development of economic sectors other than mineral resources development and traditional/ non-traditional agricultural production for export to areas outside of the sub-regional markets.

Those individual national governments are concerned that the lack of effective actions against expanding the regional disparities between inland areas/ inland countries and coastal areas might cause social and political instability, leading to massive labour migration from inland countries to urban areas and rural areas of coastal countries.

It is needed for the individual national governments to take necessary actions against the expanding regional disparities between inland areas/ inland countries and coastal areas since the modern affluent lives of middle-income and higher-income people have been rapidly emerging in coastal metropolitan areas. Such actions should be taken promptly and smoothly beginning in the short-term.

4.3 Strategic Objective

Considering the present situation and future vision of WAGRIC countries, the aim (“Strategic Objective”) for formulating the WAGRIC Master Plan is neither “Development of Corridor Transport Infrastructure” nor “Development of Economic Sectors along Corridors.” It is necessary to set it at wider and higher levels.

- The WAGRIC Master Plan should not limit its target to inland areas, but target widely the whole areas of WAGRIC sub-regions including inland areas.
- The WAGRIC Master Plan should seek not only to expand the export of primary commodities which are the major strength of the WAGRIC countries, but also to diversify economic sectors other than those primary commodities.
- The WAGRIC Master Plan should tackle the problem of regional disparities between inland areas and coastal areas within the WAGRIC countries.
- By taking advantage of emerging growth opportunities from now on toward the long-term future, it is necessary to take necessary actions for seeking a large leap of the whole economy of WAGRIC Sub-Region not in a staid manner, but in a prompt and smooth manner beginning with the short term and extending toward the long term.

By analysing these points, the following strategic objective is set for formulating the WAGRIC Master Plan:

“To seek a large leap of the whole economy of the WAGRIC Sub-Region including inland countries and inland areas of coastal countries by developing diversified economic sectors, as well as by preventing accelerating expansion of regional disparity between inland areas and coastal areas both within individual countries and within the sub-region.”

Chapter 5 Core Issue Identified from a Relationship of Economic Sectors and Transport

5.1 Introduction

In order to achieve the strategic objective and the future vision of the WAGRIC sub-region, it is necessary to solve a variety of issues. Out of the various issues, in this chapter, a core issue is identified from a relationship between the economic sectors and transport concerning inland areas and coastal areas.

In Chapter 5, core issues are discussed and identified from a perspective of the relationship of economic sectors and transport between inland areas and coastal areas. It is possible to achieve neither strategic objective nor the future vision of WAGRIC Sub-Region unless the identified core issues are to be tackled.

5.2 Vicious Circles of Inland Areas concerning Economic Sectors and Transport: Weak Geographical and Economic Relationship between Inland Areas and Coastal Areas

Underdevelopment of economic sectors in inland areas/ inland countries is due to the fact that inland areas and inland countries have been geographically and economically isolated from the central areas (the centres of production and consumption) of WAGRIC countries' economies. As a result, a vicious cycle between economic sectors and transport is taking place.

(1) “Barriers of Transport Costs” derived from the Distance between Inland Areas and Coastal Areas

Geographically isolated relationship between inland areas and coastal areas is due to the fact that the physical distance between inland areas and coastal cities is more than 500 km. For example, the distance between Abidjan and Korhogo in Côte d'Ivoire is 570 km. The distance between Accra and Tamale in Ghana is 630 km. The distance between Lomé and Kara in Togo is 410 km. The distance between coastal cities and inland countries is over 800 km.

This physical distance increases the cost of cargo transport between inland areas and coastal areas. It is partly because railway, inland water transport and pipelines are neither well developed nor well utilized in WAGRIC countries although these transport modes are good at less-costly long-distance cargo transport. See Figure 5.1. Since long-distance cargo transport between inland areas and coastal countries mostly depends on costly truck transport, various materials including fuels, cement and food, are more expensive in inland areas. As a result, underdevelopment of economic sectors continues in inland areas. Therefore, it is not possible to remove “the barriers of transport costs” between inland areas and coastal areas by upgrading transport infrastructure of north-south corridors. Therefore, it is difficult to develop economic sectors in inland areas. Under the presence of transport cost barriers, it is difficult to establish value chains of economic sectors concerning both inland areas and coastal areas.

Since economic sectors have not been highly developed in inland areas, there is not a great deal of demand for transportation from inland areas to coastal markets. See Table 5.1 and Table 5.2 and Figure 5.2. Since there is a larger volume for import cargo for inland areas than that for export, the state of one-way transportation is found in many trucks for import direction for inland areas. In the case of WAGRIC countries, the proportion of the volume

of import cargo for inland areas against that of export cargo is 8:2. As a result, the cargo transport between inland areas and coastal areas becomes inefficient, pushing up the prices of materials which can be purchased in inland areas and hindering the development of economic sectors in inland areas. This is a vicious cycle concerning economic sectors and transport and is also related to inland areas and coastal areas.

This vicious cycle is caused by the situation that incomes from mineral resources development and traditional/non-traditional agricultural production are circulated only within the coastal areas and between the urban dwellers. The incomes are not distributed around inland areas so as to promote development of economic sectors in inland areas. Increased consumer demand from urban areas is not so well utilized for promoting the development of economic sectors in inland areas. In other words, the relationship between inland areas' economic sectors and coastal markets is geographically and economically weak.

(2) “Barriers of Transport Time” due to the Distance between Inland Areas and Coastal Areas

Not only the speed of cargo transport, but also the high speed of passenger transport by upgrading corridor transport infrastructure, such as motorways, high-standard 4-lane roads and air transport, is needed for attracting investments in economic sectors in inland areas and for enabling business operation in inland areas. In addition to the high speed for passenger transport, the high speed for transmitting information by upgrading ICT infrastructure and services is also important for investment attraction and business operation. However, the problem is that there is not a large demand for corridor infrastructure of motorways, air transport and ICT which would make those necessary investments feasible and attractive.

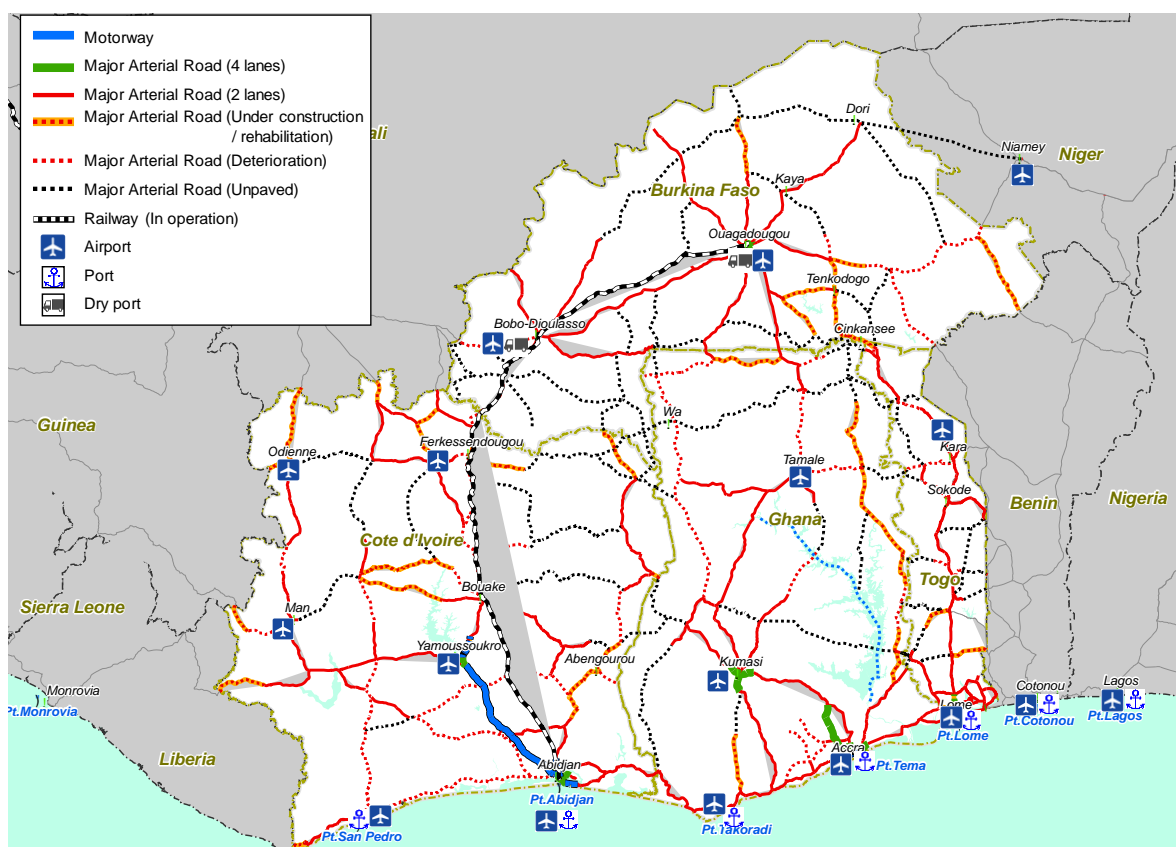
In order to break down the barriers of transport time, it is also necessary to take measures for improving the efficiency of cross-border procedures at national borders including measures for reducing harassment at national borders, as well as on corridors.

Such motorway construction reduces costs of vehicle operation and transport time and improves the punctuality of truck transport. It could improve the efficiency of truck transport operation, resulting in reduction of prices for truck transport and leading to improvement of profitability of truck transport businesses. Furthermore, because of this improved business operation, truck companies could obtain bank loans easier than before, and they could purchase more new trucks so that they could lower the costs of vehicle maintenance and break downs. As a result, more companies would join the long-distance truck transport sector, leading to increased competition among truck companies and reduced prices of truck transport.

Because of these improvements, it will become easier to promote economic sector development in inland areas. Then the transport demand for north-south corridor roads would increase. Furthermore, it would become easier to get funding or financial support to road upgrading to motorways or high-standard 4-lane roads. In the mid and long terms, high-speed transport connecting inland areas to coastal areas would become possible, enabling the transport of fresh agricultural products and fresh dairy products from inland areas to coastal markets. In other words, by breaking down of the barriers of transport costs and transport time, it would be possible to develop value chains in economic sectors related to inland areas and coastal areas. As a result, these circumstantial changes could improve development potentialities of economic sectors in inland areas. Furthermore, it would become easier to promote development of economic sectors in inland areas.

As described above, inland areas and coastal areas are not strongly connected with each other not only in a relationship between economic sectors and markets, but also in terms of transport of cargo, passengers and information. By solving the vicious cycles related to the relationship between economic sectors and investments, and those related to the relationship between economic sectors and transport infrastructure, and by breaking down

the barriers of transport costs and time, it is possible to create an enabling environment for development of the economic sectors in inland areas.



Note: Yamoussoukro Airport is not functioning

Source: JICA Study Team based on Information from Counterparts in Each Country

Figure 5.1 Present Situation of Existing Transport Infrastructures of WAGRIC Countries

Table 5.1 Economic Active Population Engaged in Manufacturing in Major Cities in Côte d'Ivoire (1998)

	Economic Active Population Engaged in Manufacturing	Share of Economic Active Population Engaged in Manufacturing
Abidjan District	164,254	46%
Bouaké Commune	23,084	7%
National Total	355,533	100%

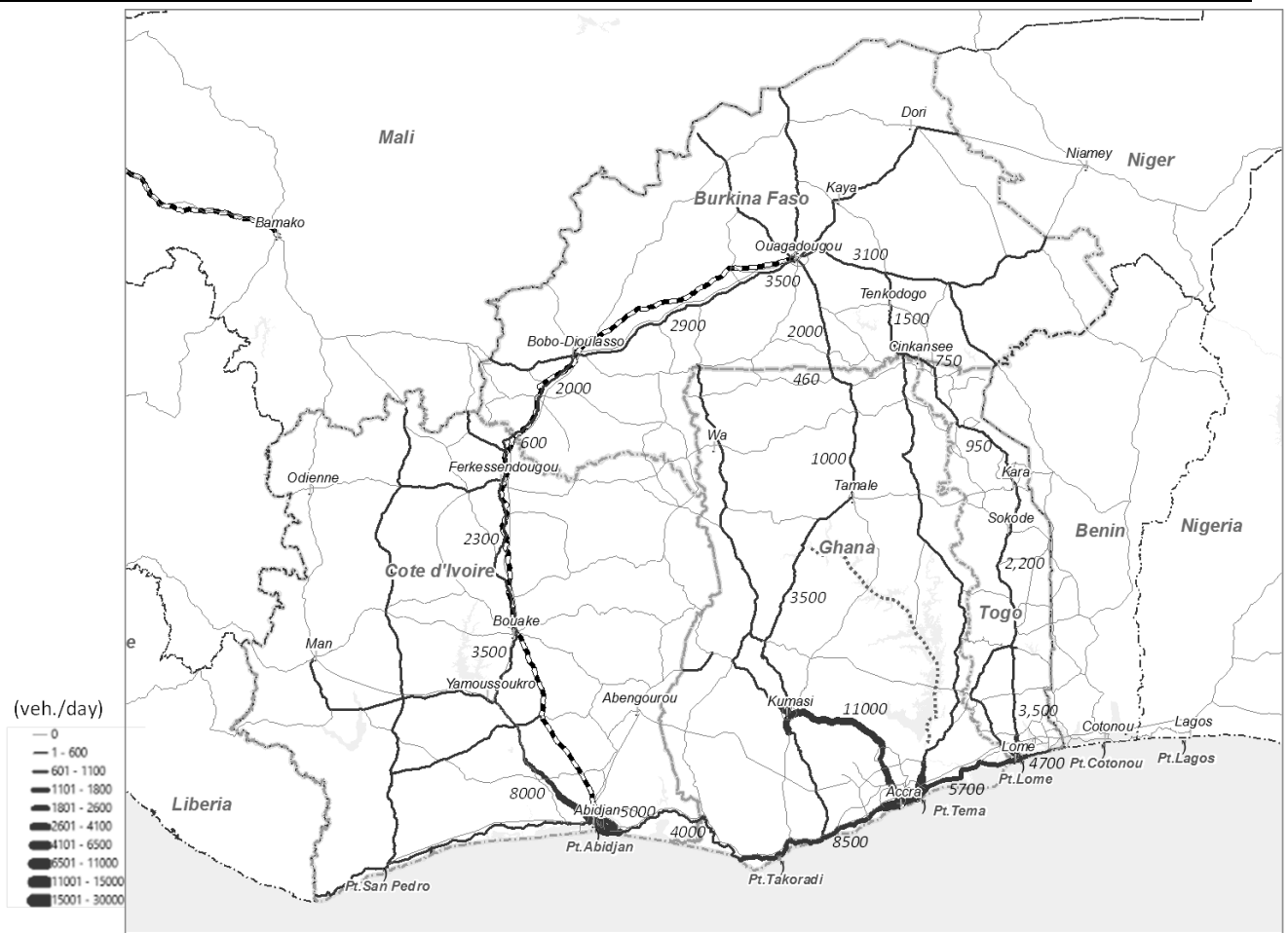
Source: INS, Recensement Général de la Population et de l'Habitat (RGPH) 1998

Table 5.2 Number of Establishments of Secondary Sector Industry and Manufacturing in Regions with Major Cities in Ghana

		National	Western Region	Greater Accra Region	Ashanti Region	Northern Region
Secondary Sector Industry	Number of Establishments	108,242	9,899	27,302	20,752	8,662
	Share (%)	100%	9.1%	25.2%	19.2%	8.0%
	Rank (out of 10 regions)	-	3	1	2	6
Manufacturing	Number of Establishments	99,437	9,134	23,313	19,483	8,274
	Share (%)	100%	9.2%	23.4%	19.6%	8.3%
	Rank (out of 10 regions)	-	3	1	2	6

Note: Secondary Sector Industry includes Manufacturing, Mining and Quarrying, Electricity and Gas, Water Supply, Sewage and Waste Management, and Construction

Source: GSS, 2015, Integrated Business Establishment Survey Summary Report



Source: JICA Study Team based on the traffic volume survey conducted by the Team in 2015 and other collected documents

Figure 5.2 Average Daily Traffic Volume in WAGRIC Countries (2015)

5.3 Core Issue to be tackled by the Master Plan

Based on the understanding discussed in the previous section, the core issue to be tackled by the master plan is determined to be “To develop both inland areas and coastal areas by connecting these areas through economic sectors development and transport infrastructure development.” WAGRIC countries cannot overcome the vicious circle concerning economic sectors and transport without tackling this issue as the core issue.

Without solving this issue, WAGRIC countries cannot fulfil the strategic objective and sub-regional future vision.

Chapter 6 Selected Growth Scenario to Tackle the Core Issue

6.1 Introduction

At the next stage, it is necessary to consider solutions for the core issues identified in Section 5.3, which are how to strongly connect inland areas and coastal areas by both economic sectors and transport. In Chapter 6, at first, it is considered what kinds of economic sectors are to be promoted, and secondly, growth scenarios are considered from a perspective of economic sectors and transport.

6.2 How to Deal with Underdevelopment and Regional Disparity of WAGRIC Countries: Directions of Development of Economic Sectors for Seeking Balanced Economic Development within Each Country

6.2.1 Basics on Policies for Economic Sector Development

It is necessary to select other economic sectors than mining and export agriculture and to promote their development in order to diversify economic sectors and seek balanced economic development within each country because WAGRIC countries' economies are dependent on primary commodity production and export, and their regional disparity is large as a result of separation of inland areas from coastal markets in terms of economy and transport, as shown in Chapter 3.

Various alternative types of economic sector development, such as import substitution, export promotion, import processing and export processing, can be created by combining different factors, such as types of economic sectors (1st industrial sector, 2nd industrial sector and 3rd industrial sector), origins of resources (domestic resources, regional resources and import resources) and market orientation (domestic market orientation, regional market orientation, outside regional market orientation).

In addition to the conventional types of economic sector development (import substitution, export promotion, import processing and export processing), the WAGRIC countries have an additional potential type of economic sector development, which is import substitution and export promotion to sub-regional markets, because WAGRIC countries are member countries of UEMOA and ECOWAS, both of them have established a system for a Customs Union.

For developing countries, it is a popular strategy to produce for export markets by taking advantage of their relatively cheaper labour costs and certain domestic resources. However, unlike Southeast Asian and South Asian countries, it is difficult for many Southern African countries to satisfy conditions to enable them to be competitive in export markets. Especially, WAGRIC countries have the problem that they are not geographically close to any large developed markets.

In the future, the world demand for primary commodities (mineral products and agricultural products) is expected to increase in response to increasing global population and continuing economic development. Therefore, WAGRIC countries have possibilities to expand their production of primary commodities. However, since their prices in international markets tend to fluctuate greatly, with such export promotion of primary commodities alone to outside the sub-region, WAGRIC countries are not able to grow their

national economies from a low-income country status to a middle-income country status and furthermore to get out from a lower middle-income status.

6.2.2 Growth Potential Economic Sectors for WAGRIC Countries

From the above reasons, the individual governments of WAGRIC countries recognize the necessity to diversify their economic sectors to sectors other than mining and export agriculture. In order to promote such economic diversification, the following different types of economic sectors are identified:

- Type No.1: Processing Industries for Traditional and Non-Traditional Agricultural Export Products for Outside Sub-Regional Markets (Developed Countries' Markets) (by increasing the percentage of processed agricultural products and by increasing the level of processing of agricultural products)
- Type No.2: Export Oriented Manufacturing (based in Export Processing Zones by Importing Raw Material and Spare Parts to Produce Spare Parts and Intermediate Products for Electronic Appliances and Transport Machinery) targeting Outside Sub-Regional Markets
- Type No.3: Agriculture, Livestock and Aquaculture targeting at Domestic and Sub-Regional Consumer Markets (in response to increasing middle-income populations' demand for a wide range of high-value agricultural, livestock and aqua-cultural products, including rice, sugarcane, tilapia, cat fish, fresh beef, fresh fruits, fresh vegetable, and fresh dairy products)
- Type No.4: Manufacturing of Processed Food and Drinks and Other Processed Products oriented to Domestic and Sub-Regional Markets utilizing Domestic and Sub-Regional Resources of Agricultural and Livestock (targeting increasing demand by middle-income populations)
- Type No.5: Advanced Service Industries targeting Domestic and Sub-Regional Markets
- Type No.6: Mineral Resources Development for Export to Outside Sub-Regional Markets
- Type No.7: Production of Traditional and Non-Traditional Agricultural Products oriented to Outside Sub-Regional Markets

The economic sectors of both Type No.1 (Processing of Agricultural Export Products) and Type No.2 (Manufacturing at Export Processing Zones) are oriented to outside sub-regional markets (developed countries' markets). The development of agro-processing like Type No.1 in West Africa is not good at producing final products like chocolate which are targeting developed countries' markets by utilizing locally produced cocoa butter. The WAGRIC countries need to take measured steps over the long term for increasing the level of processing from that of simple processing, it would be difficult to realize it in the short and medium terms. The economic sectors of Type No.2 (manufacturing in export processing zones) are of a successful industrial development model of Southeast and South Asian countries, but those markets are extremely competitive worldwide. When it comes to shortage and high wages of skilled workers, lack of technologies and underdevelopment of supporting industries in WAGRIC countries, it is difficult to anticipate any comparative advantage of WAGRIC countries for this type of economic sector. In fact, substantial industrial accumulations have not been found in existing export processing zones of WAGRIC countries.

However, such export oriented manufacturing could be developed in WAGRIC sub-region's coastal areas for supplying spare parts and intermediate products for Nigeria's

manufacturing of transport machinery and electric appliances when the implementation of the custom union is strengthened.

6.2.3 WAGRIC Countries' Growth Possibility of Economic Sectors targeting Sub-Regional Consumer Markets

Although it is necessary to make a continuing effort at development of economic sectors oriented to outside sub-regional markets (overseas markets), it is the fact that the economic sectors of Types No.3 and No.4 have domestic and sub-regional markets which could provide large growth opportunities. The volume of imported goods increased rapidly in the 2000s. See Figure 3.2. Among the imported goods, there are some products which can be produced domestically. That is, import substitution is possible for some imported products. See Table 3.4. The economic sectors of Types No.3 and No.4 are based on such import substitution targeting domestic and sub-regional markets. Since WAGRIC countries have rapidly increased domestic consumption for those products, their domestic production cannot catch up with such increased consumption. This is especially because middle and high-income populations showed strong preference for such imported goods.

Therefore, the markets for the economic sectors of Type No.3 and No.4 are present in WAGRIC countries, but they have to compete with imported products.

Although these market sizes are much smaller than the world markets for mineral resources and traditional/ non-traditional agricultural export products, they are not small markets as target markets for nurturing of immature economic sectors. The size of the markets is estimated to be USD 4.5 billion by considering the amount of values of imported products which could be substituted by domestic and sub-regional production. See Table 6.1.

In WAGRIC sub-region, sub-regional consumer markets for food are expected to expand greatly due to the increasing non self-subsistent urban populations due to large immigration from rural areas and natural growth occurring in urban areas. At the same time, middle-income populations are increasing mostly in urban areas and their consumption level is higher than others. For these reasons, it is considered that sub-regional consumption markets would grow in WAGRIC countries in the future.

At present, it is said that WAGRIC countries have a substantial amount of middle and high-income population, whose size is comparable to that of East African countries. See Table 3.1. In the future, it is considered that the consumption markets would be expanded by increasing middle and high-income population. Among the agricultural and livestock products of Type No.3 economic sectors, the consumption of beef, chicken, fresh vegetables and fresh dairy products is expected to grow greatly. See Figures 3.10 through 3.12.

The demand for consumer processed products by Type No.4 is also considered to increase. It is estimated that the urban population of WAGRIC countries will increase from 35 million to 90 million at an annual average growth rate of 3.8%. See Table 3.8. Consumption markets targeted for the economic sectors of Type No.3 and Type No.4 are found in coastal areas in WAGRIC sub-region.

In addition, considering middle-income population increase and their concentration in metropolitan areas and the large size of their consumption markets, the economic sector of Type No.5 (advanced service industries) is considered to develop more so as to provide advanced services, which have been available in developed countries, such as investment services for financial products, information providing services, entertainment services and recreational services. Development of such advanced service industries could increase the populations of middle and high-income populations, leading to consumption market expansion, which would help development of the economic sectors of Types No.3 and No.4.

6.2.4 Inland Areas/ Inland Countries' Promotion of Economic Sector Development Oriented to Sub-Regional Markets

Among the economic sectors with various development potentials, which are discussed above, the highest-priority to be tackled is the promotion of development of inland areas/ inland countries' economic sectors, together with the strengthening of growth engines for the coastal economic sectors. Without making a substantial effort at inland areas' economic sector development, it is not possible to improve poverty, regional disparity or out-migration from inland rural areas.

Furthermore, the most important ones among the economic sectors to be developed in inland areas/ inland countries are those targeting sub-regional markets. This is because they could economically connect inland areas/ inland countries with coastal areas. The economic sectors of Type 3 targeting domestic and sub-regional markets have better locational advantages in inland areas of coastal countries and rural areas of inland countries, which are of low population density and low-density land use. In those areas, rural people are engaged in agriculture, livestock and aquaculture sectors in an extensive manner.

On the other hand, the economic sectors of Type No.4 targeting domestic and sub-regional markets would have locational advantages in coastal areas of WAGRIC sub-regions. However, when the north-south corridor transport infrastructures have been developed and the barriers of transport costs and time between inland areas and coastal areas are greatly reduced, it will become difficult to get large plots of land for business operations due to high land prices and overcrowding and the players in the economic sectors of Type 4 will need to look for land in inland areas.

6.2.5 Importance of Mineral Resources Development, Traditional and Non-Traditional Agricultural Production and Economic Sector Development in Coastal Areas: For Promotion of Economic Sectors in Inland Areas/ Inland Countries

It is important, but it is not easy to attract investments and promote economic sector development in inland areas/ inland countries. Additionally, it is necessary to tackle difficult transport problems composed of barriers of transport costs and time, therefore, it is not easy to promote development of economic sectors in inland areas/ inland countries. If certain areas of inland areas/ inland countries have development potential for mining and traditional/ non-traditional export agriculture, it will also be necessary to promote development of those economic sectors in parallel with economic sector development targeting sub-regional markets.

At the same time, it is important to promote development of the economic sectors oriented to sub-regional markets in coastal areas for the purpose of promoting development of economic sectors oriented to sub-regional markets in inland areas/ inland countries. This is because the coastal areas have the largest consumer markets within the sub-region. It is not only because coastal areas have larger growth opportunities for economic sectors targeting consumer markets, but also because such an effort at development of economic sectors in coastal areas could directly expand the consumer markets of their own coastal areas.

Furthermore, it is very important to develop economic sectors, especially manufacturing sectors, targeting sub-regional consumer markets, in coastal areas, which are the centres of the coastal countries' economies. Such an effort at developing manufacturing industries oriented sub-regional consumer markets could create the foundation of technologies, human resources and national economies for further development of manufacturing industries. Without this kind of foundation, it is difficult to achieve the future vision of the WAGRIC sub-regions.

As shown in this section, Types No.3, No.4, No.5, No.6 and No.7 are promising economic sectors for WAGRIC countries. All of these economic sectors are oriented toward sub-regional coastal markets, except for the economic sectors of Type No.6 (mining for export) and the economic sectors of Type No.7 (traditional/ non-traditional export agriculture). Table 6.2 shows identified growth economic sectors in accordance with the types of economic sectors.

Table 6.1 Local Commodities for Import Substitution and their Import Value in WAGRIC Countries (2013, USD)

Import Substitution Target	Commodity	Burkina Faso	Côte d'Ivoire	Ghana	Togo
First Target	Cereals	160,430,005	687,965,858	540,982,429	61,819,940
First Target	Fish and crustaceans, molluscs and other aquatic invertebrates	10,012,729	362,650,886	330,171,894	30,259,070
First Target	Meat and edible meat offal	234,487	78,798,472	254,838,782	11,536,854
First Target	Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	37,675,700	68,860,205	186,507,005	44,954,936
First Target	Sugars and sugar confectionery	51,755,883	15,363,076	211,522,299	21,962,047
First Target	Dairy produce; birds' eggs; natural honey; edible products of animal origin not elsewhere specified or included	24,636,366	82,716,469	104,709,931	23,007,727
First Target	Preparations of cereals, flour, starch or milk; pastry cooks' products	30,104,803	58,725,523	87,659,790	15,304,302
First Target	Edible vegetables and certain roots and tubers	4,016,175	59,876,337	18,550,821	1,843,826
First Target	Edible fruit and nuts; peel of citrus fruit or melons	2,670,821	11,313,037	13,068,922	401,147
First Target	Cocoa and cocoa preparations	466,656	5,437,112	4,450,828	1,094,506
Second Target	Pharmaceutical products	203,472,840	271,553,970	215,181,633	86,810,729
Second Target	Beverages, spirits and vinegar	15,748,164	76,632,182	151,994,337	14,267,980
Second Target	Preparations of vegetables, fruit, nuts or other parts of plants	8,383,678	28,161,564	146,196,087	9,522,079
First Target	Sub-total (USD)	322,003,625	1,431,706,975	1,752,462,701	212,184,355
Second Target	Sub-total (USD)	227,604,682	376,347,716	513,372,057	110,600,788
Items Possible for Import Substitution	Total (USD)	549,608,307	1,808,054,691	2,265,834,758	322,785,143
	Share	12.6%	14.5%	17.7%	16.4%
All Import	Total (USD)	4,365,430,824	12,482,984,119	12,787,233,399	1,967,339,824

Source: UN Comtrade Database

Table 6.2 Growth Economic Sectors for WAGRIC Countries

Types of Economic Sectors*	Growth Economic Sectors	Present	Short Term	Mid Term	Long Term	Super-Long Term
Type No.1: Processing Industries for Traditional Agricultural Export Products for Outside the Sub-Region	Agro-processing Industries of Traditional Agricultural Export Products, such as Cacao, Oil Palm, Rubber, Cashews and Cotton		●	●	●	
Type No.3: Agriculture, Livestock and Fisheries targeting Middle-Income Populations' Domestic and Sub-Regional Markets	Agriculture of Rice and Sugarcane, and Aquaculture of Tilapia and Cat Fish		●	●		
	Production of Cattle in Inland Countries, Export of Live Cattle to Coastal Countries, and Production and Sales of Fresh Beef		●	●	●	
	Agriculture oriented to Middle-Income Populations, including Fruits, Fresh Vegetable and Fresh Dairy Products		●	●	●	●
Type No.4: Manufacturing of Consumer Products for Middle-Income Populations' Domestic and Sub-Regional Markets	Production of Processed Food and Processed Drink		●	●	●	●
	Production of Plastic Products for Daily Use			●	●	●
	Production of Pharmaceutical Products			●	●	●
Type No.2: Manufacturing of Spare Parts and Intermediate Products for Nigerian Assembling Factories	Manufacturing of Spare Parts and Intermediate Products of Transport Machinery for Supplying to Nigerian Assembling Factories				●	●
Type No.5: Advanced Service Industries oriented to Domestic and Sub-Regional Markets	Finance Business, ICT-BOP, Entertainment, Higher Education Services, Advanced Medical Services		●	●	●	●

Types of Economic Sectors*	Growth Economic Sectors	Present	Short Term	Mid Term	Long Term	Super-Long Term
Types No.6 and No.7: Traditional Export Economic Sectors to Outside Sub-Region	Production of Traditional Agro-Products (Cacao, Oil Palm, Rubber, Cashew and Cotton)	●	●	●	●	●
	Mining (Gold, Iron, Manganese, Bauxite etc.)	●	●	●	●	●

Note*: Numbers of types are the same as those in Section 6.2.2

Note: Those underlined are economic sectors oriented to sub-regional markets.

Source: JICA Study Team

6.3 Comparison of Alternative Growth Scenarios

In this section, directions of solutions (growth scenarios) for the core issues identified in Section 5.3 are considered. The directions of solutions (growth scenarios) suggest the necessity to implement measures to strongly connect inland areas and coastal areas in terms of economic sectors and transport.

Three alternative growth scenarios are prepared by using three factors, namely 1) which economic sectors are emphasized for promotion, 2) to what extent sub-regional economic integration is promoted, 3) what kinds of corridor infrastructures are strengthened for connecting inland areas and coastal areas

- [Alternative Growth Scenario No.1: Corridor Development oriented to Sub-Regional Markets] : While seeking a strong sub-regional economic integration, Growth Scenario No.1 aims at development of economic sectors targeting sub-regional markets and development of corridor infrastructures of both north-south corridors and the coastal east-west corridor for the purpose of strengthening both economic connectivity and transport connectivity between inland areas and coastal areas.
- [Alternative Growth Scenario No.2: Corridor Development oriented to Individual Domestic Markets]: Growth Scenario No.2 aims at development of various economic sectors in both inland areas and coastal areas by developing corridor infrastructures of north-south corridors in individual countries.
- [Alternative Growth Scenario No.3: Corridor Development oriented to Outside Sub-Regional Markets (Overseas Export Markets)]: Growth Scenario No.3 aims at development of economic sectors oriented to outside sub-regional markets (overseas export markets) in both inland and coastal areas by developing north-south corridor infrastructures.

(1) Alternative Growth Scenario No.1: Corridor Development oriented to Sub-Regional Markets

Growth Scenario No.1 aims at inland areas' development of economic sectors, in addition to expanding of production and export of primary commodities in inland areas.

Measures

To implement Growth Scenario No.1, the following four measures should be taken:

- Strengthening of implementation of the customs union in order to integrate sub-regional markets and to attract investments in economic sectors
- Development of motorways or high-standard 4-lane roads in selected sections in both north-south corridors and the coastal east-west corridor in order to break down the barriers of transport time
- Development of an efficient long-distance cargo transport system in order to break down the barriers of transport costs
- Promotion of development of economic sectors targeting sub-regional markets in both inland areas and coastal areas in order to connect inland areas and coastal areas in relationship with production areas and markets

Impact

- By following “Growth Scenario No.1”, the development of economic sectors in inland areas would be more substantial than those of Alternative 2 and Alternative 3.
- It is because the main targets of Growth Scenario No.1 is the integrated sub-regional markets, which are larger than individual countries’ markets. It is also because larger sub-regional markets could attract more investments to economic sectors.

(2) Alternative Growth Scenario No.2: Corridor Development oriented to Individual Domestic Markets

Growth Scenario No.2 aims at development of various economic sectors in both inland areas and coastal areas by developing north-south corridor infrastructures in individual countries. However, Growth Scenario No.2 does not expect much effect of implementation of the customs union.

Measures

In accordance with Growth Scenario No.2, the following actions are taken and effects are achieved:

- Gradual development of coastal east-west motorways so that sub-regional economic integration is not so effectively achieved and expansion of sub-regional consumer markets is also not so well achieved
- Promotion of economic sector development targeting domestic consumer markets in inland areas of individual countries by developing corridor transport infrastructures of not only north-south central corridors, but also other north-south corridors
- Promotion of development of mineral resources and export agriculture targeting outside sub-regional markets not only in coastal areas but also in inland areas
- Promotion of upgrading of north-south roads in the inland country for inland countries’ access to coastal countries’ consumer markets because relatively slow progress on development of north-south motorways or high-standard 4-lane roads is expected in coastal countries

Impact

- Since “Growth Scenario 2” does not depend much on the effect of sub-regional economic integration, the target markets for economic sectors are not so large and attractive for investments as Alternative 1.
- As a result, by following Growth Scenario 2, outmigration from inland areas would become larger than Alternative 1, and deterioration of inland economies would be more accelerated than Alternative 1.

(3) Alternative Growth Scenario No.3: Corridor Development oriented to Outside Sub-Regional Markets (Overseas Export Markets)

Growth Scenario No.3 aims at development of economic sectors oriented to outside sub-regional markets (overseas export markets) in both inland and coastal areas by developing north-south corridor infrastructures.

Measures

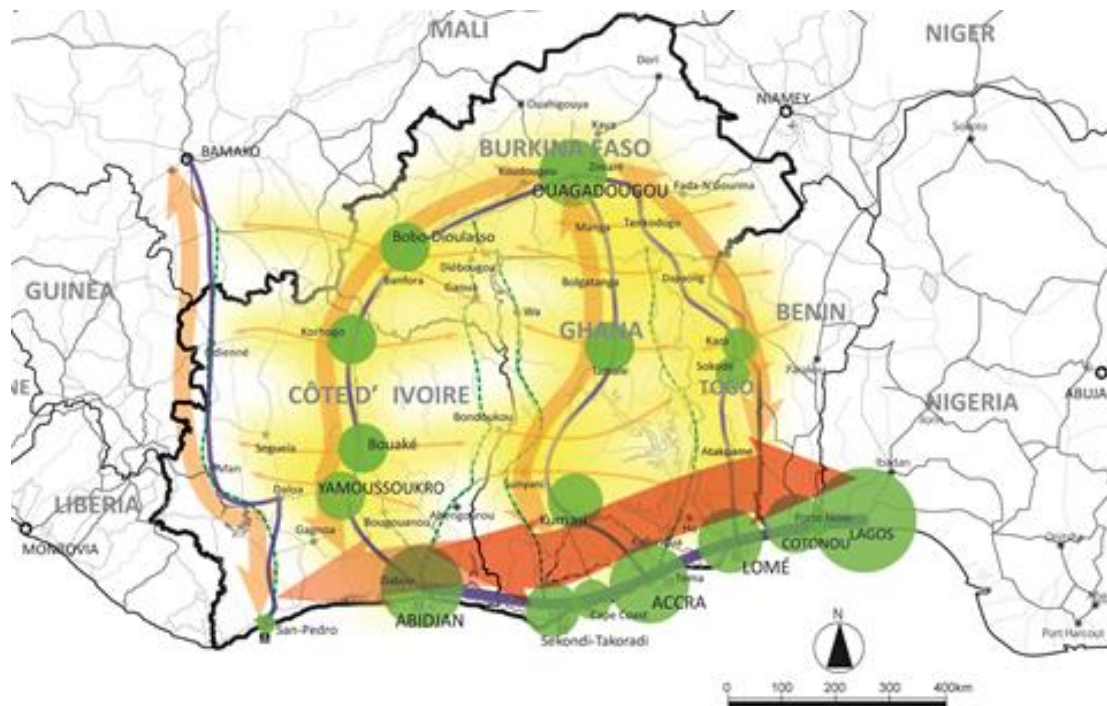
In accordance with Growth Scenario No.3, the following measures are taken and effects are achieved:

- Promotion of economic sectors oriented to outside sub-regional markets (overseas markets)
- Development of long-distance cargo transport infrastructures (railways, inland waterways and pipelines) of north-south corridors

- Gradual development of motorways or high-standard 4-lane roads in north-south corridors, because investments in economic sectors is not so much promoted by upgrading north-south infrastructures (motorways or high-standard 4-lane roads, air transport and ICT)
- Slow progress of development of coastal east-west corridor motorways because increase of intra-regional trade with neighbouring countries is not so much expected along the coastal corridor
- Not much effort at promotion of economic sectors development targeting consumer markets in inland areas

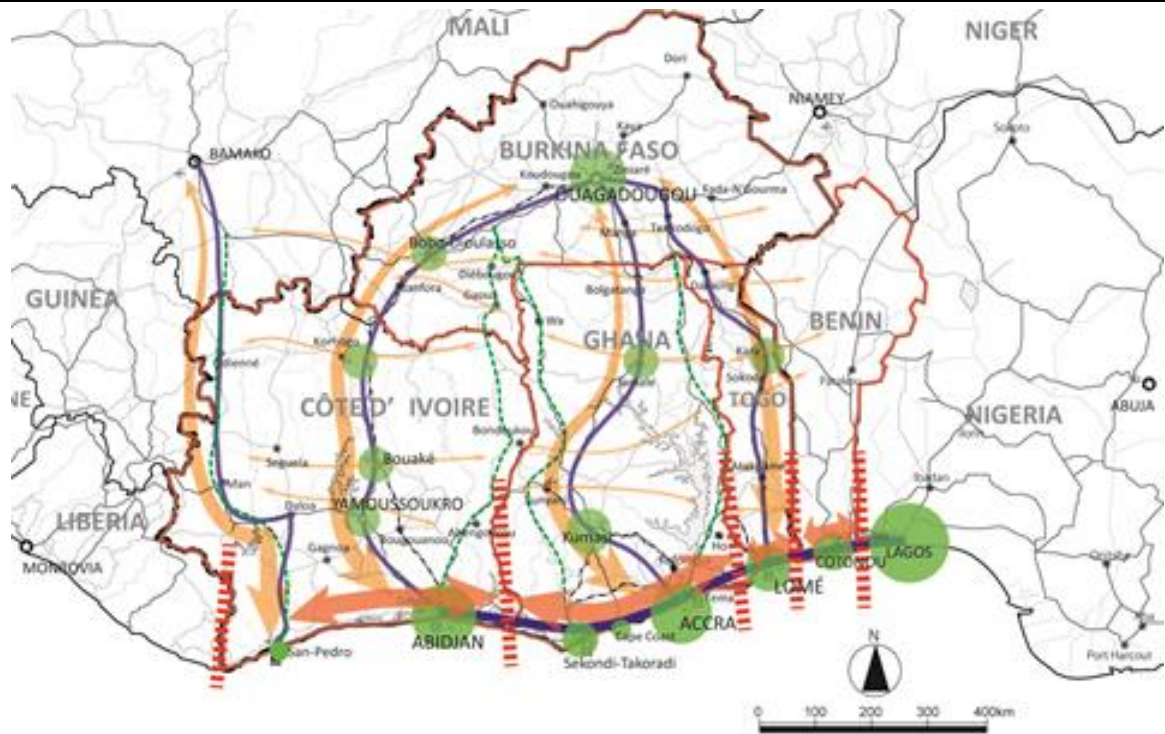
Impact

- Growth Scenario No.3 emphasizes more the production and export of primary commodities to outside the sub-region (world export markets) than the economic sectors oriented to sub-regional markets. By following “Growth Scenario No.3”, much resource is not allocated to programmes for development of economic sectors oriented to sub-regional markets.
- As a result, Growth Scenario No.3 could achieve higher economic growth than Alternatives 1 and 2. However, inland economic sectors would not develop so much as Alternative 1.



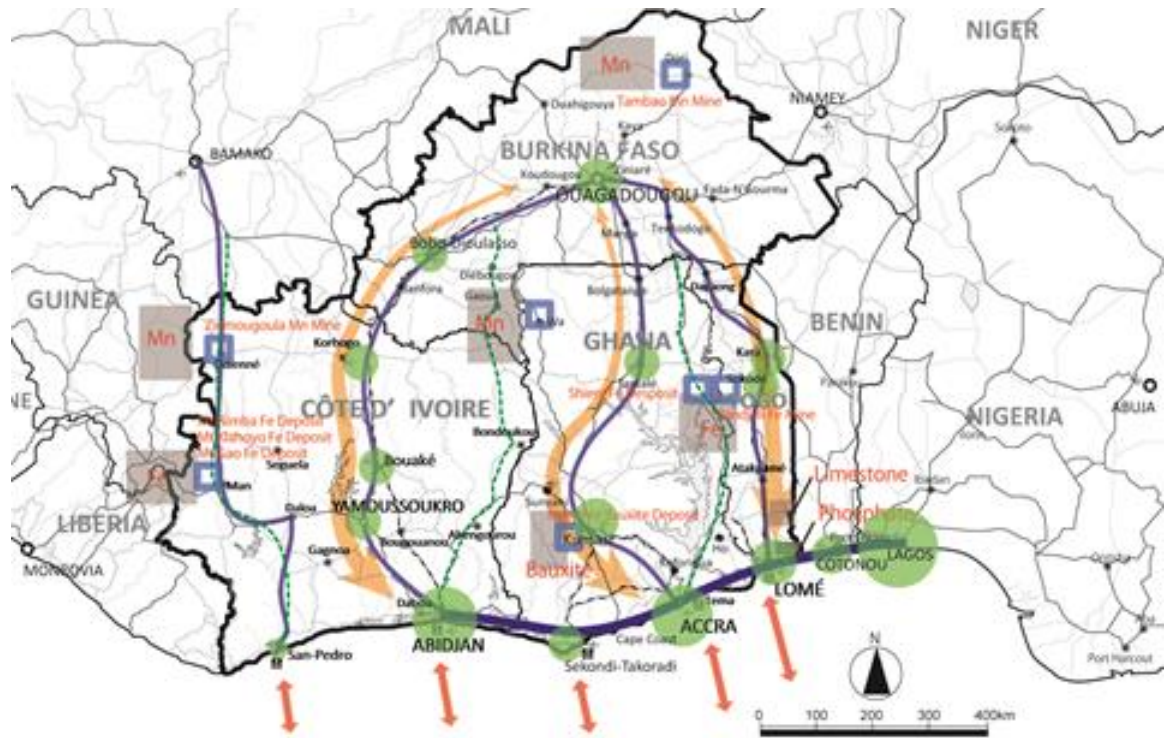
Source: JICA Study Team

**Figure 6.1 Alternative Growth Scenario 1 for WAGRIC-CACAO
“Corridor Development oriented to Sub-Regional Markets”**



Source: JICA Study Team

Figure 6.2 Alternative Growth Scenario 2 for WAGRIC-CACAO
“Corridor Development oriented to Individual Domestic Markets”



Source: JICA Study Team

Figure 6.3 Alternative Growth Scenario 3 for WAGRIC-CACAO
“Corridor Development oriented to Overseas Export Market”

Table 6.3 Comparison of Alternative Growth Scenarios

	Selected Economic Sectors	Sub-Regional Integration	North-South Corridor Infrastructure
Options	<p><u>Type No.1:</u> Processing Industries for Traditional and Non-Traditional Agricultural Export Products for Outside Sub-Regional Markets</p> <p><u>Type No.2:</u> Export Oriented Manufacturing</p> <p><u>Type No.3:</u> Agriculture, Livestock and Aquaculture targeting at Domestic and Sub-Regional Consumer Markets</p> <p><u>Type No.4:</u> Manufacturing of Processed Food and Drinks and Other Processed Products oriented to Domestic and Sub-Regional Markets utilizing Domestic and Sub-Regional Resources of Agricultural and Livestock</p> <p><u>Type No.5:</u> Advanced Service Industries targeting Domestic and Sub-Regional Markets</p> <p><u>Type No.6:</u> Mineral Resources Development for Export to Outside Sub-Regional Markets</p> <p><u>Type No.7:</u> Production of Traditional and Non-Traditional Agricultural Products oriented to Outside Sub-Regional Markets</p>	<ul style="list-style-type: none"> • Strengthening of customs union • Construction of coastal corridor motorway 	<ul style="list-style-type: none"> • Corridor Transport Infrastructure between Inland Areas and Coastal Areas • Construction of north-south corridor motorway • Establishment of north-south corridor's long-distance cargo transport systems (Railway, Inland Water Transport, Pipeline etc.)
Alternative Growth Scenario 1 Corridor Development oriented to Sub-Regional Market	<p>Inland Areas</p> <p><u>Type No.3:</u> Agriculture, Livestock and Aquaculture targeting at Domestic and Sub-Regional Consumer Markets</p> <p><u>Type No.4:</u> Manufacturing of Processed Food and Drinks and Other Processed Products oriented to Domestic and Sub-Regional Markets utilizing Domestic and Sub-Regional Resources of Agricultural and Livestock</p> <p><u>Type No.6:</u> Mineral Resources Development for Export to Outside Sub-Regional Markets</p> <p><u>Type No.7:</u> Production of Traditional and Non-Traditional Agricultural Products oriented to Outside Sub-Regional Markets</p> <p>Coastal Areas</p> <p><u>Type No.1:</u> Processing Industries for Traditional and Non-Traditional Agricultural Export Products for Outside Sub-Regional Markets</p> <p><u>Type No.2:</u> Export Oriented Manufacturing</p> <p><u>Type No.4:</u> Manufacturing of Processed Food and Drinks and Other Processed Products oriented to Domestic and Sub-Regional Markets utilizing Domestic and Sub-Regional Resources of Agricultural and Livestock</p> <p><u>Type No.5:</u> Advanced Service Industries targeting Domestic and Sub-Regional Markets</p> <p><u>Type No.6:</u> Mineral Resources Development for Export to Outside Sub-Regional Markets</p> <p><u>Type No.7:</u> Production of Traditional and Non-Traditional Agricultural Products oriented to Outside Sub-Regional Markets</p>	<ul style="list-style-type: none"> • Strengthening of Customs Union • Promotion of Constructing Coastal Corridor Motorway from Early Stage • Integration of Consumption Market in the Coastal Countries through Strengthening of Customs Union 	<ul style="list-style-type: none"> • Strong Promotion of Constructing North-South Corridor Motorway (This motorway is for attracting investment towards the economic sectors in inland areas and inland countries. The development of the north-south corridor's motorway will shorten travel time, enabling managers and technicians of the investment companies to travel between inland areas and coastal areas for necessary production development and management at the investment site.) • Establishment of north-south corridor's long-distance cargo transport systems (Railway, Inland Water Transport, Pipeline etc.)
Alternative Growth Scenario 2 Corridor Development oriented to Individual Domestic Markets	<p>Inland Areas</p> <p><u>Type No.3:</u> Agriculture, Livestock and Aquaculture targeting at Domestic and Sub-Regional Consumer Markets</p> <p><u>Type No.4:</u> Manufacturing of Processed Food and Drinks and Other Processed Products oriented to Domestic and Sub-Regional Markets utilizing Domestic and Sub-Regional Resources of Agricultural and Livestock</p> <p><u>Type No.6:</u> Mineral Resources Development for Export to Outside Sub-Regional Markets</p>	<ul style="list-style-type: none"> • Sub-regional development not relying on strengthening of customs union • Coastal corridor motorway will be constructed but early construction will not be promoted 	<ul style="list-style-type: none"> • Construction of north-south corridor motorway will be promoted. However, it is assumed that the development of the economic sector in the inland areas will not be sufficient to increase the transport demand. Therefore, it will take time for the construction of the North-South Corridor Motorway to

	Selected Economic Sectors	Sub-Regional Integration	North-South Corridor Infrastructure
	<p><u>Type No.7:</u> Production of Traditional and Non-Traditional Agricultural Products oriented to Outside Sub-Regional Markets</p> <p>Coastal Areas</p> <p><u>Type No.1:</u> Processing Industries for Traditional and Non-Traditional Agricultural Export Products for Outside Sub-Regional Markets</p> <p><u>Type No.2:</u> Export Oriented Manufacturing</p> <p><u>Type No.3:</u> Agriculture, Livestock and Aquaculture targeting at Domestic and Sub-Regional Consumer Markets</p> <p><u>Type No.4:</u> Manufacturing of Processed Food and Drinks and Other Processed Products oriented toward Domestic and Sub-Regional Markets utilizing Domestic and Sub-Regional Resources of Agricultural and Livestock</p> <p><u>Type No.5:</u> Advanced Service Industries targeting Domestic and Sub-Regional Markets</p> <p><u>Type No.6:</u> Mineral Resources Development for Export to Outside Sub-Regional Markets</p> <p><u>Type No.7:</u> Production of Traditional and Non-Traditional Agricultural Products oriented to Outside Sub-Regional Markets</p>	<ul style="list-style-type: none"> Integration of consumption market in the coastal countries will not be strongly promoted (leave sub-regional integration to take its own course) 	<p>be implemented.</p> <ul style="list-style-type: none"> Establishment of north-south corridor's long-distance cargo transport systems (Railway, Inland Water Transport, Pipeline etc.) will also take time due to insufficient development of economic sectors in the inland areas and inland country.
Alternative Growth Scenario 3 Corridor Development oriented to Overseas Export Market	<p>Inland Areas</p> <p><u>Type No.6:</u> Mineral Resources Development for Export to Outside Sub-Regional Markets</p> <p><u>Type No.7:</u> Production of Traditional and Non-Traditional Agricultural Products oriented to Outside Sub-Regional Markets</p> <p>Coastal Areas</p> <p><u>Type No.1:</u> Processing Industries for Traditional and Non-Traditional Agricultural Export Products for Outside Sub-Regional Markets</p> <p><u>Type No.2:</u> Export Oriented Manufacturing</p> <p><u>Type No.5:</u> Advanced Service Industries targeting Domestic and Sub-Regional Markets</p> <p><u>Type No.6:</u> Mineral Resources Development for Export to Outside Sub-Regional Markets</p> <p><u>Type No.7:</u> Production of Traditional and Non-Traditional Agricultural Products oriented to Outside Sub-Regional Markets</p>	<ul style="list-style-type: none"> Sub-Regional development not relying on strengthening of customs union Coastal corridor motorway will be constructed but early construction will not be promoted Integration of consumption market in the coastal countries will not be strongly promoted (leave sub-regional integration to take its own course) 	<ul style="list-style-type: none"> Construction of north-south corridor motorway will not be strongly promoted. (This is due to the character of Alternative Growth Scenario 3, which aims to strengthen economic sectors oriented to overseas export market. For such economic sectors, it is assumed that the motorway will not be a factor to attract investment.) Establishment of the North-South Corridor's Long-Distance Cargo Transport Systems (Railway, Inland Water Transport, Pipeline etc.) will be strongly promoted rather than the north-south corridor motorway.

Source: JICA Study Team

6.4 Selected Growth Scenario

Three alternative growth scenarios adopt different directions of solutions for promotion of economic sector development in inland areas and coastal areas, and strengthening of economic and transport connectivity between inland areas and coastal areas. The different growth scenarios would have different degrees of impact on economic and transport connectivity between inland areas and coastal areas. Growth Scenario No.1 is expected to make the largest impact, Growth Scenario No.2 could make the second largest impact, and Growth Scenario No.3 would make the smallest impact on economic and transport connectivity between inland areas and coastal areas.

Growth Scenario No.1 “Corridor Development oriented to Sub-Regional Markets” is selected to tackle the core issues identified in Chapter 5.

It is the economic sectors that are targeting sub-regional consumer markets that will strongly connect inland areas and coastal areas in terms of economy and transport.

Promotion of economic sector development oriented to sub-regional markets is “the key” to solve the core issue of “a weak relationship between coastal economies and inland areas’ economic sectors in terms of economy and transport.”

6.5 Four Sets of Necessary Actions (“Four Buttons”) for the Selected Growth Scenario

In accordance with the selected Growth Scenario 1 “Corridor Development oriented to the Sub-Regional Market,” the following four sets (“four buttons”) of necessary actions should be taken in an integrated manner:

- **[Button A] Development of Economic Sectors oriented toward Sub-Regional Market:** By Utilizing the Potential of the Economic Sectors and by Targeting Sub-Regional Markets. <<Take Advantage of Growing Sub-Regional Markets>>
- **[Button B] Expansion of the Size of Coastal Markets:** By Strengthening of Implementation of a Customs Union and By Promoting Economic Sector Development. <<Strengthening of Growth Engine of Coastal Areas>>
- **[Button C]: Strengthening of North-South Connectivity:** By Establishment of Less Costly and High-Speed Transport Systems to Connect Inland Production Areas with Coastal Market Areas for Enhancing Competitiveness of Economic Sectors located in Inland Areas <<Strengthening of Connectivity between Inland Areas and Coastal Areas>>
- **[Button D]: Securing of Inclusive and Sustainable Development:** By Paying Attention to Social, Environmental and Security Aspects of Corridor Development <<For Pro-Actively Responding to Social, Environmental and Security Issues>>

These four sets of necessary actions correspond to the essential strategy groups 1 to 4 in Chapter 10. Buttons A through C of actions (Essential Strategy Groups No.1 through 3) are important for initiating and driving corridor development. Button D of actions (Essential Strategy Group No.4) is intended to secure inclusive and sustainable corridor development.

Chapter 7 Future Socio-Economic Framework

7.1 Target Years for the Socio-economic Framework

A socio-economic framework was prepared for formulating sub-regional development strategies for the WAGRIC countries. The socio-economic framework covers both population and the economy. The socio-economic framework indicates the foreseeable level of population growth and economic development as a result of implementing the WAGRIC sub-regional development strategies. It is a set of indicative parameters, rather than definitive forecast.

The target years for the development strategies for the WAGRIC Development Master Plan were set as follows:

- Short-Term Target Year: Year 2025
- Medium-Term Target Year: Year 2033
- Long-Term Target Year: Year 2040

7.2 Future Socio-Economic Framework for WAGRIC Countries

The future socioeconomic framework for WAGRIC countries is set considering the following three parameters for the target years:

- Population by Country
- Gross Domestic Product (GDP)

7.2.1 Population Framework

The UN's medium variant is chosen for setting the future population framework of the ECOWAS sub-region. However, the populations of 2015 were adjusted based on each country's recent census data.

The future population framework of ECOWAS sub-region is shown in Table 7.1. In 2040, the total population of ECOWAS sub-region is projected to be 632 million which is almost twice the size of the current population.

Table 7.1 Population Framework of ECOWAS Sub-Region

	2000	2010	2015	2020	2025	2030	2035	2040
Population	227.8	299.0	343.5	391.8	444.6	502.3	565.0	632.2
Annual Growth Rate	-	2.76%	2.81%	2.67%	2.56%	2.47%	2.38%	2.27%

Source: JICA Study Team based on UN, World Population Prospects 2015 Revision

Table 7.2 shows the future population by country for the ECOWAS countries including the WAGRIC countries. The selected population framework uses slightly higher annual population growth rates than the UN projection for the three coastal countries of the WAGRIC sub-region. This is because the selected scenario (the case of economic integration and physical integration are achieved) will attract sub-regional migration to the major cities in the coastal area by accelerating the development of Abidjan-Lagos Corridor.

Table 7.2 Population Framework for ECOWAS Countries including WAGRIC Countries

Country		2015	2025	2033	2040
Burkina Faso	Population	18,999,897	26,548,027	33,754,508	40,559,751
	Annual Growth Rate		3.40%	3.05%	2.66%
Côte d'Ivoire	Population	23,217,271	30,470,452	38,109,762	45,142,028
	Annual Growth Rate		2.76%	2.84%	2.45%
Ghana	Population	28,018,147	35,831,244	42,994,619	49,758,219
	Annual Growth Rate		2.49%	2.30%	2.11%
Togo	Population	7,150,472	9,493,005	11,822,161	14,222,551
	Annual Growth Rate		2.87%	2.78%	2.68%
WAGRIC	Population	77,385,786	102,342,728	126,681,049	149,682,549
	Annual Growth Rate		2.83%	2.70%	2.41%
Benin	Population	10,549,412	13,350,142	15,747,313	17,958,375
	Annual Growth Rate		2.38%	2.09%	1.89%
Cape Verde	Population	522,090	579,289	618,282	648,169
	Annual Growth Rate		1.05%	0.82%	0.68%
Gambia	Population	2,006,227	2,677,593	3,292,336	3,881,338
	Annual Growth Rate		2.93%	2.62%	2.38%
Guinea	Population	10,808,781	13,758,890	16,367,060	18,847,013
	Annual Growth Rate		2.44%	2.19%	2.04%
Guinea-Bissau	Population	1,714,817	2,113,490	2,440,584	2,741,707
	Annual Growth Rate		2.11%	1.81%	1.68%
Mali	Population	17,400,992	23,150,938	28,734,481	34,332,569
	Annual Growth Rate		2.90%	2.74%	2.58%
Niger	Population	19,338,251	28,460,501	38,205,588	48,828,194
	Annual Growth Rate		3.94%	3.75%	3.57%
Nigeria	Population	178,532,674	226,085,460	269,124,739	311,373,227
	Annual Growth Rate		2.39%	2.20%	2.10%
Liberia	Population	4,262,896	5,356,445	6,326,858	7,235,360
	Annual Growth Rate		2.31%	2.10%	1.94%
Senegal	Population	14,356,060	18,782,705	22,770,394	26,729,925
	Annual Growth Rate		2.72%	2.44%	2.32%
Sierra Leone	Population	6,594,165	7,948,876	9,012,827	9,936,840
	Annual Growth Rate		1.89%	1.58%	1.40%
ECOWAS	Population	343,472,151	444,607,058	539,321,510	632,195,266
	Annual Growth Rate		2.61%	2.44%	2.30%
UEMOA	Population	112,727,171	152,369,260	191,584,790	230,515,100
	Annual Growth Rate		3.06%	2.90%	2.68%

Source: JICA Study Team

The most populated country in Africa, Nigeria, will have over 300 million populations by 2040 which will be the fourth most populated country in the world, next to India, China and United States of America.

Ghana will continue to be the second most populated country in ECOWAS sub-region, followed by Niger with populations of almost 50 million each in 2040. Côte d'Ivoire and Burkina Faso will follow Niger with approximately 45 million and 40 million respectively.

As a result, the total population of WAGRIC countries will be over 100 million by 2025 and almost 150 million by 2040.

7.2.2 Economic Framework

Two scenarios for the economic framework are set. These two scenarios are set based on the sub-regional corridor development scenarios discussed in the previous chapter, Chapter 6.

- Base Case: Sub-regional economic integration is not achieved
- Integrated Case: Sub-regional economic integration is substantially achieved

Table 7.3 shows the total amount of GDP at market prices expressed in US dollars for the above two cases in the WAGRIC countries. The difference in GDP growth between the

two cases (Base Case and Integrated Case) shown in Table 7.3 is estimated by applying different efficiency rates of investment on economic growth in Table 7.4.

Table 7.3 GDP as Economic Framework in WAGRIC Countries

Unit: US\$ Billion (2014 prices)

Country	Case	2015	2025	2033	2040
Burkina Faso	Base	13.0	24.6	39.9	60.1
	Integrated	13.0	25.3	46.0	76.6
Côte d'Ivoire	Base	36.7	71.4	118.1	177.5
	Integrated	36.7	73.4	130.9	210.1
Ghana	Base	40.0	71.3	120.2	182.5
	Integrated	40.0	73.3	133.2	215.9
Togo	Base	4.8	8.4	14.0	21.2
	Integrated	4.8	8.7	15.8	25.7
WAGRIC Total	Base	94.4	175.7	292.2	441.3
	Integrated	94.4	180.7	325.8	528.4

Source: JICA Study Team

Table 7.4 GDP Growth Rates (%) as Economic Framework in WAGRIC Countries

Country	Scenario	2015-2020	2021-2025	2026-2033	2034-2040
Burkina Faso	Base	6.6	6.5	6.2	6.0
	Integrated	6.6	7.1	7.8	7.5
Côte d'Ivoire	Base	7.2	6.6	6.4	6.0
	Integrated	7.2	7.2	7.4	7.0
Ghana	Base	6.2	5.7	6.8	6.0
	Integrated	6.2	6.4	7.8	7.0
Togo	Base	6.2	5.6	6.6	6.0
	Integrated	6.2	6.2	7.8	7.0

Source: JICA Study Team

GDP per capita for the target years for WAGRIC countries based on the selected population and economic scenarios are shown in Table 7.5. By selecting the growth scenario which is “Corridor Development oriented to Sub-Regional Market,” Burkina Faso and Togo will lift themselves from low-income economies to lower-middle-income economies, while Côte d'Ivoire and Ghana will reach to become upper-middle-income economies by 2040.

Table 7.5 Future GDP per Capita in WAGRIC Countries

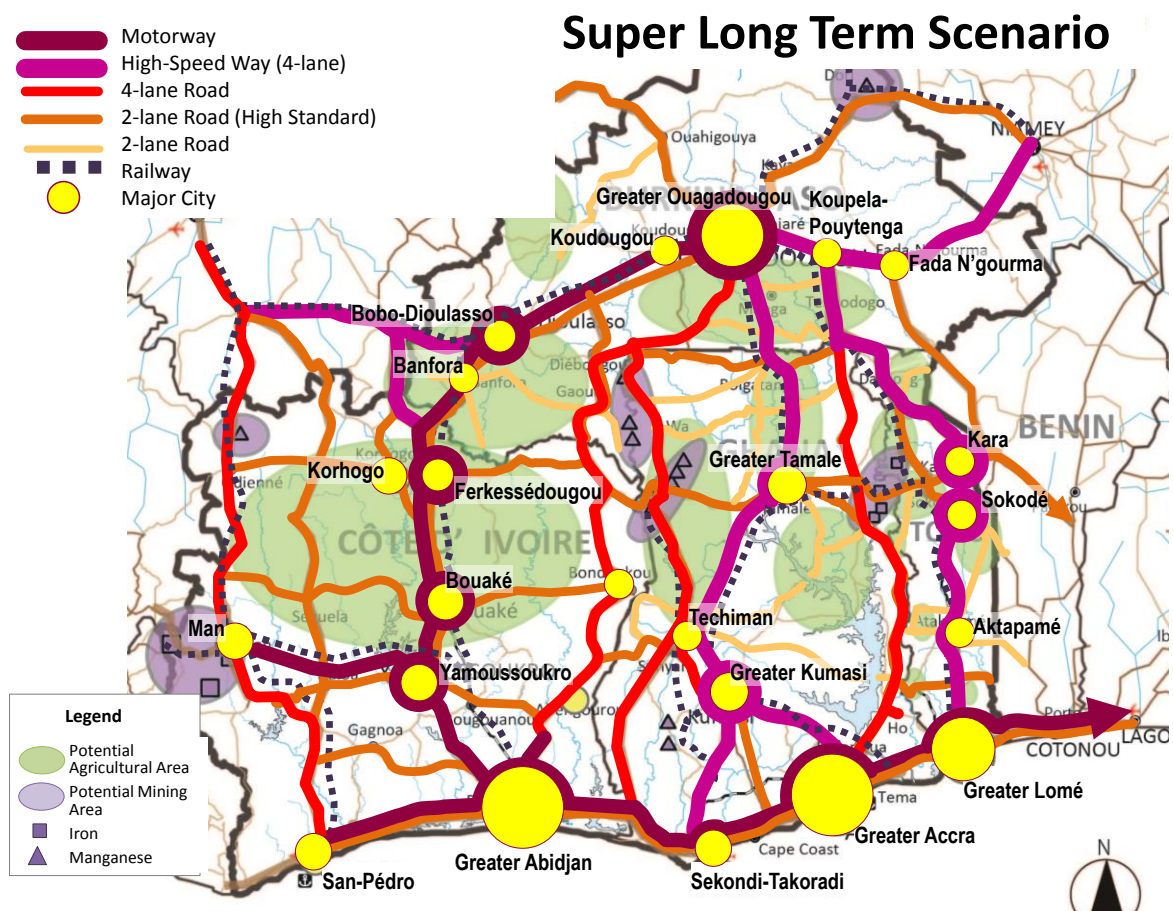
Country	GDP per Capita (USD)				Annual Growth Rate (%)		
	2015	2025	2033	2040	2015-2025	2025-2033	2033-2040
Burkina Faso	684	953	1,363	1,889	3.4%	4.6%	4.8%
Côte d'Ivoire	1,581	2,409	3,435	4,654	4.3%	4.5%	4.4%
Ghana	1,428	2,046	3,098	4,339	3.7%	5.3%	4.9%
Togo	671	916	1,336	1,807	3.2%	4.8%	4.4%
WAGRIC Sub-Region	1,220	1,766	2,572	3,530	3.8%	4.8%	4.6%

Source: JICA Study Team

Chapter 8 Future Spatial Structure of WAGRIC Sub-Region

8.1 Spatial Development through Sub-Regional Economic Integration and Corridor Development

WAGRIC Master Plan aims to integrate the four countries economically by strengthening the customs union and physically by corridor development. This master plan seeks not only to develop economic sectors both in coastal areas and inland areas, but also to upgrade the transport infrastructure in north-south corridors and coastal east-west corridor. This effort will transform the spatial structure of WAGRIC Sub-Region.



Source: JICA Study Team

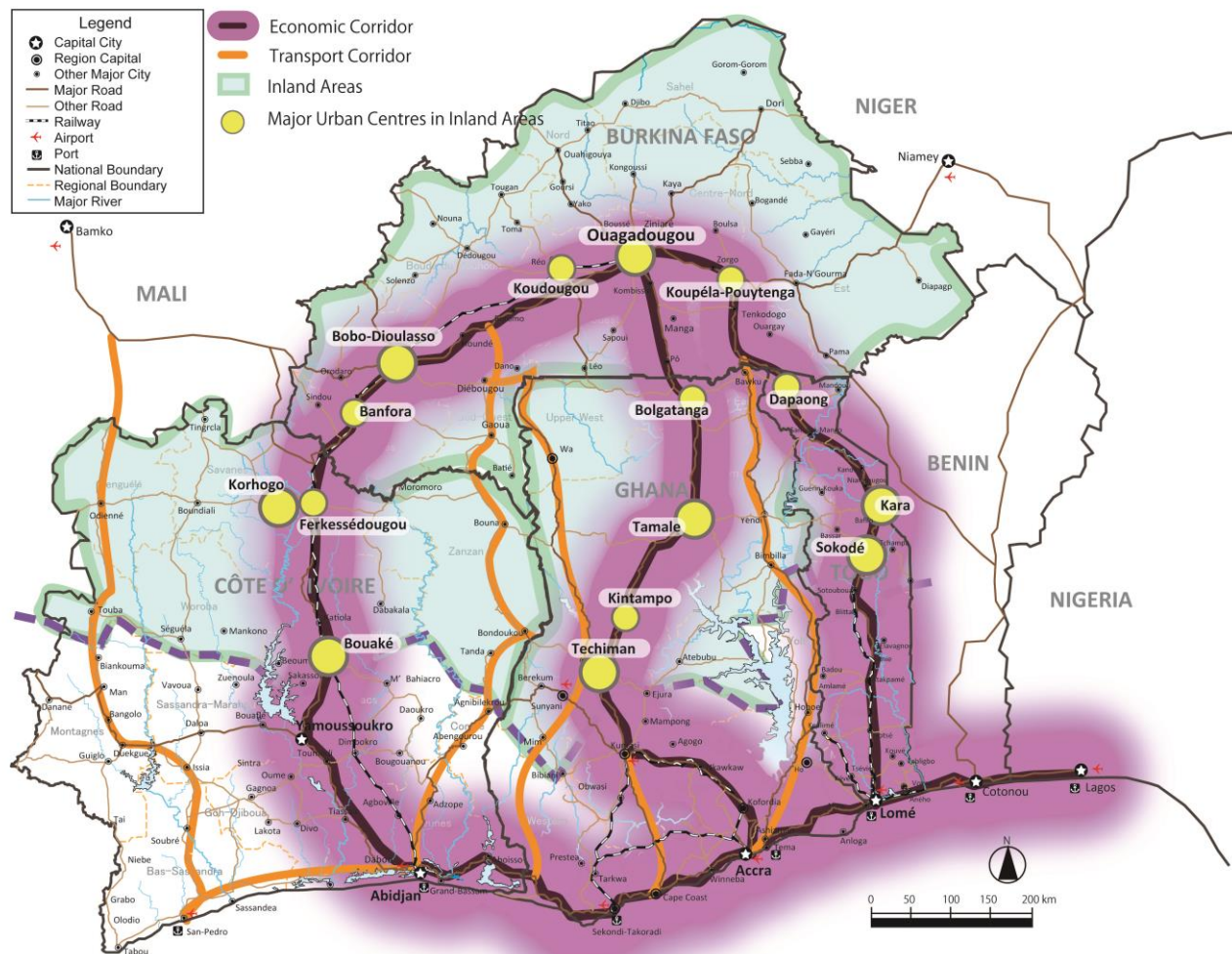
Figure 8.1 Super-Long Term Spatial Structure of WAGRIC Sub-Region (Beyond 2040)

8.2 Economic Corridors and Transport Corridors of the North-South Corridors

The north-south corridors which connect the inland areas and coastal areas are to be developed into two different types of corridors. One is an economic corridor and the other is a transport corridor. These different types of corridors have different functions and different forms of development. Economic corridors will upgrade the transport function to break the barriers of transport cost and time and also develop basic infrastructures for economic sectors for developing economic sectors in the cities along the corridor, as well as in other areas along the corridor. Transport corridors will strengthen the transport

function concentrating on roads. This will strengthen the connectivity between coastal areas and inland areas and also improve the access to areas along these corridors.

Major corridors, such as Abidjan-Ouagadougou Corridor, Tema-Ouagadougou Corridor and Lomé-Ouagadougou Corridor, are to be developed to as economic corridors. Other corridors are to be developed as transport corridors.



Source: JICA Study Team

Figure 8.2 Economic Corridors and Transport Corridors in WAGRIC Sub-Region

8.3 Major Regional Cities

People, goods and information will get together along north-south economic corridors and major regional cities. Urban functions, corridor infrastructure and basic infrastructures for economic sectors will be provided in those cities, accommodating administration function and service functions for neighbouring agriculture areas, and regional head office functions for private companies, and furthermore attracting manufacturing factories. For these cities, social services and cultural facilities will be provided for promoting people's settlement in inland areas.

The major regional cities in inland areas of the WAGRIC Sub-Region are as follows:

- Bobo-Dioulasso (Abidjan-Ouagadougou Corridor in Burkina Faso)
- Bouaké (Abidjan-Ouagadougou Corridor in Côte d'Ivoire)
- Korhogo (Abidjan-Ouagadougou Corridor in Côte d'Ivoire)
- Tamale (Tema-Ouagadougou Corridor in Ghana)
- Kara (Lomé-Ouagadougou Corridor in Togo)
- Sokodé (Lomé-Ouagadougou Corridor in Togo)

The future population of major cities in WAGRIC countries are shown in Figure 8.3 and Table 8.1.

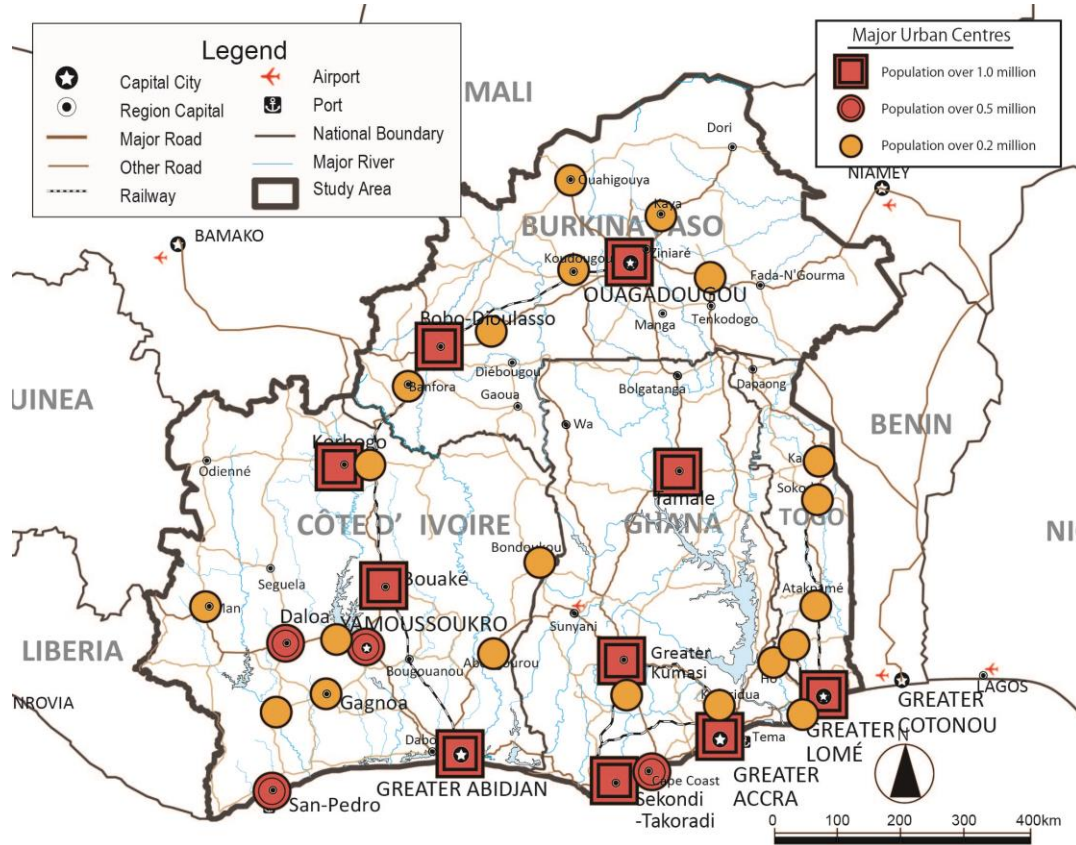
Table 8.1 Future Population of Major Cities in WAGRIC Countries

Country	Major City	Region		2015	2025	2033	2040
Burkina Faso	Greater Ouagadougou	Centre	Population	2,557,000	4,370,000	6,135,000	7,731,000
			Annual Growth Rate		5.51%	4.33%	3.36%
	Bobo-Dioulasso	Hauts-Bassins	Population	771,000	1,215,000	1,709,000	2,247,000
			Annual Growth Rate		4.66%	4.35%	3.99%
	Hounde	Hauts-Bassins	Population	66,000	119,000	186,000	268,000
			Annual Growth Rate		6.06%	5.75%	5.38%
	Koudougou	Centre-Ouest	Population	115,000	155,000	195,000	236,000
			Annual Growth Rate		3.00%	2.92%	2.78%
	Banfora	Cascades	Population	121,000	193,000	272,000	361,000
			Annual Growth Rate		4.80%	4.40%	4.12%
	Ouahigouya	Nord	Population	104,000	151,000	202,000	255,000
			Annual Growth Rate		3.77%	3.66%	3.42%
	Kaya	Centre-Nord	Population	87,000	144,000	212,000	294,000
			Annual Growth Rate		5.19%	5.00%	4.73%
	Koupela-Pouytenga	Centre-Est	Population	143,000	238,000	351,000	481,000
			Annual Growth Rate		5.25%	4.96%	4.61%
	Tenkodogo	Centre-Est	Population	62,000	88,000	113,000	139,000
			Annual Growth Rate		3.54%	3.27%	2.92%
	Fada N'Gourma	Est	Population	62,000	95,000	132,000	172,000
			Annual Growth Rate		4.41%	4.18%	3.90%
Côte d'Ivoire	Greater Abidjan (Incl. part of Indénié-Djuablin Region)	Abidjan	Population	5,004,000	6,611,000	8,292,000	9,832,000
			Annual Growth Rate		2.82%	2.87%	2.46%
	Yamoussoukro	Yamoussoukro	Population	363,000	465,000	571,000	667,000
			Annual Growth Rate		2.50%	2.60%	2.24%
	Bouaké	Gbêkê	Population	478,000	688,000	924,000	1,166,000
			Annual Growth Rate		3.72%	3.77%	3.37%
	San-Pédro	San-Pédro	Population	172,000	306,000	509,000	762,000
			Annual Growth Rate		5.91%	6.55%	5.94%
	Soubré	La Nawa	Population	108,000	177,000	236,000	291,000
			Annual Growth Rate		5.06%	3.66%	3.08%
	Abengourou	Indénié-Djuablin	Population	103,000	147,000	197,000	248,000
			Annual Growth Rate		3.61%	3.71%	3.34%
	Odienné	Kabadougou	Population	43,000	56,000	70,000	83,000
			Annual Growth Rate		2.62%	2.82%	2.56%
	Gagnoa	Gôh	Population	166,000	239,000	322,000	407,000
			Annual Growth Rate		3.73%	3.78%	3.38%
	Dimbokro	N'Zi	Population	50,000	65,000	81,000	95,000
			Annual Growth Rate		2.66%	2.72%	2.33%
	Agboville	Agnéby-Tiassa	Population	52,000	75,000	100,000	126,000
			Annual Growth Rate		3.58%	3.74%	3.40%
	Man	Tonkpi	Population	153,000	211,000	272,000	331,000
			Annual Growth Rate		3.22%	3.26%	2.85%
	Daloa	Hout-Sassandra	Population	254,000	344,000	438,000	524,000
			Annual Growth Rate		3.09%	3.07%	2.59%
	Bouaflé	La Marahoué	Population	97,000	165,000	251,000	351,000
			Annual Growth Rate		5.42%	5.39%	4.90%
	Korhogo	Poros	Population	253,000	477,000	770,000	1,108,000
			Annual Growth Rate		6.56%	6.17%	5.35%
	Ferkessédougou	Tchologo	Population	58,000	107,000	169,000	239,000
			Annual Growth Rate		6.28%	5.90%	5.08%
	Séguéla	Worodougou	Population	49,000	85,000	132,000	190,000
			Annual Growth Rate		5.71%	5.74%	5.30%
Bondoukou	Gontougo	Population	92,000	133,000	180,000	232,000	
		Annual Growth Rate		3.75%	3.92%	3.63%	

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Country	Major City	Region		2015	2025	2033	2040
Ghana	Sekondi-Takoradi	Western	Population	756,000	1,407,000	2,205,000	3,108,000
			Annual Growth Rate		6.42%	5.77%	5.03%
	Cape Coast	Central	Population	210,000	316,000	427,000	547,000
			Annual Growth Rate		4.15%	3.84%	3.62%
	Greater Accra (Incl. part of Central Region)	Greater Accra	Population	4,750,000	6,434,000	7,913,000	9,183,000
			Annual Growth Rate		3.08%	2.62%	2.15%
	Ho	Volta	Population	136,000	225,000	323,000	434,000
			Annual Growth Rate		5.12%	4.66%	4.29%
	Aflao	Volta	Population	91,000	170,000	271,000	397,000
			Annual Growth Rate		6.45%	5.98%	5.61%
	Kofordia	Eastern	Population	141,000	188,000	235,000	287,000
			Annual Growth Rate		2.93%	2.82%	2.90%
	Greater Kumasi	Ashanti	Population	3,060,000	4,617,000	6,187,000	7,780,000
			Annual Growth Rate		4.20%	3.73%	3.33%
	Obwasi	Ashanti	Population	161,000	200,000	229,000	250,000
			Annual Growth Rate		2.15%	1.68%	1.29%
	Sunyani	Brong Ahafo	Population	83,000	101,000	115,000	127,000
			Annual Growth Rate		2.02%	1.67%	1.37%
	Techiman	Brong Ahafo	Population	80,000	111,000	145,000	179,000
			Annual Growth Rate		3.36%	3.35%	3.05%
Kintampo	Brong Ahafo	Population	52,000	77,000	102,000	132,000	
		Annual Growth Rate		3.91%	3.61%	3.69%	
Tamale	Northern	Population	495,000	856,000	1,313,000	1,865,000	
		Annual Growth Rate		5.64%	5.50%	5.13%	
Bolgataga	Upper East	Population	69,000	85,000	100,000	115,000	
		Annual Growth Rate		2.17%	2.02%	2.02%	
Wa	Upper West	Population	80,000	100,000	117,000	132,000	
		Annual Growth Rate		2.24%	1.97%	1.80%	
Togo	Greater Lomé	Maritime	Population	1,950,000	2,916,000	3,909,000	4,970,000
			Annual Growth Rate		4.11%	3.73%	3.49%
	Tsevié	Maritime	Population	62,000	80,000	97,000	112,000
			Annual Growth Rate		2.67%	2.33%	2.08%
	Aktapaée	Plateaux	Population	88,000	142,000	206,000	284,000
			Annual Growth Rate		4.88%	4.80%	4.67%
	Kpalimé	Plateaux	Population	89,000	124,000	161,000	200,000
			Annual Growth Rate		3.39%	3.30%	3.17%
	Sokodé	Centrale	Population	119,000	184,000	258,000	343,000
			Annual Growth Rate		4.48%	4.32%	4.15%
	Kara	Kara	Population	117,000	178,000	250,000	334,000
			Annual Growth Rate		4.31%	4.33%	4.24%
	Dapaong	Savenes	Population	72,000	108,000	147,000	191,000
			Annual Growth Rate		4.17%	3.97%	3.79%

Source: JICA Study Team



Source: JICA Study Team

Figure 8.3 Future Distribution of Major Cities in WAGRIC Countries (2040)

8.4 West Africa Coastal Mega-Region (Mega Coastal Economic Corridor)

Abidjan-Lagos Corridor is to be developed into an integrated coastal economic corridor (its population estimated to be 65 million in 2040) connecting coastal economies and cities between Abidjan and Lagos with an approximately 1,000km long motorway. The urban facilities, urban expansion areas, industrial areas and conservation areas should be strategically located along the two axes of existing roads and new motorways.

In the super long term (beyond 2040), this area would become a coastal mega-region equipped with a high-speed railway, as well as a motorway, connecting capital cities and regional cities which have metropolitan functions, strategic sea ports, international airports and economic sectors. See the spatial concept of West Africa Coastal Mega-Region shown in Figure 8.5.

Table 8.2 Future Population of Major Cities along Abidjan-Lagos Corridor (2040)

Major Cities	Population 2040 (thousand)
San-Pédro	500
Greater Abidjan	11,000
Sekondi-Takoradi	2,500
Cape Coast	500
Greater Accra	9,300
Greater Lomé	5,000
Greater Cotonou	3,200
Port Nouvo	1,700
Greater Lagos and Surrounding Cities	32,000
Total	65,700

Source: JICA Study Team

8.5 Coastal Metropolitan Areas

The coastal metropolitan areas, such as Greater Abidjan, Greater Accra, Greater Lomé and Greater Lagos, have been developed along the Abidjan-Lagos Corridor. These metropolitan areas are located at junctions between north-south economic corridors and Abidjan-Lagos Coastal Corridor. They should strengthen global competitiveness by upgrading their urban functions and advancing their economic sectors, as well as attracting functions, such as knowledge, information, finance, advanced services, and culture.

For implementing the selected growth scenario, it is necessary for Greater Abidjan, Greater Accra and Greater Lomé to promote spatial development for satisfying the following points.

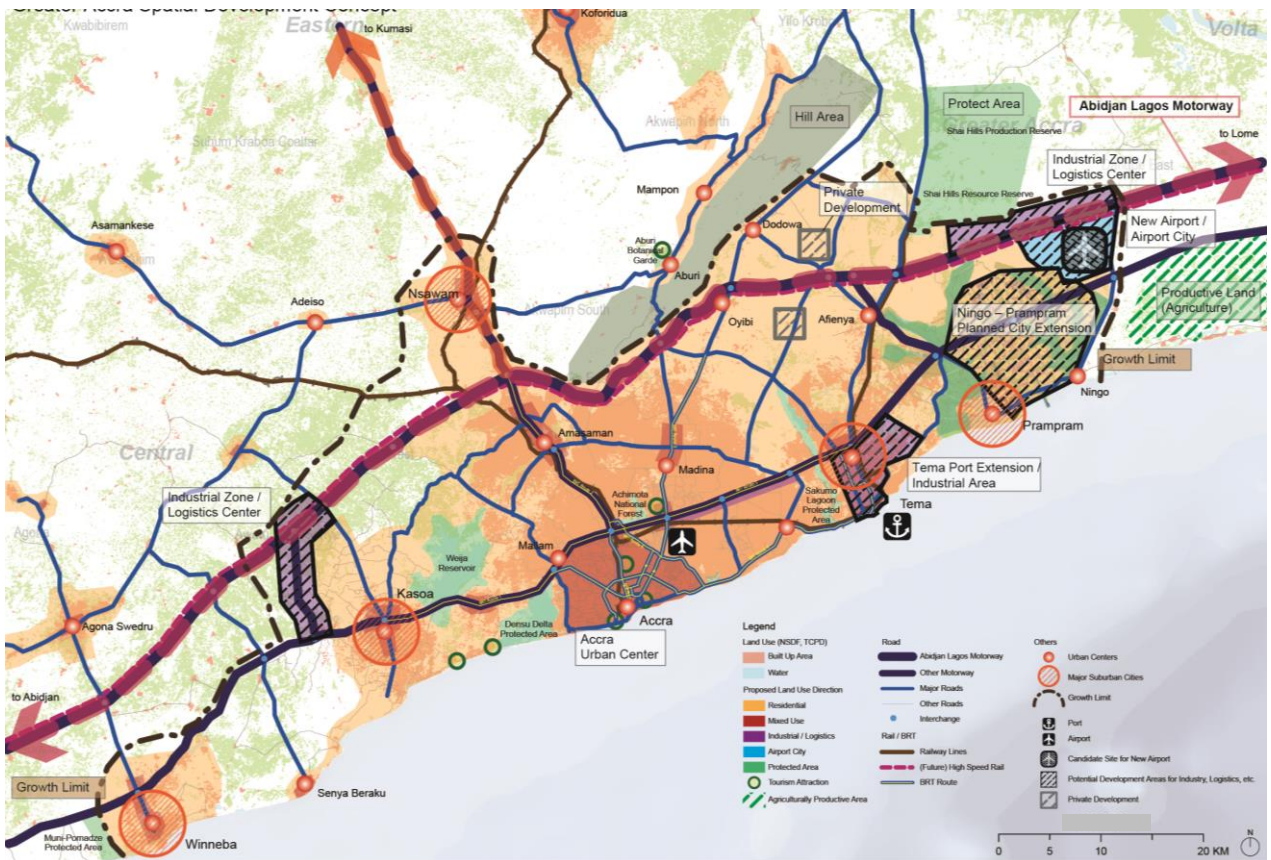
- Where to put an east-west motorway, as part of the Abidjan-Lagos Corridor Motorway, in each coastal metropolitan
- How to secure the connectivity between north-south corridors and coastal corridor within each of the coastal metropolitan
- How to secure a strong access to strategic sea ports which have plans for expansion within coastal metropolitan areas
- How to get access to new international airports planned within each of the coastal metropolitan areas
- Where to locate new industrial zones within each of the coastal metropolitan areas

In order to do so, it is necessary to formulate urban spatial development plans including urban transportation development planning, for those metropolitan areas. WAGRIC-CACAO Project prepared spatial concepts for those coastal metropolitan areas by conducting preliminary analyses on these points. See Figures 8.6 through 8.8.



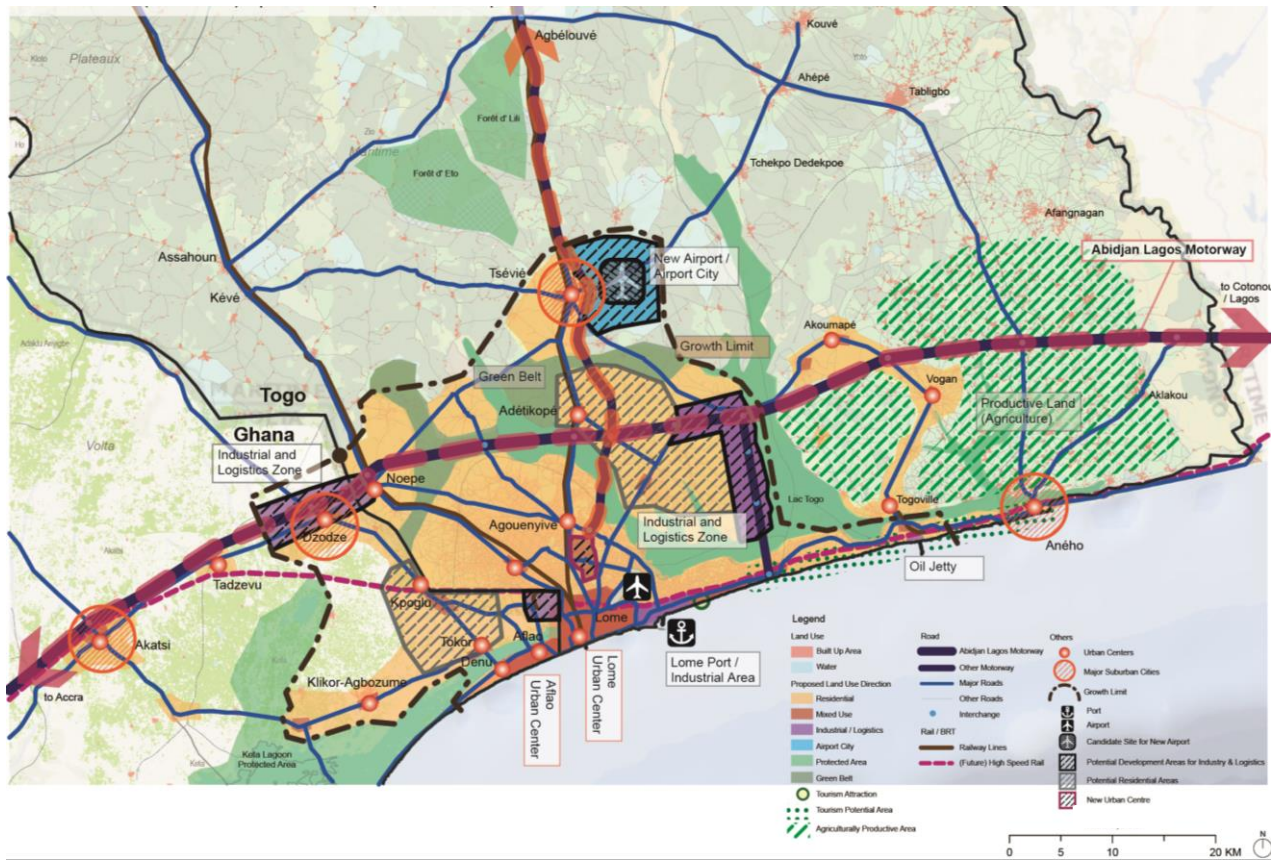
Source : JICA Study Team

Figure 8.5 Spatial Concept of Greater Abidjan



Source : JICA Study Team

Figure 8.6 Spatial Concept of Greater Accra



Source : JICA Study Team

Figure 8.7 Spatial Concept of Greater Lomé

Chapter 9 Key Points for Individual Countries' Corridor Development Plan in WAGRIC Sub-Region

9.1 Introduction

In Chapter 6 of this summary report, alternative growth scenarios for WAGRIC Sub-Region are discussed and a growth scenario has been selected. In this chapter, considering different potentials and constraints of individual countries, individual countries' corridor development plans are composed of strategies and priority projects for a variety of economic sectors and infrastructure sectors.

In Chapter 9, key points for initiating and driving individual countries' corridor development are described. These key points are closely related to selected priority projects for individual countries as shown in Chapter 11.

9.2 Key Points for Burkina Faso's Corridor Development Plan

Located between 1,000 and 1,200 km from the coast, Burkina Faso is the only landlocked country in the four countries of WAGRIC Sub-Region, and high transport costs bear heavily on its economy. While mineral resources and cotton are exported outside the sub-region, agricultural and livestock products are also exported to neighbouring countries and well known by consumers of coastal areas. However, their volumes of production and export are not large enough to upgrade transport infrastructure of north-south corridors.

In view of large growth potential of coastal consumer markets, it is possible for Burkina Faso to increase their production and export to coastal sub-regional markets.

Fortunately, coastal countries have relatively well maintained transport infrastructure in the north-south direction (roads and railways) between the coastal and inland areas. Each of them is likely to try to upgrade corridor infrastructure (WAGRIC Master Plan strongly supports this policy) in order to reduce the regional disparity and to develop the economic sectors of the inland areas. It is time for Burkina Faso, too, to promote economic sectors targeting coastal markets and upgrade north-south corridor transport infrastructure to reach coastal areas.

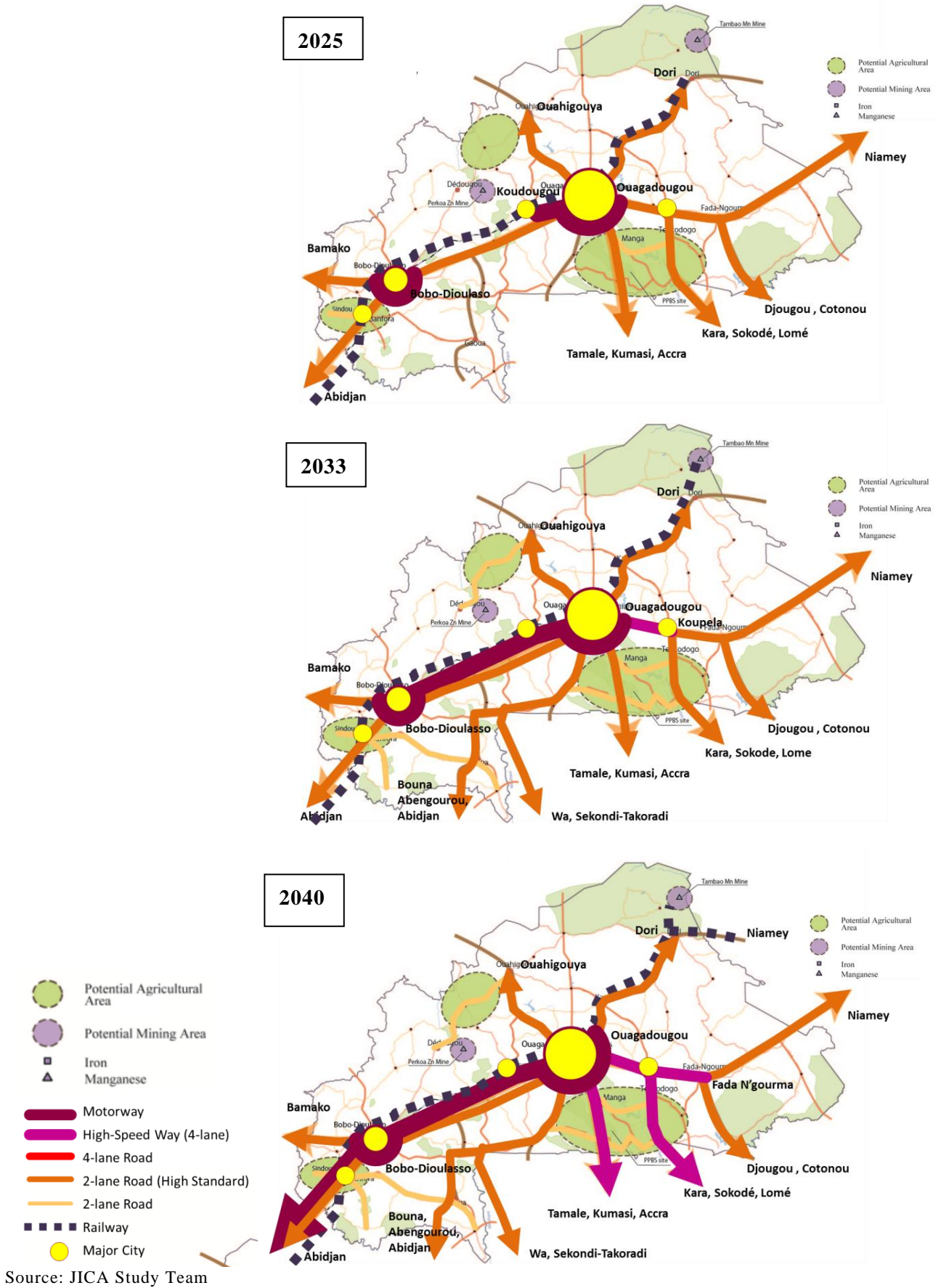


Figure 9.1 Burkina Faso's Phased Corridor Development

Given this situation, in order to initiate and drive corridor development, Burkina Faso should implement the following measures by pushing the two types of buttons (necessary actions):

[Button A]: Development of economic sectors oriented to coastal consumers' markets of the sub-region should be promoted by making the following efforts:

- Improvement of access roads to potential agricultural areas from north-south corridors to coastal countries (Côte d'Ivoire, Ghana and Togo), and expansion of irrigation schemes in potential agricultural areas for increasing the production and export of existing products (agricultural and livestock products) oriented to sub-regional consumers' markets
- Development of new signature products oriented to middle-income populations of sub-regional markets (agricultural and livestock products and agro-processed and livestock-processed products)

[Button C]: North-south connectivity should be strengthened for reducing long-distance cargo transport costs for development of economic sectors in inland areas by taking the following action:

- Development of Multi-Modal Dry Port in Ouagadougou and Expansion of the Multi-Modal Dry Port in Bobo-Dioulasso for combining rail and truck transport for the purpose of expanding rail service areas and increasing rail transport demand, as well as for reducing cargo transport costs

[Button C]: North-south Connectivity should be strengthened by developing a high-speed transportation for attracting investment to economic sectors in inland areas as follows:

- Phased development of a motorway from Ouagadougou to Bobo-Dioulasso for strengthening the connectivity with coastal markets of Côte d'Ivoire
- Phased development of high-standard four-lane roads from Ouagadougou toward Togo and Ghana for strengthening the connectivity with coastal markets through Togo and Ghana

9.3 Key Points for Côte d'Ivoire's Corridor Development Plan

Côte d'Ivoire's strength in corridor development is north-south roads and railway linking Abidjan Port and its inland areas and furthermore with neighbouring landlocked countries. Those roads and railway have been built and maintained since the colonial period. Furthermore, a motorway was recently established between Abidjan and Yamoussoukro. It should be also noted that the railway from Abidjan to the landlocked country, Burkina Faso, provides transportation of cargo despite constraints in capacity and speed.

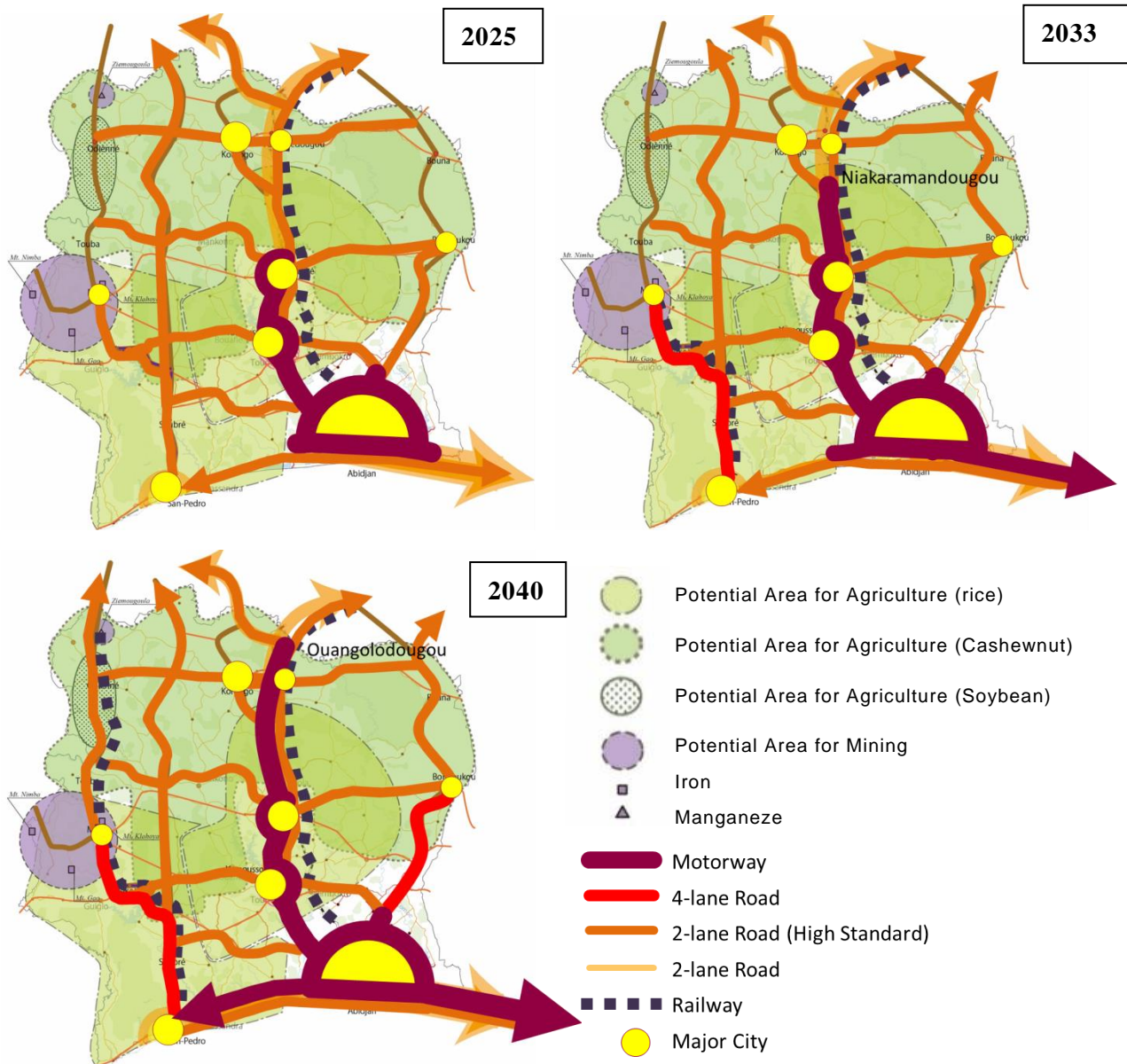
On the other hand, inland areas of the Côte d'Ivoire have not only strong potential for agricultural production of rice, maize, soya beans, vegetable and fruits, which could target coastal markets and neighbouring countries' markets, but also expansion potential of cashew and cotton, targeting outside of the sub-regional markets. Major inland regional cities, such as Bouaké and Korhogo, could offer opportunities for agro-processing industries, as well as for commercial and service centres.

By taking advantage of this relatively well developed north-south transport corridor and inland development potential, it is necessary both to extend the motorway of Abidjan-Yamoussoukro to the north and to strengthen cargo railway for attracting investment in inland areas' economic sectors oriented to growing consumer markets in the sub-region.

However, urban populations and economic activities are heavily concentrated in Grand Abidjan. Inland regional cities remain underdeveloped. Therefore, traffic demand on the north-south corridors is too low to upgrade corridor transport infrastructure.

Côte d'Ivoire lies at the west end of WAGRIC Sub-Region, meaning that it is located the farthest from a large growth potential market of Lagos of Nigeria. To mitigate this

disadvantage, Côte d'Ivoire should start developing Abidjan-Lagos Corridor Motorway, as early as possible, especially the eastern exit section from the north-eastern part of Abidjan toward the east.



Source: JICA Study Team

Figure 9.2 Côte d'Ivoire's Phased Corridor Development

Given this situation, in order to initiate and drive corridor development, Côte d'Ivoire should implement the following measures by pushing the three buttons (three sets of necessary actions):

[Button A]: Development of economic sectors oriented to sub-regional markets should be promoted not only in coastal areas, but also in inland areas by taking the following actions:

- Investment promotion to economic sectors in both coastal areas and inland areas, by emphasizing the importance of integrated and expanded markets within the sub-region
- Promote the agricultural production of rice, maize, soy bean, fresh vegetables and fresh fruits targeting coastal markets of the sub-region by improvement of access roads to potential agricultural areas from Abidjan-Ouagadougou Corridor and by providing infrastructure including irrigation facilities
- Provision of economic infrastructure, such as electricity, water and industrial parks,

for agro-processing industries in Bouaké and Korhogo

[Button B]: Sub-regional markets should be integrated and expanded for creating the enabling environment to attract investment to economic sectors oriented to sub-regional markets by taking the following actions:

- Strengthening of implementation of the Customs Union at the national border with Ghana for integrating Côte d'Ivoire's coastal markets with Ghanaian and other coastal markets
- Construction of East Exit Line of Motorway connecting Cocody with Bonoua, which could contribute to the strong connectivity of Greater Abidjan with Abidjan-Lagos Corridor

[Button C]: North-south Connectivity should be strengthened for reducing transport costs and transport time between inland areas and coastal areas, for creating the enabling environment for developing economic sectors in inland areas by taking the following actions:

- Extension of the motorway further north up to Niakaramandougou from Yamoussoukro for reducing transport time between inland areas and coastal areas
- Development of multi-modal dry ports at Suburban Abidjan and Ferkessédougou by combining rail transport and truck transport for expanding service areas of the railway both in coastal areas and inland areas, and for reducing transport costs between inland areas and coastal areas

9.4 Key Points for Ghana's Corridor Development Plan

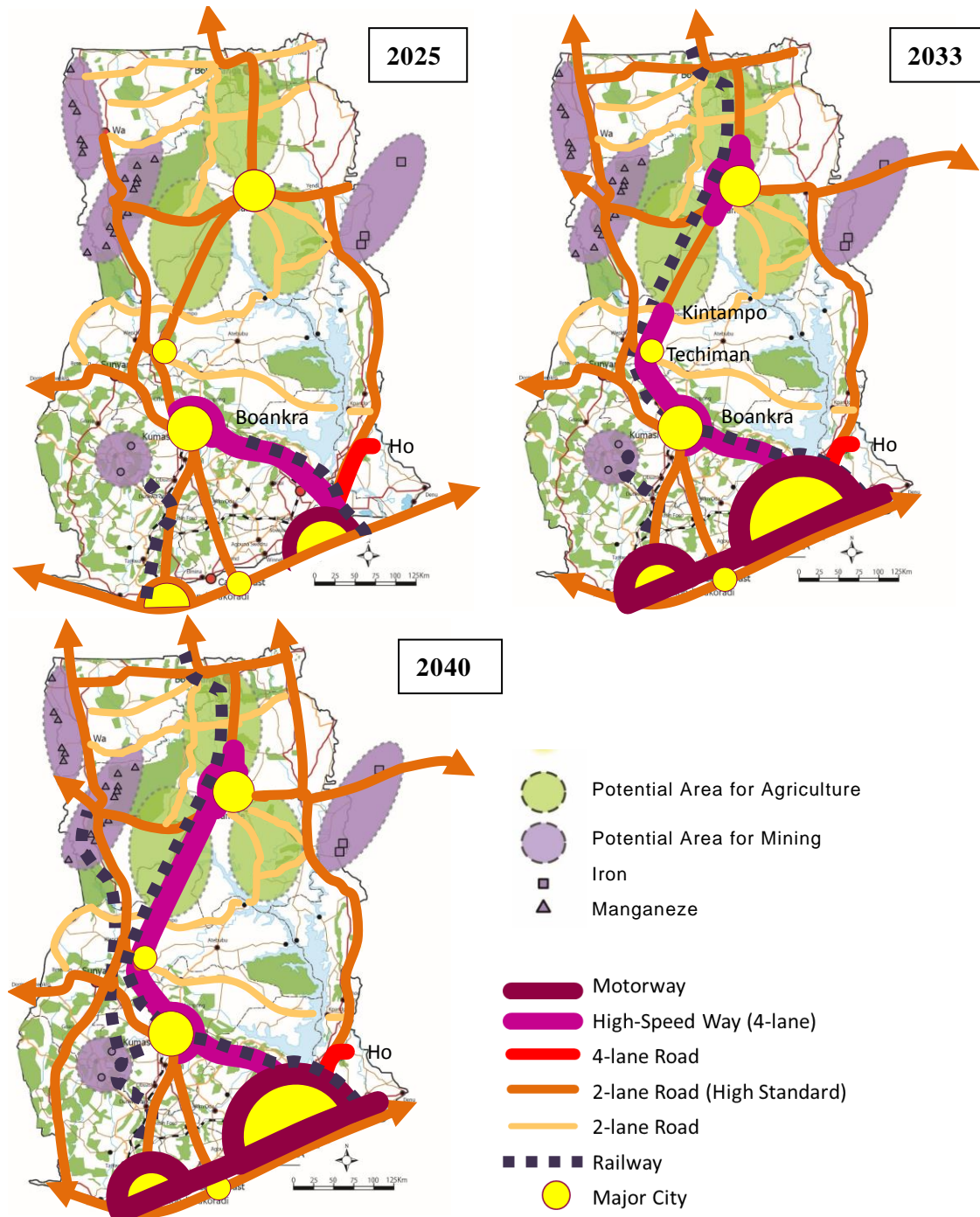
One of Ghana's strength for corridor development is its relatively large urban population in the inland area. Ghana has developed large regional cities, such as Greater Kumasi (3 million population in 2015) and Tamale (0.5 million population in 2015). Greater Kumasi is located in between two areas (the inland area and coastal area), and is about 270 km from Tema Port. Tamale is the capital city of the Northern Region, located about 650 km from the coastal area. Tamale is expected to increase its population to 1.8 million by 2040. These cities could function as service centres for their surrounding rural areas, but also could accommodate manufacturing sectors, such as agro-processing industries. These regional cities will become development centres for inland areas of Ghana.

On the other hand, a weak point of Ghana is Volta Lake's occupation of the eastern part of Ghana's territory. Because of this geographic feature, the central corridor of Ghana follows a large curve route from Tema to the north, turning west then east. Consequently, the long distance separating the coastal and inland areas would be a disadvantage for Ghana's inland area development.

Moreover, the railway in Ghana has not been substantially operational as a long-distance cargo railway. In view of the present situation, its recovery would not be easy. This is partly because of an inefficiency of rail transport due to its relatively short length of railways. The Eastern Railway Line used to have about 300 km of operational length, and Western Railway Line had about 280 km. Ghana's railway length is not long enough to be efficient. It should be complemented by the inland waterway of the Volta Lake. The transport of petroleum products had been operated by combining 1) a pipeline between Tema and Akosombo, 2) inland water transport on the Volta Lake and 3) a pipeline between Buipe and Bolgatanga. However, this combined transport system has posed various problems in the recent years.

Tema Port has a much lower volume of transit cargo for inland countries than neighbouring countries' ports. However, it has an ambitious strategy to become a hub port to handle an increased volume of transit and transshipping cargos in the sub-region in the future.

Ghana is characterized by its geographical position surrounded by French-speaking countries. In the implementation of strategies for promoting sub-regional economic integration, Ghana is expected to play a key role to integrate its neighbouring countries spatially by upgrading transport infrastructure and by implementing a customs union.



Source: JICA Study Team

Figure 9.3 Ghana's Phased Corridor Development

In this situation, in order to initiate and drive corridor development, Ghana is to push the following three buttons to take necessary measures:

[Button A]: Development of economic sectors oriented to sub-regional markets should be promoted not only in coastal areas, but also in inland areas by taking the following actions:

- Investment promotion to economic sectors in both coastal areas and inland areas, by emphasizing the importance of integrated and expanded markets within the sub-region

- Promotion of development of agriculture targeting sub-regional markets in the Northern Zone by attracting investments and by providing infrastructure (including east-west access roads to potential agricultural areas and irrigation facilities) in inland areas from the Central Corridor (Tema-Ouagadougou Corridor) of Ghana
- Strengthening of economic infrastructure, such as electricity, water and industrial parks, for supporting the development of Tamale as a Major Regional City in the Northern Zone for attracting investment to agro-processing industries targeting sub-regional markets

[Button B]: Sub-regional markets should be integrated and expanded for creating the enabling environment to attract investment to economic sectors oriented to sub-regional markets by taking the following actions:

- Strengthening of implementation of the Customs Union at the national border with Côte d'Ivoire and Togo for integrating Ghana's coastal markets with neighbouring coastal markets
- Construction of strategically selected sections of a Coastal Motorway within Ghana, not only for spatially integrate coastal markets, but also for forming a coastal industrial and urban belt (a coastal economic corridor)
- Formulation of Greater Accra's urban transportation master plan, especially for identifying the location of the East-West Motorway within Greater Accra
- Formulation of a road plan for securing the connectivity of the new Tema container terminal with the Abidjan-Lagos Motorway, as well as with Tema-Ouagadougou Corridor (Central Corridor of Ghana)

[Button C]: North-south Connectivity should be strengthened for reducing transport costs and transport time between inland areas and coastal areas, for creating an enabling environment for developing economic sectors in inland areas by taking the following actions:

- Extension of 4-lane high-standard road between Nkawkaw and Kumasi, construction of Greater Kumasi Outer Ring Road and extension of 4-lane high-standard road between Kumasi and Kintampo for reducing travel time between inland areas and coastal areas
- Revitalization of water transport of the Volta Lake in the short term, by combining 1) construction of Tema-Akosonbo Railway, 2) development of Debre Port in the upstream of the Volta Lake and Akosonbo Port in its downstream, 3) rehabilitation of pipelines between Buipe and Bolgatanga
- Revitalization of the Western Railway Line (Takoradi-Awaso-Kumasi) and the Eastern Railway Line (Tema-Boankra-Kumasi) in the short term, and new construction of a railway from Kumasi up to northern areas in the mid and long terms

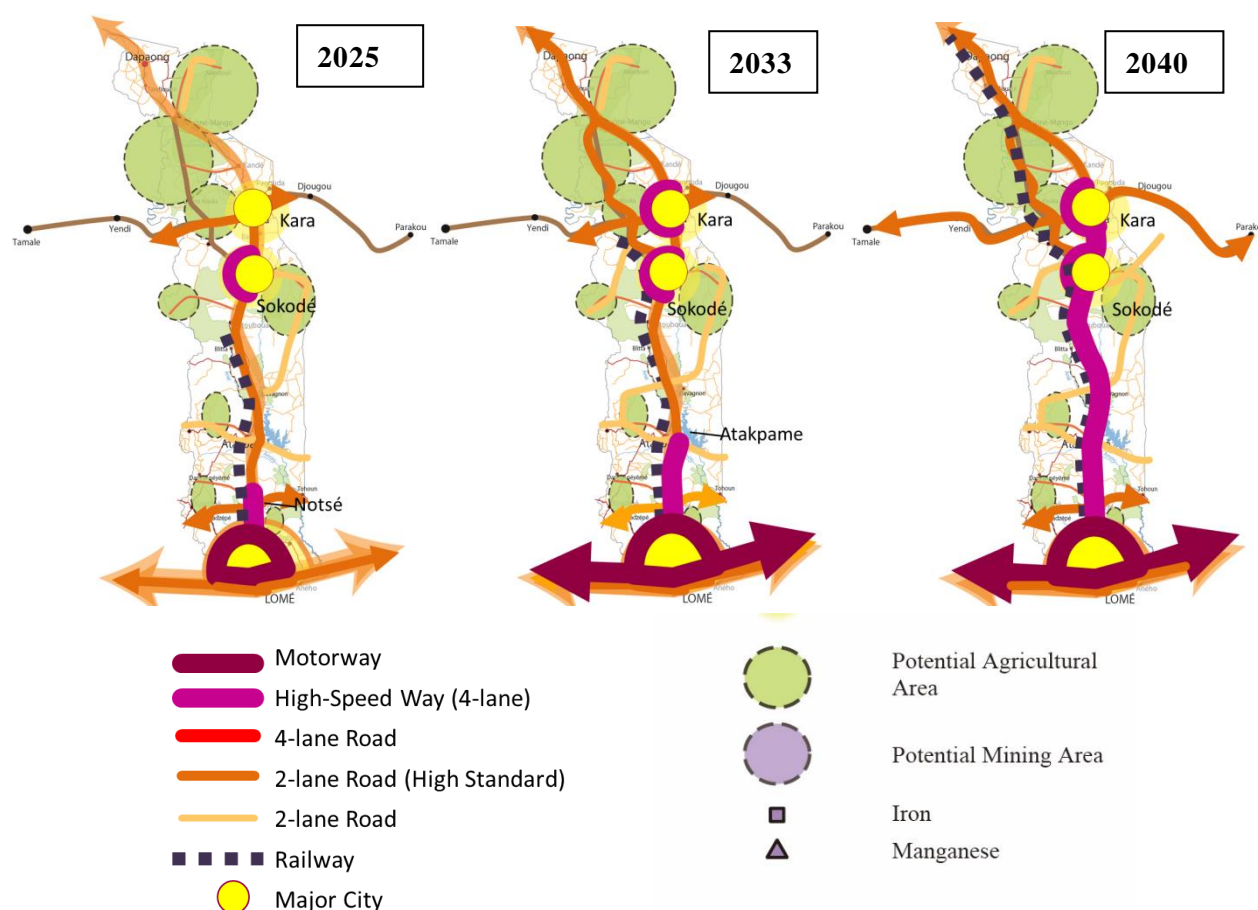
9.5 Key Points for Togo's Corridor Development Plan

Togo's strength in corridor development is Lomé Port and Lomé-Ouagadougou Corridor. Lomé container terminal has attracted a large volume of transit cargo to landlocked countries since its open to the public in November 2014. In addition to the development of logistics businesses related to Lomé Port, Togo continues to develop a north-south road corridor of Lomé-Ouagadougou so as to develop logistics industries relying on road transport. However, countries of the Gulf of Guinea (Côte d'Ivoire, Ghana, etc.) have development plans for port expansion (Abidjan Port and Tem Port) in order to compete with the Lomé Container Terminal.

If the volume of cargo handling continues to increase at Lomé Port, traffic congestion might become more serious around the port. As a result, the competitiveness of both Lomé Port and the Lomé-Ouagadougou Corridor might be deteriorated.

However, although Togo's inland areas have agricultural development potential, it has been difficult for the inland areas to take advantage of Lomé Port and an improved road of Lomé -Ouagadougou Corridor.

Moreover, Greater Lomé is located the closest to Lagos among other major metropolitan areas along the Abidjan-Lagos Corridor, in addition to Lomé's competitive port. Therefore, Togo will be able to go beyond logistics and other service sectors, and to transform it to be a base for manufacturing sectors by taking advantage of its strategic location in the Abidjan-Lagos Corridor, when coastal metropolitan areas of Abidjan-Lagos Corridor participate in an international division of labour.



Source: JICA Study Team

Figure 9.4 Togo's Phased Corridor Development

Given this situation, in order to initiate and drive corridor development, Togo should take the following measures by pushing the following three types of buttons:

[Button A]: By utilizing the strength of Lomé-Ouagadougou Corridor and Coastal Abidjan-Lagos Corridor, the development of economic sectors should be promoted in both inland areas and coastal areas, targeting sub-regional coastal markets, by making the following efforts:

- Promotion of agriculture in inland areas, targeting the sub-regional market by developing agro-poles in inland areas including infrastructure such as access roads and irrigation facilities to potential agricultural areas
- Promotion of agro-processing industries in inland areas by strengthening of infrastructure in Kara and Sokodé (major regional cities) including industrial parks
- Development of industrial and logistics parks in Greater Lomé by taking advantage of Abidjan-Lagos Coastal Motorway, which is to be developed

[Button B]: Sub-regional markets should be integrated and expanded for creating the enabling environment to attract investment to economic sectors oriented to sub-regional markets by taking the following actions:

- Strengthening of implementation of the Customs Union at national borders along Abidjan-Lagos Corridor
- Construction of strategically selected sections of the Coastal Motorway, especially the East-West Motorway in Greater Lomé, for strengthening of the logistics function and enhancing locational potentiality for manufacturing sectors in the mid and long terms

[Button C]: North-south connectivity should be strengthened for reducing transport costs and transport time for investment promotion to economic sectors in inland areas as follows:

- Improvement of traffic congestion in surrounding areas of Lomé Port for maintaining of the competitiveness of Lomé Port and Lomé-Ouagadougou Corridor
 - Development and operation of truck terminals near Lomé Port
 - Improvement of intersections near Lomé Port
 - Clearing of unnecessary land uses around Lomé Port
 - Construction of a new motorway up to a new international airport
- Phased upgrading of the north-south corridor road to a 4-lane high-standard road including the construction of 4-lane bypass roads on Lomé-Ouagadougou Corridor
- Phased development of railway between Lomé (Togo) and Cinkasé (Burkina Faso) for reducing long-distance cargo transport costs and by utilizing private sectors' initiatives of iron ore mining and transport for Banjeli

Chapter 10 Ten Essential Strategies: Necessary Actions for Selected Growth Scenario

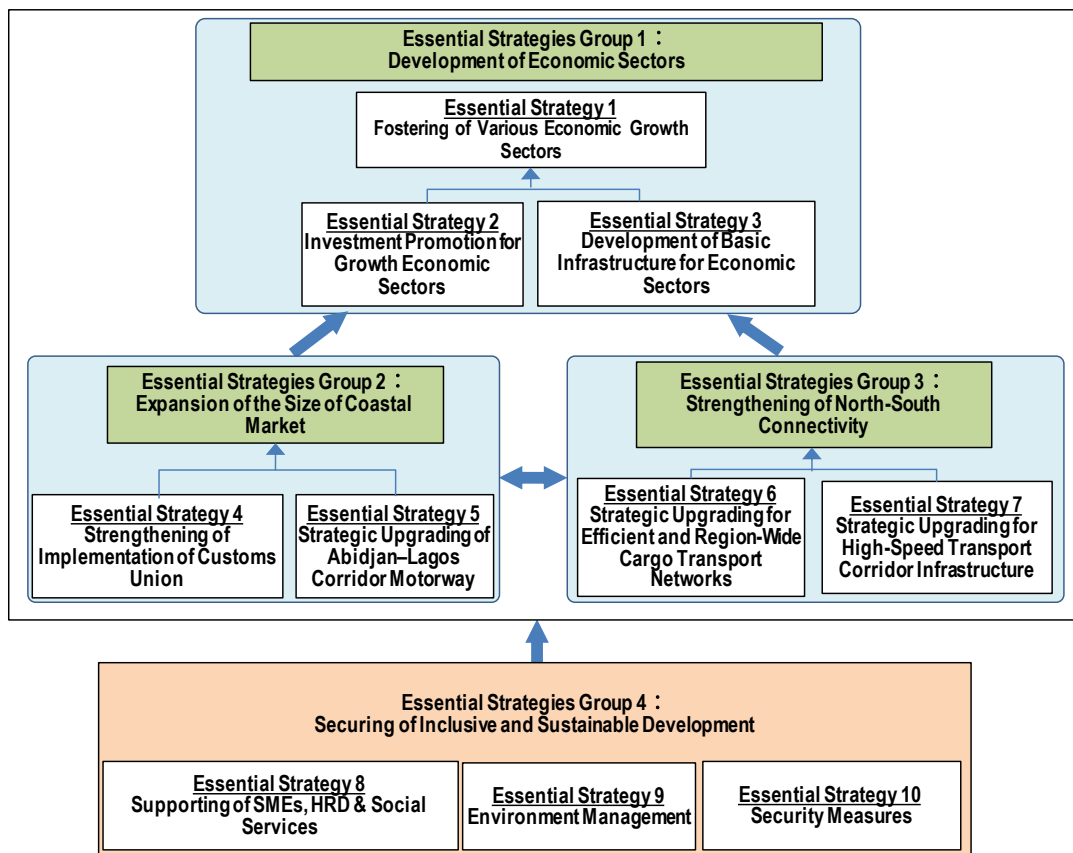
10.1 Ten Essential Strategies

To achieve the future vision of the sub-region, 10 essential strategies are formulated and grouped into the following four groups:

- Essential Strategies Group 1 (Button A): Development of Economic Sectors
- Essential Strategies Group 2 (Button B): Expansion of the Size of Coastal Markets
- Essential Strategies Group 3 (Button C): Strengthening of Connectivity between Coastal Markets and Inland Areas
- Essential Strategies Group 4 (Button D): Securing of Inclusive and Sustainable Development

These four strategy groups are related to each other as described below. Essential Strategies Group 1 is supported by essential strategies for Group 2 and Group 3. Essential Strategies Group 4 supports essential strategies for Group 1, Group 2 and Group 3 as a whole. (See Figure 10.1)

The concepts and necessary actions for each essential strategy are described in the following sections. These actions will be taken through policy decisions or implementation of priority projects.



Source: JICA Study Team

Figure 10.1 Essential Strategies of WAGRIC Master Plan

10.2 Essential Strategies Group1 (Button A): Development of Economic Sectors

Essential Strategies Group1 is composed of the following three essential strategies:

- Essential Strategy 1: “Fostering of Various Growth Economic Sectors” that Contribute to Region-Wide Development
- Essential Strategy 2: “Investment Promotion for Growth Economic Sectors” by Taking Advantage of Integration and Expansion of Sub-Regional Markets
- Essential Strategy 3: “Development of Basic Infrastructure for Economic Sectors” to Support the Development of Growth Economic Sectors in both Inland and Coastal Areas

In order to increase the effectiveness of implementation of Essential Strategy 1, it is necessary to implement Essential Strategies 2 and 3 substantially.

10.2.1 Essential Strategy No. 1: “Fostering of Various Growth Economic Sectors” that Contribute to Region-Wide Development

Essential Strategy 1 focuses on economic sectors targeting sub-regional markets in both inland areas and coastal areas, in addition to making of an increasing effort at production and export of primary products (mineral resources and agricultural products) which have been the engine of economic growth in this sub-region. Another economic sector which should also be promoted alongside is advanced service industries which have future potential in major metropolitan areas of the sub-region. Especially for economic sectors oriented to sub-regional markets, as discussed in Table 6.2 of Chapter 6, there are consumer products targeting the middle income populations, such as rice, sugar, farmed fish, beef, fresh fruits and fresh vegetables and fresh dairy products in the short term, plastic products for daily use and pharmaceutical products in the medium term and manufacturing of spare parts and intermediate goods for transport machinery and electronic goods in the long and super-long term, and also advanced service industries, such as financial services, ICT-BPO, entertainment industries, advanced education, and advanced medical services.

It is necessary to implement various measures included in Essential Strategies 2-7, for creating an enabling business environment for developing economic sectors targeting sub-regional markets. At the same time, there are different key points for fostering different growth economic sectors. Individual countries’ governments should implement their own policies for economic sector development by following those key points. This is Essential Strategy 1.

Economic sectors orientated to sub-regional markets will face competition with imported goods from overseas in both inland areas and coastal areas. Therefore, it is necessary to transform its industrial structure by improving productivity and increasing production volume etc. To do so, it is important to attract investments to such economic sectors by implementing Essential Strategy 2 “Investment Promotion for Growth Economic Sectors” and Essential Strategy 3 “Development of Basic Infrastructures for Economic Sectors.”

For improving the business environment for promoting the economic sectors, it is also important for each individual country to identify specific development measures for fostering selected growth economic sectors targeting sub-regional markets.

The following are some possible measures for establishing value chains related to certain growth economic sectors:

- Important Measures for Increasing Rice Production: Necessary measures include improvement of rice varieties and dissemination of necessary production technologies, provision of rice mills and rice storage facilities by private sectors, and fostering of private rice distributors. However, to promote private investors to build rice mills and

storage facilities for increasing rice production in inland areas, it is necessary for the governments to consider and give incentives to private sectors.

- Important Measures for Fostering Poultry Industries: Necessary measures are increasing of production of maize, which is a main ingredient of poultry feed, and fostering of poultry feed producers. The WAGRIC countries heavily rely on imported poultry feed. To improve this current situation, it is important to support development of a value chain for poultry feed, by expanding maize production and supply for poultry feed and also by utilizing by-products of various agro-processing products, such as rice dregs from rice milling and oil-dregs from cooking oil production.
- Important Measures for Productivity Improvement and Production Scale Expansion of Inland Aquaculture: It is essential to utilize feed for aquaculture to improve aquaculture productivity. Therefore, it is necessary to support private sectors in feed production for aquaculture. It is also important to promote production of feed in the sub-region and export them to neighbouring countries in the sub-region by taking advantage of the customs union.
- Important Measures for Increasing Production and Expansion of Sub-Regional Sales Market for Fresh Vegetables and Fresh Fruits: Necessary measures are to develop and disseminate fresh market varieties of fruits and vegetables, production and branding of local specialties, and utilization of refrigerated transport technologies for fresh fruits and vegetables. Construction of parts of the north-south motorways, construction of bypass roads and widening of roads to high-standard four-lane roads could bring a huge positive impact on reduction of transport time. However, as a short-term solution, it is realistic to use simple refrigerated transport methodologies by utilizing crushed ice and foam coolers. It is also important to simplify border crossing procedures for sub-regional products on north-south corridors and the coastal east-west corridor in order shorten the transport time.
- Important Measures for Farmers in Inland Areas/Inland Countries to Enhance Access to Coastal Markets: One necessary measure is to develop distribution linkage between agricultural producers in inland areas and inland countries with large-scale distributors (supermarkets and chain stores etc.) of coastal metropolitan areas.
- Important Measures for Sustainable Development of Extensive Distribution of Live Cattle and Livestock: It is necessary to take measures to prevent communicable diseases of livestock from spreading while transporting a large number of live cattle and other livestock by railway from inland countries to coastal areas, as well as to distribute livestock hygienically. At the same time, in addition to modernization of transport means for livestock, it is also important to formulate and implement management plans to resolve conflicts between transhumant cattle raisers and farmers.
- Important Measures for Development of Processed Food and Drinks for Middle Income Population, Increase of their Production and Strengthen Competitiveness against Imported Goods: Necessary measures are to upgrade and expand industrial areas with necessary basic infrastructure, to support acquisition of “certificates of origin of products” for exporting to neighbouring countries of the sub-region without paying customs duties by utilizing the customs union, and strengthening of implementation of the customs union for enabling producers to import raw materials without paying customs duties within the sub-region.

10.2.2 Essential Strategy No. 2: “Investment Promotion for Growth Economic Sectors” by Taking Advantage of Integration and Expansion of Sub-Regional Markets

Taking advantage of and appealing to the integrated and expanded markets by strengthening of implementation of the customs union and construction of coastal corridor

motorway to be achieved by Essential Strategy Group 2, Essential Strategy 1 is designed for investment promotion targeting economic sectors targeting sub-regional markets.

Since economic sectors oriented to sub-regional markets need to compete with imported goods from overseas, it is important for those economic sectors to obtain investments (international and domestic investments) for improving productivity and to increase the scale of production for gaining competitiveness. However, the size of population and the economy in each WAGRIC country is not large enough to attract investments to its economic sectors. In fact, each country has tried to attract investment by promoting its own country's potential, but has not been successful except for mineral resources development for overseas export.

It is necessary from now on to accelerate investment promotion by paying attention to growing opportunities of exporting to neighbouring countries' markets (sub-regional markets), in addition to promoting products for domestic markets and overseas markets. Investment promotion agencies of individual countries need to change their activity plans to this direction.

It is not only integration and expansion of sub-regional markets which can be obtained through strengthening of implementation of a customs union and corridor development. Once the customs union is strengthened, taxes are to be exempted for importing raw materials from neighbouring countries. This will decrease the cost of procuring raw materials. Such advantages can be used for attracting investment to economic sectors.

In addition, it is necessary to focus efforts on "following up of post investment status" to check and see if invested companies are actually getting the incentives as expected. If they do not receive expected incentives from the customs union, it should be considered necessary to support them in obtaining said expected incentives. This function should be incorporated into the roles of investment promotion agencies, by officially widening their scopes of activities. It is also important for the investment promotion agencies to support invested companies in getting certificates of origin for their products.

Furthermore, especially when it comes to investment to agriculture and food systems, it is necessary to improve the quality of investment, as well as to increase the quantity of investment. Principles of responsible investment in agriculture and food systems, which is known as RAI, should be applied by national government agencies for investment promotion and regional government organisations. Since the sub-regional economic integration is associated with the increase of investment in economic sectors, a sub-regional programme by UEMOA Commission and national projects by individual governments should be implemented for promotion of utilization of principles of responsible investment in the sectors of agriculture, livestock, forestry and fisheries.

10.2.3 Essential Strategy No. 3: "Development of Basic Infrastructure for Economic Sectors" to Support the Development of Growth Economic Sectors in both Inland and Coastal Areas

To promote economic sector development and foster economic sectors oriented to sub-regional markets in both inland and coastal areas, more is needed than just providing corridor infrastructure to connect inland and coastal areas and to connect the markets of neighbouring countries. Basic infrastructure to support economic sectors, including energy, electricity supply, access roads, water resources and industrial parks, are necessary for developing growth economic sectors.

(1) Development of Energy and Electricity Supply Sector Infrastructure which is Fundamental for all Economic Sectors

Infrastructures for energy and electricity supply sectors need to be developed, not only for people's daily life, but also for activities of all economic sectors. Electricity supply is essential especially for manufacturing sectors of processed food and drink, pharmaceutical

products and plastic products for daily use targeting sub-regional markets. The following energy and electricity supply infrastructures are particularly essential:

1) Development of Infrastructure (Gas Pipeline) to Support Sustainable Exploration and Development of Oil and Gas in Côte d'Ivoire and Ghana

Although they are limited, Côte d'Ivoire and Ghana have recoverable oil and gas reserves. Both countries need to continuously explore oil and gas in order to support their national revenues and power generation.

In both Côte d'Ivoire and Ghana, natural gas is used as the main source of power generation making gas-fired power generation important for both countries to support their national electricity supply. Therefore, it is necessary to prepare a favourable investment environment and promote investment so that natural gas exploration and development could be sustainable.

For attracting investment to exploitation and development of natural gas, the construction and operation of onshore gas pipelines is necessary as a basic infrastructure.

2) Strengthening of Interconnected Power Transmission Lines among WAGRIC Countries and with the Countries surrounding WAGRIC Countries

Côte d'Ivoire and Ghana are relatively privileged with hydropower resources and natural gas among the four countries. Therefore, the power generation capacity of these two countries should be strengthened utilizing those existing resources. At the same time, interconnected power transmission lines among the four WAGRIC countries and with their surrounding countries should be strengthened for utilizing the existing system and functions of the West Africa Power Pool (WAPP). This will enable more stable and efficient electricity supply for people's daily lives and growth economic sectors.

As for Burkina Faso and Togo, if they stick to power generation within their own countries, they would need to build relatively smaller power plants which are not so efficient due to the smaller size of their economies and electricity demand. Therefore, these two countries need to continue to increase their countries' power generation capacities by utilizing their natural resources (water resources, solar and wind power), in addition to the establishment of interconnecting power transmission lines for importing electricity from neighbouring countries through WAPP.

- Côte d'Ivoire and Ghana need to construct interconnecting power transmission lines for exporting electricity to WAPP member countries.
- Burkina Faso and Togo need to construct interconnecting power transmission lines for importing electricity from WAPP member countries.

3) Strengthening Power Generation Capacities by Using Natural Gas and Hydropower (Côte d'Ivoire and Ghana)

As already mentioned above, among the four countries Côte d'Ivoire and Ghana are relatively well endowed with hydropower resources and natural gas. Therefore, these countries should increase production of electricity by utilizing those resources not only for their own countries but also for supplying to WAPP.

4) Increasing Production of Electricity Using Domestic Natural Resources (Burkina Faso and Togo)

Burkina Faso should continue to develop solar power plants, while Togo should continue to develop hydropower plants to increase its power generation capacity.

(2) Road Development for Improving Access to Potential Agricultural Areas in the Inland Areas

Existing roads of north-south corridors are in relatively good condition. However, there are not enough industries developed in inland areas. As a result, the transport demand is

not large enough to justify upgrading of these existing roads. However, in inland areas of coastal countries and in rural areas of Burkina Faso, there are existing potential agricultural areas that could grow products that could be exported not only to overseas markets but also for sub-regional markets. By improving the access to such areas from the main corridors, it will increase the transport demand on the main north-south corridor. Therefore, it is necessary to improve east-west roads from north-south corridors to potential agricultural areas by attracting investment in the agricultural sector and activating agricultural production.

(3) Water Resources Development and Development of Irrigation Facilities for Agricultural Development in Inland Areas

Irrigation facilities should be developed through water resources development for supporting agriculture in inland areas of coastal countries and rural areas of Burkina Faso. In some cases, existing irrigation facilities could be expanded by using water resources already developed for increasing agricultural production.

(4) Water Resources Development and Water Supply Necessary for Urban Development in Inland Areas and Coastal Areas

As corridor development continues, population increase and economic sector development will occur in major urban centres in inland areas. This will increase the demand for water. Therefore, water resources development, as well as provision of water supply infrastructures, is required for urban development.

(5) Development of Industrial Parks with Basic Infrastructure for Economic Sectors in Inland Areas and Coastal Areas

Development of industrial parks with basic infrastructure for economic sectors, such as access roads, electricity and water supply, is necessary in major urban centres of inland areas and around the metropolitan areas along the Abidjan-Lagos Corridor.

Industrial parks for major urban centres in inland areas should be developed along bypass roads on north-south corridors. On the other hand, in Abidjan-Lagos coastal corridor, in which motorways are to be developed in selected sections, industrial parks should be developed in strategic locations close to metropolitan areas where the access to integrated and expanded coastal markets are to be improved.

10.3 Essential Strategies Group 2 (Button B): Expansion of the Size of Coastal Markets

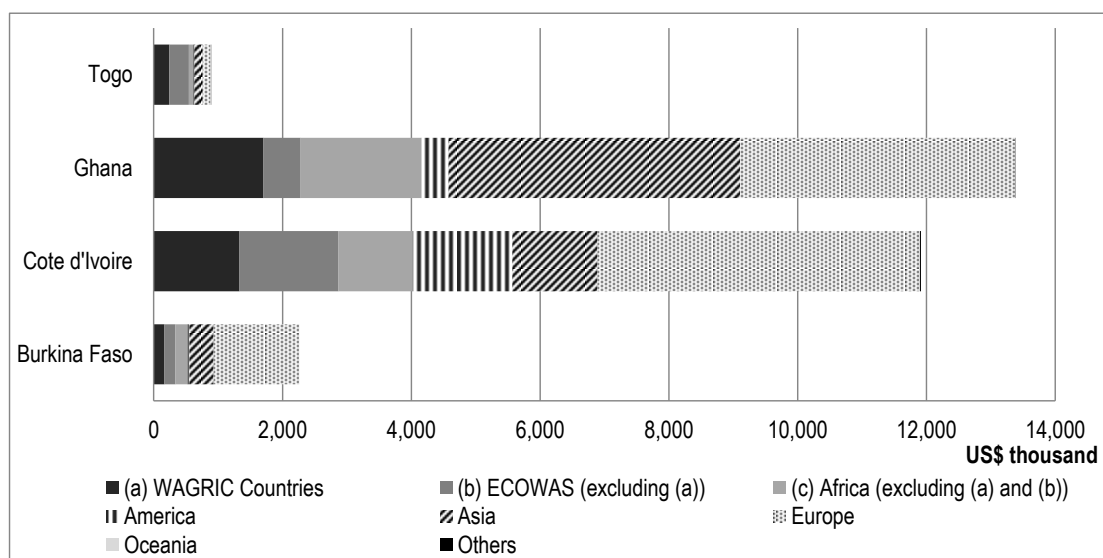
At present, the trade volumes among the WAGRIC countries are small as shown in Figure 10.2. It is considered that sub-regional economic integration is still limited. However, WAGRIC countries have potentiality to integrate their economies and markets by strengthening of the implementation of the customs union and by upgrading transportation infrastructure to strongly connect coastal countries along the coastal corridor. This integration and expansion of coastal markets is necessary to attract investment to economic sectors oriented sub-regional markets in coastal areas.

Essential Strategies Group 2 aims to expand the size of coastal markets. It consists of the following two essential strategies:

- Essential Strategy No. 4: “Strengthening of Implementation of the Customs Union” and “Facilitation of Sub-Regional Trade” on National Borders, Sea Ports and Transport Corridors among the WAGRIC Countries
- Essential Strategy No. 5: Strategic Upgrading of Abidjan-Lagos Corridor Transport Infrastructure (Motorways)

The size of coastal markets can be expanded by integration of individual coastal countries' markets by implementing Essential Strategy No. 4 and Essential Strategy No. 5. The combined implementation of these two essential strategies could increase the effectiveness of integration of coastal markets. In addition to these two essential strategies, the coastal markets could be expanded by combining with the effect of implementation of Essential Strategy No. 1 "Fostering of Growth Economic Sector."

The expansion of the size of coastal markets is necessary for increasing the growth potential of sub-regional market oriented economic sectors to be promoted in inland areas. By promoting the sub-regional market oriented economic sectors, the economies of inland areas and coastal areas would be connected to each other. This could create a good cycle of relationship between transport infrastructure and economic sectors within the sub-region.



Source: JICA Study Team based on IMF Direction of Trade Statistics

Figure 10.2 Average Export Amount per Year (2011-2016)

10.3.1 Essential Strategy No. 4: "Strengthening of Implementation of the Customs Union" and "Facilitation of Sub-Regional Trade" on National Borders, Sea Ports and Transport Corridors among the WAGRIC Countries

Investment should be promoted, especially for selected growth economic sectors targeting sub-regional consumers' markets, by appealing of the impact on investment attractiveness of sub-regional economic integration, expansion of the size of the sub-regional markets and utilization of raw material within the sub-region. For promoting investment for sub-regional oriented economic sectors, actual practice of custom-free trading must be strengthened for all agricultural, livestock and fisheries products as well as sub-regional manufacturing products (goods with certificates of origin within the sub-region). At the same time, sub-regional trading should be facilitated by enforcing regulations on reducing harassments at national borders, sea ports and on the corridors.

The operation of the customs union for sub-regional trading has already commenced in both UEMOA and ECOWAS countries. The common customs tariff has also been put in operation since January 2015 in Burkina Faso, Côte d'Ivoire and Togo, and since January 2016 in Ghana. Please see Table 10.1 for the rates for five categories of Common External Tarrif, which are currently adopted by ECOWAS and UEMOA. All goods produced in the sub-region, as well as goods with over 30% of value added within the sub-region, are to be subject to exemption of custom duties.

Table 10.1 Common External Tariff for ECOWAS Countries including UEMOA Countries

Categories	Common External Tariff (CET)	Number of Tariff Lines
The zero Category for Essential Social Goods	0%	85 Tariff Lines
Category 1 for Basic Raw Materials and Capital Goods	5%	2,146 Tariff Lines
Intermediate Goods	10%	1,373 Tariff Lines
Consumer Goods	20%	2,165 Tariff Lines
Goods Specifically for Economic Development	35%	130 Tariff Lines

Source: “Trade Policy Review (The member countries of the UEMOA): Report by the Secretariat, September 2017, World Trade Organization (WTO)

However, in reality, many customs offices at the national borders are still applying taxes on tax exempt goods from within the sub-region or otherwise treating such products as subjects of inspections. That is, the customs union is not always effective.

Collection of custom duties which does not comply with the customs union must be banned. Customs inspection must be simplified and facilitated especially for sub-regional products by strengthening of implementation of the customs union at the national borders of the four countries. At the same time, by targeting sub-regional products, special trade facilitation measures to reduce harassments at the national borders on the corridors should be implemented.

Existing measures for trade facilitation have not been particularly suited for sub-regional trading. New measures, especially for inter-regional trading of local products (sub-regionally produced goods), should be designed for trade and sub-regional economic sectors developing, as well as for promoting intra-regional.

Customs procedures at the national border of the WAGRIC countries should be improved by applying the following methods (policy and specific measures to simplify the customs procedures to take advantage of the merits of the customs union). This should be practiced in collaboration among UEMOA Commission, ECOWAS and individual countries.

- To prepare manuals and conduct trainings for strengthening “No Custom Duties for Local Products”
- To advocate promotion of “No Custom Duties for Local Products” within the WAGRIC countries by collaboration of UEMOA Commission and ECOWAS. (Full enforcement of customs exemption for all local products crossing the national borders of WAGRIC countries)
- Among the four countries in collaboration with UEMOA Commission and ECOWAS, to reconfirm the strengthening of implementation of measures to reduce harassment activities at the national borders for trade facilitation of local products.

10.3.2 Essential Strategy No. 5: Strategic Upgrading of Abidjan-Lagos Corridor Transport Infrastructure (Motorways)

Markets beyond the national boundaries will be integrated by constructing Abidjan-Lagos Motorway for strengthening physical connectivity together with implementation of Essential Strategy No. 4 which is « “Strengthening of Implementation of the Customs Union” and “Facilitation of Sub-Regional Trade” on National Borders, Sea Ports and Transport Corridors. » The integration of coastal markets will expand the size of the consumers’ markets. This will make it easier for economic sectors targeting expanded coastal markets to attract investments and also to operate businesses.

In theory, sub-regional economic integration may be achieved by strengthening implementation of the customs union. However, in reality, due to geographical distances, transport costs and time could be barriers to hindering economic integration. As a result, the markets will only be integrated within a certain range of transport costs and times. In the case of the WAGRIC countries, market integration becomes possible by upgrading the

corridor transport infrastructure, and connecting neighbouring coastal markets of Côte d’Ivoire, Ghana and Togo with stronger physical connections.

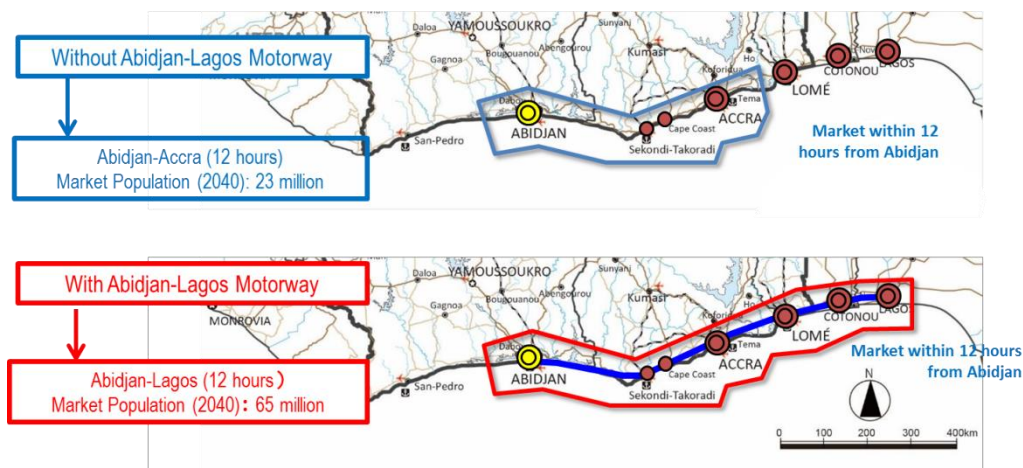
The plan for constructing a motorway connecting Abidjan and Lagos has been agreed and signed by the heads of state of the five concerned countries. Currently, formulation of implementation plans and preparation for a feasible study are on-going by ECOWAS and AfDB. It is considered that the actual construction would proceed according to each country’s budget and financial situation. To integrate the coastal markets and furthermore to increase the size of the sub-regional markets, it is necessary to start construction of the coastal motorway in selected sections in which the motorway would be difficult to go through, including east-west sections within metropolitan areas of Abidjan, Accra, Lomé and Cotonou. Therefore, formulation of urban master plans or urban transport master plans in those metropolitan areas should be completed as soon as possible.

Furthermore, this coastal area will form an economic corridor of 1,000 km between Abidjan and Lagos with a coastal motorway and existing roads as axes. In this economic corridor, the large metropolitan areas of Abidjan, Accra and Lagos and other large cities, such as Sekondi-Takoradi, Lomé and Cotonou, and other medium size cities are located continuously, accommodating the accumulation of manufacturing and other economic sectors. These urban and surrounding areas will not only provide infrastructures, such as electricity, water and ICT services, supporting economic sectors and urban activities, but also high international standard infrastructures, such as international airports and international sea ports.

In the near future, global competition between cities will be intensified. Under such circumstance, it is expected that the number of major cities neighbouring each other from Abidjan and Lagos with functions, such as administration centres, commercial hubs, business headquarters, industrial accumulation, international airports/ airport cities and international sea ports will compete with each other, as well as complement each other to develop as an integrated urban and industrial belt (integrated economic corridor) with competitiveness beyond each city’s boundary.

In the short and medium terms, selected sections of the motorway will be constructed. In the long term, the completion of the coastal motorway would form a strongly integrated Abidjan-Lagos economic zone, consisting Abidjan - Accra 6-hour transport zone and Accra - Lagos 6-hour transport zone, resulting a 12-hour zone between, Abidjan and Lagos. See Figure 10.3.

In the super-long term, sub-regional economic integration should be strengthened, and high-speed railway should be established in the coastal corridor. This area would strive to develop as “West Africa Coastal Mega-Region,” in other words, “Mega Coastal Economic Corridor.”



Source: JICA Study Team

Figure 10.3 Coastal Cities Reachable from Abidjan within 12 Hours (2040)

10.4 Essential Strategies Group 3 (Button C): Strengthening of Connectivity between Coastal Markets and Inland Areas

Essential Strategies Group 3 aims to strengthen the connectivity between coastal markets and inland areas. The strengthened connectivity between coastal markets and inland areas would create an important spatial environment to support the development and fostering of the economic sectors in inland areas.

This strategy group consists of the following two essential strategies:

- Essential Strategy No.6: Strategic Upgrading for Establishment of Efficient and Region-Wide Cargo Transport Networks (Railways, Multi-Modal Dry Ports, Inland Water Transport and Pipelines) for Reducing Transport Costs
- Essential Strategy No.7: Strategic Upgrading of Transport Corridor Infrastructure by Emphasising the Importance of High Speed Transport and Services for Investment Promotion for Inland Areas (Motorways, High-Standard 4-Lane Roads, Air Transport and ICT)

The effectiveness of strengthening of connectivity between coastal markets and inland areas can be increased by implementing both Essential Strategy No. 6 and No. 7.

10.4.1 Essential Strategy No.6: Strategic Upgrading for Establishment of Efficient and Region-Wide Cargo Transport Networks (Railways, Multi-Modal Dry Ports, Inland Water Transport and Pipelines)

In Essential Strategy No.6, long-distance cargo transport between inland areas / inland countries and coastal areas would increase efficiency and reduce transport costs for developing and fostering economic sectors in inland areas / inland countries targeting sub-regional consumers' markets by strategically (selectively) upgrading railways, inland water transport and pipelines.

At present, Sitarail connecting Abidjan Port and Burkina Faso's capital Ouagadougou is the only railway for north-south long-distance cargo transport in the WAGRIC countries. However, present service areas of Sitarail are limited to areas just along the railway between Abidjan Port, Bobo-Dioulasso and Ouagadougou.

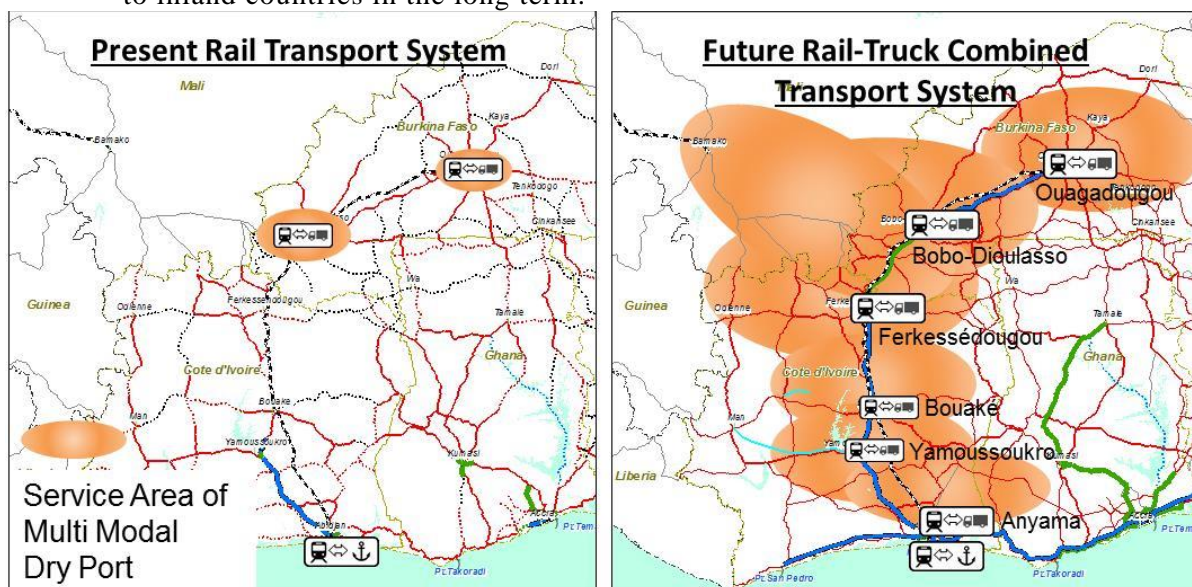
Ghana has a north-south cargo transport system using inland water transport on the Volta Lake. This water transport can function as a long-distance transport system, together with pipelines connecting Tema Port, Akosombo Port (at the south end of the Volta Lake), Buipe Port (at the north-east end of the Volta Lake) and Bolgatanga (city in northern Ghana), as well as with truck transport. However, the pipeline between Tema and Akosombo is not functioning and the water level of the Volta Lake at Buipe Port has become too low for inland water transport to operate. As a result, this multi-modal transport involving inland water transport is dysfunctional. On the other hand, the Togo north-south corridor does not have such a long-distance cargo transport system, such as railway, inland water transport or pipelines, except for truck transport.

The development policies for long-distance cargo transport for the WAGRIC Master Plan are as follows:

- Service areas for rail transport should be expanded by combining railway and truck transport. At the same time, strict regulation on overloaded trucks should be enforced to encourage cargo to shift to the rail and truck combined transport. This measure could increase cargo demand for rail transport on the existing railway. The effectiveness of controlling of overloaded trucks is also expected to increase by providing an alternative cargo transport mode.
- As more cargo uses the combined rail and truck transport in the future, another (or more) long-distance railway line or more (in Ghana and Togo) besides Sitarail could be constructed and operated in the WAGRIC Sub-regions in the long term. Prospective

competition between these two railways could reduce the prices of long-distance cargo transport below the present level.

- The inland water transport on the Volta Lake is not a stable means of transport due to the decrease in the lake water level caused by global environmental changes. Since it is not easy in the short / medium term in Ghana to develop a railway line connecting inland areas and coastal areas, it is important to take some measures to utilize the inland water transport, while seeking to establish a long-distance railway from Tema to inland areas, and further with Burkina Faso.
- Oil product pipelines from coastal areas to inland areas should be developed. In Côte d'Ivoire and Burkina Faso, the oil product pipeline should be extended from Abidjan to Bobo-Dioulasso.
- In Ghana and Burkina Faso, the oil product pipeline should be extended from Buipe (Debre) on Volta Lake to Ouagadougou via Bolgatanga. In the long term, an oil products pipeline should be extended from Tema Port to Accra, Kumasi then to Buipe, for connecting with the pipeline between Buipe and Bolgatanga and further with Ouagadougou.
- Development of new railway lines should be promoted by utilizing private companies' initiatives for developing mineral resources in inland areas of coastal countries. Furthermore, such railway lines for developing mineral resources should be extended to inland countries in the long term.



Source: JICA Study Team

Figure 10.4 Expansion of Service Areas of Combined Rail and Truck Transport by Establishing Multi-Modal Dry Ports

In order to implement these policies, the measures at the sub-regional level and each country level are as below.

(1) Establishment and Operation of International Railway Committee

For promoting the use of railway for long-distance transport and increase the transport demand for railway in the four WAGRIC countries, cooperation between all the countries is necessary as well as guiding the private concessioners in an appropriate manner. An International Railway Committee should be established in this sense to plan the international railway network, monitor operation etc. The themes to be discussed in this committee for the time being are as follows:

- Study on Development of Rail and Truck Combined Transport by Establishing Multi-Modal Dry Ports
- Promotion of Implementation of Establishment of Multi-Modal Dry Ports for Promoting Rail and Truck Combined Transport

- Study on Development of Ouagadougou-Lomé Railway
- Study on Development of a Loop Railway of Abidjan-Ouagadougou-Niamey-Cotonou
- Study on Development of Ouagadougou-Accra-Tema Railway

(2) Approach by Each Country

In the four countries, they should operate long-distance cargo transport systems as shown below.

1) Côte d’Ivoire and Burkina Faso

- In Côte d’Ivoire and Burkina Faso, in order to strengthen the combined transport with the existing railway and trucks, (1) multi-modal dry ports should be established in Greater Abidjan and Ferkessédougou for Côte d’Ivoire, and (2) multi-modal dry ports should be established in Ouagadougou and activate the existing multi-modal dry port in Bobo-Dioulasso for Burkina Faso.
- The north-south central corridor should be strengthened by replacement of old bridges of Sitarail.

2) Ghana

- In Ghana, a multi-modal transport system should be established for strengthening north-south connectivity, composing 1) a new railway between Tema Port and Akosombo Port of the Volta Lake, 2) inland water transport on the Volta Lake and 3) oil products pipeline from Bupe to Bolgatanga. In order to utilize the inland water transport, Debre Port should be improved and extend the oil products pipeline to Debre to counter the declining water level of the Volta Lake. Akosombo Port should also be newly developed for connecting the new railway from Tema Port.
- In the short-term and middle terms, the Eastern Line of Tema-Accra-Boankra-Kumasi should be rehabilitated. And in the middle and long terms, a new railway line should be extended from Kumasi up to Paga, which is on the border with Burkina Faso.
- For building new railway lines, it is essential to consider the incorporation of mining companies’ initiatives.

3) Togo

- In Togo, the transport cost of cargo is high, when a long-distance cargo transport system depends on truck transport on the north-south corridor. Therefore, railway should be developed phase by phase. In the short term the railway should be constructed from Lomé to Blitta, then extended in the medium term from Blitta to Kabou (also for promoting iron ore mining development) and in the long term from Kabou to Cinkasé of Burkina Faso. In Cinkasé of Burkina Faso, a multi-modal dry port should be established to attract cargo of Burkina Faso and Niger.

10.4.2 Essential Strategy No.7: Strategic Upgrading of Transport Corridor Infrastructure by Emphasising the Importance of High-Speed Transport and Services (Motorways, High-Standard 4-Lane Roads, Air Transport and ICT)

Essential Strategy 7 aims at increasing the speed of movement of “people, goods and information” by construction of selected part of motorways or high-standard 4-lane roads, strengthening of domestic and sub-regional air transport and strengthening of the ICT network. This could break down the transport time barrier between inland areas and coastal areas, so as to attract investment to economic sectors in inland areas. By developing a high-speed transport system from the place of production in inland areas to the place of consumption in coastal areas, the production of high-value added products, such as fresh fruits, fresh vegetables, fresh dairy products, in inland areas and their selling to coastal markets would become possible.

Essential Strategy 7 includes the following measures for roads, air transport and ICT.

(1) Construction of North-South Motorways and High Standard 4-Lane Roads

Investment from outside (both domestic and foreign investment) is necessary to transform the economic structure of inland areas. For attracting such investments to inland areas, it is necessary to satisfy the following conditions:

- Managers and technicians of the companies must be able to move easily between the places of production in inland areas and the places of company headquarters located in coastal metropolitan areas. This condition would enable companies to conduct appropriate management of production and transport.
- Inland areas must be able to produce high-value added products targeting middle-income populations by connecting inland production areas and coastal consumption areas with high-speed transportation.

For satisfying these two requirements, the upgrading of the corridor infrastructures described below is necessary. This upgrading does not aim to connect all inland areas to coastal areas in the short term, but rather to selectively upgrade parts of the corridors so that major coastal metropolitan areas would be connected to major inland cities by a 6-hour drive.

- Construction of motorways and high-standard 4-lane roads
- Strengthening of existing north-south corridor roads
- Replacement of old bridges of north-south corridor roads
- Improvement of pavement of north-south corridor roads
- Construction of bypass roads and ring roads for cities on north-south corridors
- Widening of major roads within the cities on north-south corridors
- Improvement of major intersections in cities on north-south corridors (construction of flyovers)

(2) Confirmation and Implementation of International Motorway Network and High-Standard 4-Lane Road Construction Programmes for WAGRIC Countries

The construction of north-south motorways and high-standard 4-lane roads needs to be agreed and signed as a programme by the heads of state of the concerned countries, in a similar way to the agreement on Abidjan-Lagos Corridor Motorway signed by the six heads of states. This agreement could smoothen the strengthening of spatial integration of the WAGRIC countries, leading to substantial economic integration.

The coordination for development of these motorways and high-standard 4-lane roads of north-south corridors should be done by UEMOA Commission, while the coordination for the coastal corridor motorway has been done by the ECOWAS Secretariat.

(3) Strengthening of Domestic and Sub-Regional Air Transport

In addition to construction of the roads necessary to satisfy the requirements of 6-hour drive distance, air transport service is also necessary. However, it is difficult to serve frequent air transport services (more than one round trip per day) from an early stage. Therefore, it is still important to construct roads which enable high-speed movement. It is assumed that the frequency of the air transport service will increase as the high-speed movement on the roads becomes possible.

- Strengthening of domestic air transport
- Strengthening of sub-regional air transport

In order to implement this Essential Strategy No.7, the following points should be taken into consideration:

- Individual capital cities have development plans to relocate the existing international airports to their suburbs in order to expand airport sizes and to solve noise problems due to the airports. However, it is a good idea to convert the international airports

located in central areas of the capital cities to domestic and sub-regional airports for securing the accessibility to the domestic and sub-regional airports.

- It is important to encourage new airlines to provide domestic and sub-regional flights.

(4) Strengthening of ICT Network

Internet use and its supporting sub-sectors (such as ICT infrastructure, ICT industries and ICT human resources) have become essential in the social life and economic activities. ICT will continue to be important infrastructure and an economic sector in the future. To strengthen ICT, which is also an important corridor infrastructure, emphasising the importance of high speed in Essential Strategy N0. 7, the following actions are necessary:

- Provision of data centres in individual countries' capital cities and strengthening of the basis of ICT infrastructure
- Strengthening of optical fibre networks along economic corridors
- Promotion of internet use in inland areas by providing public internet kiosks in smaller urban centres of inland areas
- ICT human resources development

10.5 Essential Strategies Group 4 (Button D): Securing of Inclusive and Sustainable Development

Essential Strategies Group 4 is designed to seek the sub-regional future vision from social, environmental and security perspectives. It consists of the following three essential strategies:

- Essential Strategy No.8: Supporting of Small and Medium Enterprises, Development of Human Resources for the Economic Sectors and Strengthening of the Basic Social Services in order to Enable More People to Participate in Emerging Development Opportunities due to Sub-Regional Corridor Development
- Essential Strategy No.9: Development of Systems and Activities of Environmental Management that could Respond to Potential Risks to the Natural and Social Environments that are Increasing across Wide Areas due to Sub-Regional Corridor Development
- Essential Strategy No.10: Strengthening of Security Measures for Maintaining Safe and Secure Societies and Sustainable Economies in the Sub-Region

10.5.1 Essential Strategy No.8: Supporting of Small and Medium Enterprises, Development of Human Resources for Economic Sectors and Strengthening of Basic Social Services in order to Enable More People to Participate in Emerging Development Opportunities due to Sub-Regional Corridor Development

In order to enable more people to participate in emerging development opportunities, SME support and human resources development for economic sectors, as well as basic education and health services, should be improved for both inland areas of coastal countries and rural areas of inland countries.

It is also necessary to encourage private companies that are investing in inland areas to have linkage with local SMEs and local human resources. For this purpose, a linkage programme to support SMEs, as well as a programme to develop local human resources in inland areas, is necessary.

For the increasing population in both rural and urban areas of inland areas, it is also necessary to improve basic education and basic health services which have been underdeveloped compared with those in the coastal areas.

10.5.2 Essential Strategy No.9: Development of Systems and Activities of Environmental Management that could Respond to Potential Risks to the Natural and Social Environments that will be Increasing across Wide Areas due to Sub-Regional Corridor Development

Since the development of economic sectors is expected to occur across wider areas in the sub-region due to corridor development, environmental and social risks may reach not only rural areas in coastal areas, but also inland areas. It is necessary to develop legal institutions, strengthen organisations and enhance their technical capabilities for implementing environmental management.

It is especially necessary to strengthen capacities to monitor the environment and activities for environmental management plans, which project proponents should prepare and implement under the existing system of environmental impact assessment (EIA). For the purpose of conducting such environmental monitoring, the establishment of environmental laboratories is also necessary to test various environmental data.

10.5.3 Essential Strategy No.10: Strengthening of Security Measures for Maintaining Safe and Secure Societies and Sustainable Economies in the Sub-Region

Measures to prevent terrorist attacks which jeopardize social and economic safety and stability should be taken.

Implementation of the WAGRIC Master Plan itself is already taking actions towards poverty and social problems which are factors which threaten the security of the sub-region since this master plan will foster economic sectors in inland areas and inland countries as well as activate the economies in the whole of the sub-region to help prevent a further widening of regional and social disparities because of the future vision this master plan aims for as well as sub-regional economic and physical integration.

On the other hand, with larger mobility of people and goods within and without the sub-region in the future, individual security measures would become more important. It is especially necessary to strengthen the implementation of security measures at the national borders, sea ports, airports and on the major corridors.

Chapter 11 Priority Projects

11.1 Criteria for Selection of Priority Projects

Priority projects for implementing Essential Strategies 1 through 10 are formulated and compiled respectively in The priority project lists in this chapter contain priority projects for Benin and Nigeria. They are priority projects identified for Essential Strategy No.4 and Essential Strategy No.5, which aim at the promotion of sub-regional economic integration and spatial integration, especially for Abidjan-Lagos Corridor.

Table 11.1 through Table 11.10. These priority projects are selected by using the following criteria:

- Those projects which are required for implementing the ten essential strategies
- Those projects which could initiate and drive corridor development in line with the selected growth scenario
- Those projects which needs proactive implementation, ahead of increased demand for infrastructure or production of economic sectors
- Those projects which are technically and institutionally implementable

By using these criteria, the priority projects are selected not only from newly formulated projects by WAGRIC Project, but also from existing prioritized projects by individual countries' governments.

11.2 Priority Projects of UEMOA Commission and Individual Countries for Implementing Essential Strategies

The priority project lists in this chapter contain priority projects for Benin and Nigeria. They are priority projects identified for Essential Strategy No.4 and Essential Strategy No.5, which aim at the promotion of sub-regional economic integration and spatial integration, especially for Abidjan-Lagos Corridor.

Table 11.1 Priority Projects for Essential Strategy No. 1

Essential Strategy No. 1 <“Fostering of Various Growth Economic Sectors” that Contributes to Region-Wide Development> and its Priority Projects	
UEMOA Commission	
• UEMOA Programme for Coordination and Promotion for Implementation of Fostering of Economic Sectors targeting Sub-Regional Markets	
Burkina Faso	Togo
<u>Agriculture (2018-2025)</u> <ul style="list-style-type: none"> • Marketing Support Project on the Bagré Growth Pole • Project for Irrigation and Agribusiness Development in Douna, Karfiguéla and Kou Valley • Project for Irrigation and Agribusiness Development in Sourou Valley • Project for Irrigation and Agribusiness Development in Samendeni • Project for Development of Signature Agricultural Products and Marketing for Sub-Regional Markets Phase 1 • Project for Developing Irrigation Schemes in Wetlands 	<u>Agriculture (2018-2025)</u> <ul style="list-style-type: none"> • Project for Reactivation of Planned Agricultural Zone Development (ZAAP) • Project for Rehabilitation of Agricultural Markets Phase 1 (including Kétau and Guérin-Kouka) • Support Project for Development for Kara Agropole (Water Resources Development and Logistics Centre) • Support Project for Development for Oti Agropole (Water Resources Development and Logistics Centre) • Support Project for Development for Mono Agropole (Water Resources Development and Logistics Centre)
<u>Agriculture (2026-2033)</u> <ul style="list-style-type: none"> • Project for Development of Signature Agricultural Products and Marketing for Sub-Regional Markets Phase 2 	<u>Agriculture (2026-2033)</u> <ul style="list-style-type: none"> • Continuation of Support Projects for Development of Agropoles of Oti, Kara and Mono
<u>Agriculture (2034-2040)</u> <ul style="list-style-type: none"> • Project for Development of Specialized Crops Targeting Middle-Income Consumers of Sub-Regional Markets 	<ul style="list-style-type: none"> • Study on Development for Agropoles of Amou, Agou, Yoto and Bas-Mono • Support Project for Development of Agropoles of Amou, Agou, Yoto and Bas-Mono
<u>Livestock (2018-2025)</u> <ul style="list-style-type: none"> • Project for Basic Service Improvement for Cattle and Small 	<ul style="list-style-type: none"> • Rehabilitation of Agricultural Markets Phase 2 (including

<p>Ruminants</p> <ul style="list-style-type: none"> • Project on Technical Development of Fodder Crop Production and Feeding Methods • Project for Value Chain Development for Animal Products <p><u>Livestock (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Continued Basic Service Improvement for Cattle and Small Ruminants • Project on Continued Technical Development of Fodder Crop Production and Feeding Methods • Project for Continued Value Chain Development for Animal Products <p><u>Livestock (2034-2040)</u></p> <ul style="list-style-type: none"> • Continued Expansion of Production and Export of Beef and Other Animal Meat to Coastal Countries • Continued Expansion of Production and Export of Cattle and Small Ruminants to Coastal Countries <p><u>Mining (2018-2025)</u></p> <ul style="list-style-type: none"> • Expansion of Mining Operation of Tambao Manganese Mine by Rehabilitation and Construction of Railway between Tambao and Ouagadougou through Dori and Kaya <p><u>Manufacturing (2018-2025)</u></p> <ul style="list-style-type: none"> • Integrated Development Project of Gounghin and Kossodo Industrial Zones in Ouagadougou <ul style="list-style-type: none"> ➢ Expansion of Kossodo Industrial Area ➢ Relocation of industries from Gounghin Industrial Area in the Centre of Ouagadougou to Kossodo Industrial Area ➢ Rehabilitation of Gounghin Industrial Area <p><u>Manufacturing (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Construction and Operation of New Industrial Park along an Outer Ring Road in Bobo-Dioulasso <p><u>ICT (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Human Resources Development for ICT Specialists <p><u>ICT (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Continued Human Resources Development for ICT Professionals 	<p>Anié, Gaando Namoni and Cinkassé)</p> <p><u>Agriculture (2034-2040)</u></p> <ul style="list-style-type: none"> • Continuation of Support Projects for Agropoles and Mini-Agropoles in Inland Areas • Rehabilitation of Agricultural Markets Phase 3 (including Tchamba and Bassar) <p><u>Fisheries (2018-2025)</u></p> <ul style="list-style-type: none"> • Support Project for Aquaculture Development at Nangbéto Dam <p><u>Fisheries (2026-2033)</u></p> <ul style="list-style-type: none"> • Support Project for Aquaculture Development at Adjarala Dam <p><u>Mining (2026-2033)</u></p> <ul style="list-style-type: none"> • Development of Bandjeli Iron Mine <p><u>Manufacturing (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Construction of Industrial Park including Free Zone in Kara • Project for Construction of Industrial Park including Free Zone in Sokodé <p><u>Manufacturing (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Construction of Industrial and Logistics Zone along Motorway in Greater Lomé <p><u>ICT (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Construction and Operation of Data Centre in Greater Lomé • Project for Human Resourced Development for ICT Specialists
<p style="text-align: center;">Côte d'Ivoire</p>	<p style="text-align: center;">Ghana</p>
<p><u>Agriculture (2018-2025)</u></p> <ul style="list-style-type: none"> • Programme for Development and Effective Use of Agricultural Infrastructure and Bas-fonds • Support for Agro-industrial Pole of Bélier Region (including Yamoussoukro) • Project for Acceleration of Cashew Nuts Processing (14 regions - Bafing, Eirb Hambol, Worodougou, Boukani, Gontougo, Bagoue, Kabadougou, Marahoué, Poro, Folon, Tchologo, Iffou, Hauto Sassandra) • Project for Development of Soybean Cultivation in the North and North-west of Côte d'Ivoire (Bafing and Kabadougou Region including the Towns of Touba and Odienné) <p><u>Agriculture (2026-2033)</u></p> <ul style="list-style-type: none"> • Continued Implementation of Programme for Development and Effective Use of Agricultural Infrastructure and Bas-fonds • Continued Implementation of Project for Acceleration of Cashew Nuts Processing (14 regions - Bafing, Eirb Hambol, Worodougou, Boukani, Gontougo, Bagoue, Kabadougou, Marahoué, Poro, Folon, Tchologo, Iffou, Hauto Sassandra) • Continued Implementation of Project for Development of Soybean Cultivation in the North and North-west of Côte d'Ivoire (Bafing and Kabadougou Region including the towns of Touba and Odienné) <p><u>Livestock (2018-2025)</u></p> <ul style="list-style-type: none"> • Construction of Cattle Market and Slaughterhouse Complex in Anyama • Strengthening of Cattle Loading Facility to Railway at Ferkessédougou Station or at a Station in a Suburban Area of Ferkessédougou • Rehabilitation of Ranches and Breeding Stations <p><u>Livestock (2026-2033)</u></p> <ul style="list-style-type: none"> • Expansion of Cattle Market and Slaughterhouse Complex in 	<p><u>Agriculture (2018-2025)</u></p> <ul style="list-style-type: none"> • Tamale-Mamprusi Agricultural Cluster Area Development Programme Phase 1 • Atebubu-East Gonja Agricultural Cluster Area Development Programme Phase 1 (including Daka Valley Irrigation Project) • Gonja-Kintampo and Bole-Tain Agricultural Cluster Area Development Programme Phase 1 (including Bui Irrigation Scheme Project) • Accra Plains Irrigation Development Project <p><u>Agriculture (2026-2033)</u></p> <ul style="list-style-type: none"> • Tamale-Mamprusi Agricultural Cluster Area Development Programme Phase 2 • Atebubu-East Gonja Agricultural Cluster Area Development Programme Phase 2 • Gonja-Kintampo and Bole-Tain Agricultural Cluster Area Development Programme Phase 2 <p><u>Agriculture (2034-2040)</u></p> <ul style="list-style-type: none"> • Tamale-Mamprusi Agricultural Cluster Area Development Programme Phase 3 • Atebubu-East Gonja Agricultural Cluster Area Development Programme Phase 3 • Gonja-Kintampo and Bole-Tain Agricultural Cluster Area Development Programme Phase 3 <p><u>Livestock (2018-2025)</u></p> <ul style="list-style-type: none"> • Feed Resource Development Project Phase 1 • Improvement of Livestock Stations of Pong Tamale Livestock Breeding Station, Babile Pig Breeding Station and Amrahia Dairy Farm Phase 1 • Development of Poultry Processing Plants with Cold Storage Phase 1 • Formulating National Plan for Transhumance Management

<p>Anyama</p> <ul style="list-style-type: none"> • Construction of Slaughterhouses in the Country (Yamoussoukro, Daloa, Bouaké, Ferkessédougou, Korhogo) <p><u>Mining (2018-2025)</u></p> <ul style="list-style-type: none"> • Development of Iron Ore Mines in Tonkpi Region (Mt. Nimba, Mt. Klahoyo and Mt. Gao) by Construction of Railway between San-Pédro and Iron Ore Mines near Man <p><u>Mining (2026-2033)</u></p> <ul style="list-style-type: none"> • Continued Development of Iron Ore Mines in Tonkpi Region (Mt. Nimba, Mt. Klahoyo and Mt. Gao) by Construction of Railway between San-Pédro and Iron Ore Mines near Man <p><u>Mining (2034-2040)</u></p> <ul style="list-style-type: none"> • Continued Development of Iron Ore Mines in Tonkpi Region (Mt. Nimba, Mt. Klahoyo and Mt. Gao) by Construction of Railway between San-Pédro and Man • Development of Manganese Mines in Kabadoukou Region by Extending the Railway from Man to Odienné <p><u>Manufacturing (2018-2025)</u></p> <ul style="list-style-type: none"> • Establishment of Industrial Park including Industrial Free Zone at Bonoua along motorway from Abidjan to Bonoua • Establishment of Industrial Park including Industrial Free Zone in Bouaké (along a prospective bypass road) • Establishment of Industrial Park including Industrial Free Zone in Yamoussoukro (along a prospective bypass road) <p><u>Manufacturing (2026-2033)</u></p> <ul style="list-style-type: none"> • Establishment of Industrial Park including Industrial Free Zone in Man • Establishment of Industrial Park including Industrial Free Zone in Korhogo • Establishment of Industrial Park including Industrial Free Zone in San-Pédro <p><u>Manufacturing (2034-2040)</u></p> <ul style="list-style-type: none"> • Establishment of Industrial Park including Industrial Free Zone in Bondoukou <p><u>ICT (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Human Resources Development for ICT Specialists <p><u>ICT (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Continued Human Resources Development for ICT Specialists 	<p><u>Livestock (2026-2033)</u></p> <ul style="list-style-type: none"> • Feed Resource Development Project Phase 2 • Improvement of Livestock Stations of Pong Tamale Livestock Breeding Station, Babile Pig Breeding Station and Amrahia Dairy Farm Phase 2 • Development of Poultry Processing Plants with Cold Storage Phase 2 <p><u>Livestock (2034-2040)</u></p> <ul style="list-style-type: none"> • Feed Resource Development Project Phase 3 • Improvement of Livestock Stations of Pong Tamale Livestock Breeding Station, Babile Pig Breeding Station and Amrahia Dairy Farm Phase 3 <p><u>Fisheries (2018-2025)</u></p> <ul style="list-style-type: none"> • Programme for Aquaculture Development on the Volta Lake Phase 1 <p><u>Fisheries (2026-2033)</u></p> <ul style="list-style-type: none"> • Programme for Aquaculture Development on the Volta Lake Phase 2 <p><u>Fisheries (2034-2040)</u></p> <ul style="list-style-type: none"> • Programme for Aquaculture Development on the Volta Lake Phase 3 <p><u>Mining (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for the Study on Transportation of Iron Ore from Shieni Iron Mine considering Possibilities of Railway, Inland Water Transport and Truck transport <p><u>Mining (2026-2033)</u></p> <ul style="list-style-type: none"> • Development of Nyinahin Bauxite Mine with Construction of Railway between Awaso and Nyinahin • Development of Shieni Iron Mine <p><u>Mining (2034-2040)</u></p> <ul style="list-style-type: none"> • Development of Manganese Mine in the North Western Part of Ghana with Construction of Railway between Nyinahin and Wa <p><u>Manufacturing (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Establishment of Tamale Industrial Park • Project for Establishment of Ashanti Technology Park in Ejisu • Project for Establishment of Sekondi Export Processing Zone • Project for Establishment of Shama Export Processing Zone in Shama Ahanta District (Western Region) • Project for Establishment of Prampram Industrial Park • Project for Establishment of Kasoa Industrial Park • Project for Establishment of ICT Park in Cape Coast
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Source: JICA Study Team

Table 11.2 Priority Projects for Essential Strategy No. 2

Essential Strategy No. 2 <“Investment Promotion for Growth Economic Sectors” by Taking Advantage of Integration and Expansion of Sub-Regional Markets> and its Priority Projects	
UEMOA Commission	
<ul style="list-style-type: none"> • UEMOA Programme for Coordination and Promotion for Implementation of Investment Promotion for Growth Economic Sectors targeting Sub-Regional Markets • UEMOA Programme for Promotion of Utilization of Principles of Responsible Investments to Agriculture, Livestock and Fisheries Sectors 	
Burkina Faso	Togo
<p><u>Investment Promotion (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Promotion of Utilization of Principles of Responsible Investments to Agriculture, Livestock and Fisheries Sectors • Promotion of Investment for Export Expansion of Cattle and Small Ruminants to Coastal Countries • Promotion of Investment for Export of Beef and Other Animal Meat to Coastal Countries • Promotion of Investment and Development for Bagrépole in Agriculture, Aquaculture and Agro-Processing • Promotion of Investment and Development of Irrigated Agriculture in Karfiguéla, Douna and Vallé de Kou • Promotion of Investment and Development for Manufacturing in Ouagadougou • Promotion of Investment and Development for Manufacturing 	<p><u>Investment Promotion (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Promotion of Utilization of Principles of Responsible Investments to Agriculture, Livestock and Fisheries Sectors • Investment Promotion for Development of Three Agropoles (Oti, Kara and Mono) in Inland areas • Investment Promotion of Manufacturing and Logistics Industries in Greater Lomé • Investment Promotion of Manufacturing in Kara and Sokodé • Investment Promotion for Reactivating Bandjeli Iron Ore Mining and Railway Construction between Lomé and Kabou • Investment Promotion for Aquaculture at Nangbéto Dam <p><u>Investment Promotion (2026-2033)</u></p> <ul style="list-style-type: none"> • Investment Promotion for Reactivating Bandjeli Iron Mine • Investment Promotion for Development of Agropoles and

<p>including Cotton Spinning Industry in Bobo-Dioulasso <u>Investment Promotion (2026-2033)</u></p> <ul style="list-style-type: none"> Continued Promotion of Investment for Export Expansion of Cattle and Small Ruminants to Coastal Countries Continued Promotion of Investment for Export of Beef and Other Animal Meat to Coastal Countries Promotion of Investment for Other Agropoles Continued Promotion of Investment and Development of Irrigated Agriculture Continued Promotion of Investment and Development for Manufacturing in Ouagadougou Continued Promotion of Investment and Development for Manufacturing in Bobo-Dioulasso 	<p>Mini-Agropoles in Inland Areas</p> <ul style="list-style-type: none"> Investment Promotion for Manufacturing Industries in Sokodé and Kara Investment Promotion for Manufacturing and Logistics Industries in Greater Lomé Investment Promotion for Aquaculture at Adjarala Dam <u>Investment Promotion (2034-2040)</u> Investment Promotion for Development of Agropoles and Mini-Agropoles in Inland areas Investment Promotion of Manufacturing and Logistics Industries in Greater Lomé Investment Promotion of Manufacturing in Kara and Sokodé
Côte d'Ivoire	Ghana
<p><u>Investment Promotion (2018-2025)</u></p> <ul style="list-style-type: none"> Project for Promotion of Utilization of Principles of Responsible Investments to Agriculture, Livestock and Fisheries Sectors Promotion of Foreign and Domestic Investment for Agriculture in the Northern Zone of Côte d'Ivoire by Providing Support Services, such as Investment Target Search and Land Search Investment Promotion for the existing Grand-Bassam Free Zone for ICT and Biotechnology Investment Promotion for Manufacturing Sector in Industrial Parks Investment Promotion for Exploration and Exploitation of Oil and Gas <p><u>Investment Promotion (2026-2033)</u></p> <ul style="list-style-type: none"> Continued Promotion of Investment for Agriculture in the Northern Zone of Côte d'Ivoire by Providing Support Services, such as Investment Target Search and Land Search Continued Promotion of Investment for Manufacturing Sector in Industrial Parks Investment Promotion for Development of Manganese Mines in Kabadougou Region by Extending the Railway from Man to Odienné Continued Investment Promotion for Exploration and Exploitation of Oil and Gas <p><u>Investment Promotion (2034-2040)</u></p> <ul style="list-style-type: none"> Continued Promotion of Investment for Agriculture in the Northern Zone of Côte d'Ivoire by Providing Support Services, such as Investment Target Search and Land Search Continued Promotion of Investment for Manufacturing Sector in Industrial Parks Investment Promotion for Exploration and Exploitation of Minerals Continued Investment Promotion for Exploration and Exploitation of Oil and Gas 	<p><u>Investment Promotion (2018-2025)</u></p> <ul style="list-style-type: none"> Project for Promotion of Utilization of Principles of Responsible Investments to Agriculture, Livestock and Fisheries Sectors Investment Promotion for Development of Nyinahin Bauxite Mine Investment Promotion for Development of Shieni Iron Mine Investment Promotion for Manufacturing Industries in Sekondi-Takoradi Investment of Promotion for Manufacturing Industries in Greater Kumasi Investment Promotion for ICT-BOP Industries in Greater Kumasi <p><u>Investment Promotion (2026-2033)</u></p> <ul style="list-style-type: none"> Investment Promotion for Manufacturing Industries in Sekondi-Takoradi Investment Promotion for Manufacturing Industries in Greater Kumasi Investment Promotion for Manufacturing Industries in Tamale Investment Promotion for ICT-BPO Industries in Tema, Cape Coast and Greater Kumasi

Source: JICA Study Team

Table 11.3 Priority Projects for Essential Strategy No. 3

Essential Strategy No. 3 <“Development of Basic Infrastructure for Economic Sectors” to Support the Development of Growth Economic Sectors in both Inland and Coastal Areas> and its Priority Projects	
UEMOA Commission	
<ul style="list-style-type: none"> UEMOA Programme for Coordination and Promotion for Implementation of Development of Basic Infrastructure for Growth Economic Sectors including Access Roads, Railways, Electricity, Water Resources, ICT and Oil and Gas 	
Burkina Faso	Togo
<p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> Projects for Improvement of National and Regional Roads for Providing Better Access to Agriculture Potential Areas <ul style="list-style-type: none"> Improvement of Road (R21) between Banfora and Douna Improvement of Road (N17) connecting N5 and N16 (Guiba - Garango) Improvement of Road (R9 and N29) connecting N16 and N17 for Providing Better Access to Bagrépole Improvement of Road (N25) connecting N5 and N6 (between Pô and Nébou) Improvement of Road between Banfora and Mangodara 	<p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> Projects for Improvement of Roads for Providing Better Access to Agricultural Potential Areas in Inland Areas <ul style="list-style-type: none"> Improvement of Road of Borgou and Mango and Road of Baouré and Road of Mogou and Gando-Namoni for Oti Agropole Improvement of Road of Tchitcho – Leon – Guérin-Kouka for Kara Agropole Improvement of Road between Kambole – Bila - Goubi - Bagou - Issati –Moretan - Nyamassila for Mono Agropole

<p><u>Road (2026-2033)</u></p> <ul style="list-style-type: none"> • Projects for Improvement of National and Regional Roads for Providing Better Access to Agricultural Potential Areas <ul style="list-style-type: none"> ➢ Improvement of Road between Dédougou and Ouahigouya through Tougan for Sourou Agricultural Potential Area ➢ Improvement of Road connecting N5 and N16 between Pô and Bittou ➢ Improvement of Road (N11) between Orodara – Banfora – Gaoua – Boarder of Côte d'Ivoire <p><u>Railway (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Rehabilitation of Track of Kaya and Ouagadougou Railway Line and Construction of Railway between Tambao and Kaya through Dori for Transporting Manganese Ore from Tambao Mine • Projects for Development of Cattle Loading and Off-Loading Facilities at Railway Stations of the following railway stations together with Cattle Waiting Pens <ul style="list-style-type: none"> ➢ Railway Station in a Suburban Area of Ouagadougou ➢ Railway Station in a Suburban Area of Bobo-Dioulasso ➢ Railway Station in Kaya <p><u>Railway (2034-2040)</u></p> <ul style="list-style-type: none"> • Project for Development of Loading and Off-Loading Facility for Cattle at Cinkansé Railway Station together with Cattle Waiting Pens <p><u>Electricity (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Electricity Interconnection Line (Kompienga-Porga [Benin]) Development • Project for Construction and Operation of Solar Power Plants in Rural Communes <p><u>Water Resources (2018-2025)</u></p> <ul style="list-style-type: none"> • Project on Water Supply to Ouagadougou from the Ziga Dam (Ziga II) Stage 2 • Project for Expansion of Water Supply System in Bobo-Dioulasso 	<ul style="list-style-type: none"> ➢ Improvement of Road between Kougnonhou and Atakpamé for Agricultural Potential Areas for Mini-Agropoles of Amou and Agou in Plateau Region ➢ Improvement of Road between Atakpamé and Nangbéto Dam <p><u>Road (2026-2033)</u></p> <ul style="list-style-type: none"> • Projects for Improvement of Roads for Providing Better Access to Agricultural Potential Areas <ul style="list-style-type: none"> ➢ Improvement of Road of Bassar – Mô – Tindjasse – the Western National Border with Ghana for Agricultural Potential Areas in Mô Valley of Central Region • Projects for Improvement of North-South Road between Sokodé and Bassar • Projects for Improvement of North-South Road between Kabou and Sansanné Mango <p><u>Railway (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Construction of Railway from Lomé to Blitta <p><u>Railway (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Construction and Operation of Railway from Blitta to Kabou <p><u>Electricity (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Construction of 161kV Interconnection Line (Porga-Kompienga) with Burkina Faso <p><u>Electricity (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Construction of Adjarala Dam and Hydropower Plant • Project for Construction of Tetetou Dam and Hydropower Plant <p><u>Water Resources (2018-2025)</u></p> <ul style="list-style-type: none"> • Sogakope – Lomé Transboundary Drinking Water Supply Project • Study for New Water Source Development including Zio Dam and Conveyance from Mono River for Lomé Water Scheme • Project for Expansion of Water Treatment Plant at Kozah Dam for Kara <p><u>Water Resources (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for New Water Source Development for Greater Lomé • Project for New Water Source Development for Kara
<p style="text-align: center;">Côte d'Ivoire</p> <p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> • Projects for Improvement of East-West Roads for Providing Better Access to Agricultural Potential Areas from Central Corridor <ul style="list-style-type: none"> ➢ Improvement of Road between Ferkessédougou and Bouna ➢ Improvement of Road between Bouaké and Bondoukou ➢ Improvement of Road between Boundiali and Odienné ➢ Improvement of Road between Tieningboué and Séguéla ➢ Improvement of Road between Séguéla and Man <p><u>Railway (2018-2025)</u></p> <ul style="list-style-type: none"> • Construction of Cattle Off-Loading Facility for Railway at Anyama Railway Station • Construction of Cattle Loading and Off-Loading Facility for Railway at Ferkessédougou Railway Station or at a Suburban Railway Station near Ferkessédougou • Coordination Project for Construction of Railway from San-Pédro to Man among Three Iron Ore Companies and Government (with Technical Studies for Railway Construction) • Construction of Railway from San-Pédro to Iron Ore Mines in Tonkpi Region <ul style="list-style-type: none"> ➢ Railway between San-Pédro – Man ➢ Railway between Man – Mt. Nimba ➢ Railway between Man – Mt. Klahoyo ➢ Railway between Man – Mt. Gao <p><u>Railway (2034-2040)</u></p> <ul style="list-style-type: none"> • Construction of Railway from Man to Odienné <p><u>Sea Port (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Construction and Operation of New Mineral 	<p style="text-align: center;">Ghana</p> <p><u>ICT (2018-2025)</u></p> <ul style="list-style-type: none"> • Tema ICT Park Expansion Project • Project for Construction of Community Information Centre in Tema • Project for Development of ICT Park at Cape Coast <p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> • Projects for Improvement of Inter-Regional and Regional Roads for Providing Better Access to Agricultural Potential Areas from Central Corridor <ul style="list-style-type: none"> ➢ Improvement of Inter-Regional Road between Yawgu and Wa ➢ Improvement of Regional Road between Navrongo and Fian ➢ Improvement of Inter-Regional Road between Navrongo and Banusu ➢ Improvement of Inter-Regional Road between Tamale and Makango ➢ Improvement of Inter-Regional Road between Yeji and Kintampo ➢ Improvement of Inter-Regional Road between Salaga and Bimbila ➢ Improvement of Inter-Regional Road between Techiman and Agordeke ➢ Improvement of Inter-Regional Road between Kpando-Torkor and Golokwati ➢ Improvement of Inter-Regional Road between Berekum and Banda Nkwanta ➢ Improvement of National Road No. 11 between Bolgatanga and Bawku

<p>Terminal at San-Pédro Port <u>Pipeline (2018-2025)</u></p> <ul style="list-style-type: none"> • East Pipeline Development Project (with a total length of about 132 km from Abatta to Assinie) <p><u>Oil & Gas (2018-2025)</u></p> <ul style="list-style-type: none"> • Master Plan Study on Oil and Gas Sectors in relation to Power Generation <p><u>Electricity (2018-2025)</u></p> <ul style="list-style-type: none"> • Project of Construction of 330kV Interconnection Line with Ghana (150km) • Project of Development of Lough Hydro Power Plant (with a capacity of 270MW) • Project for Improvement of Transmission and Distribution Networks including Construction and Upgrading of Substations in Greater Abidjan <p><u>Water Resources (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Surface Water Development of the Me River for Greater Abidjan • Project for Surface Water Development of the Bandama River • Project for Dabou-Nieki Groundwater Development for Greater Abidjan • Expansion of Intake (28,000m³/day) and Water Treatment Plant from Bandama River for Yamoussoukro • Expansion of Water Treatment Plant in Loca Dam for Bouaké (Total capacity = 30,000m³/day) • Expansion of Intake (52,000m³/day) and WTP from Bandama River for Korhogo • Expansion of Water Treatment Plant from Fare Dam for San-Pédro 	<ul style="list-style-type: none"> ➤ Improvement of National Road No. 13 between Lawra and Navrongo <p><u>Railway (2018-2025)</u></p> <ul style="list-style-type: none"> • Rehabilitation of Takoradi - Awaso Section of Western Railway Line <p><u>Railway (2025-2033)</u></p> <ul style="list-style-type: none"> • Construction of Railway between Awaso-Nyinahin <p><u>Inland Water Transport (2018-2025)</u></p> <ul style="list-style-type: none"> • Study on Inland Water Transport between Damanko Port and Akosombo Port on the Volta Lake for supporting Iron Ore Mining in Shieni Mine <p><u>Pipeline (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Construction of Aboadze-Tema Natural Gas Pipeline <p><u>Electricity (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Development of 330kV Interconnection Line (Dunkwa2-Côte d'Ivoire) • Projects of Hydro Power Plants (Pwalugu, Juale and Hemang) • Projects of Thermal Power Plants (General Electric, Kpong Combined Cycle, Globeleq Combined Cycle, Aksa Combined Cycle, Tadi Combined Cycle, Chrispod Combined Cycle, Astro and Domunli) <p><u>Water Resources (2018-2025)</u></p> <ul style="list-style-type: none"> • Expansion of Water Treatment Plant in Weija Dam for Greater Accra • Expansion of Water Treatment Plant in Barakese Dam for Greater Kumasi • Tamale Water Supply Project • Interconnection of Sekyere-Hemang Water Treatment Plant to the Sekondi-Takoradi Water Supply System and the Aboadze Thermal Plant
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Source: JICA Study Team

Table 11.4 Priority Projects for Essential Strategy No. 4

Essential Strategy No. 4 <“Strengthening of Implementation of Customs Union” and “Facilitation of Sub-Regional Trade” on National Borders, Sea Ports and Transport Corridors among WAGRIC Countries> and its Priority Projects	
UEMOA Commission	
<p><u>Strengthening of Implementation of Customs Union</u></p>	
<ul style="list-style-type: none"> • Project for Building Consensus for Strengthening Implementation of Customs Union in WAGRIC Countries Prior within the 8 Member Countries of UEMOA and 15 Member Countries of ECOWAS (through Coordination within UEMOA Commission and Coordination with ECOWAS) 	
<p><u>Establishment of One Stop Border Posts (OSBPs)</u></p>	
<ul style="list-style-type: none"> • Support Project for Establishing and Operating OSBP in WAGRIC Countries 	
<p><u>Customs Integrated System by ICT</u></p>	
<ul style="list-style-type: none"> • Project for Connecting the Customs System of WAGRIC Countries by ICT in an Integrated Manner 	
Burkina Faso	Togo
<p><u>Logistics (2018-2025)</u></p>	<p><u>Logistics (2018-2025)</u></p>
<ul style="list-style-type: none"> • Project for Strengthening of Implementation of Customs Union for Sub-Regional Products at National Borders • Project for Construction and Operation of One-Stop-Border Post (OSBP) at Laleraba (National Border between Burkina Faso and Côte d'Ivoire) • Project for Operationalization of Cinkassé OSBP (National Border between Burkina Faso and Togo) • Project for Construction and Operation of One Stop Border Post (OSBP) in Paga (National Border between Burkina Faso and Ghana) 	<ul style="list-style-type: none"> • Project for Strengthening of Implementation of Customs Union for Sub-Regional Products at National Borders • Project for Operationalization of Cinkassé OSBP (National Border between Burkina Faso and Togo) • Project for Operationalization of Noépé OSBP (National Border between Ghana and Togo) • Project for Construction and Operation of Sanvee Condji – Hillacondji OSBP (National Border between Benin and Togo)
<p><u>Logistics (2026-2033)</u></p>	<p><u>Logistics (2026-2033)</u></p>
<ul style="list-style-type: none"> • Strengthening of Operation of Laleraba OSBP (National Border between Burkina Faso and Côte d'Ivoire) • Strengthening of Operation of Cinkassé OSBP (National Border between Burkina Faso and Togo) • Strengthening of Operation of Paga OSBP (National Border between Burkina Faso and Ghana) 	<ul style="list-style-type: none"> • Strengthening of Implementation of Customs Union for Sub-Regional Products at National Borders • Strengthening of Operation of Cinkassé OSBP (National Border between Burkina Faso and Togo) • Strengthening of Operation of Noépé OSBP (National Border between Ghana and Togo) • Strengthening of Operation of Sanvee Condji – Hillacondji OSBP (National Border between Benin and Togo)
Côte d'Ivoire	Ghana
<p><u>Logistics (2018-2025)</u></p>	<p><u>Logistics (2018-2025)</u></p>
<ul style="list-style-type: none"> • Strengthening of Implementation of Customs Union for Sub- 	<ul style="list-style-type: none"> • Strengthening of Implementation of Customs Union for Sub-

<p>Regional Products at National Borders</p> <ul style="list-style-type: none"> Project for Construction and Operation of One-Stop-Border Post (OSBP) at Elubo-Noé (National Border between Côte d'Ivoire and Ghana) Project for Construction and Operation of One-Stop-Border Post (OSBP) at Laleraba (National Border between Côte d'Ivoire and Burkina Faso) <p><u>Logistics (2026-2033)</u></p> <ul style="list-style-type: none"> Strengthening of Operation of Elubo-Noé OSBP (National Border between Côte d'Ivoire and Ghana) Strengthening of Operation of Laleraba OSBP (National Border between Côte d'Ivoire and Burkina Faso) 	<p>Regional Products at National Borders</p> <ul style="list-style-type: none"> Project for Operationalization of Noépé OSBP (National Border between Ghana and Togo) Project for Construction and Operation of One Stop Border Post (OSBP) in Elubo-Noé (National Border between Côte d'Ivoire and Ghana) Project for Construction and Operation of One Stop Border Post (OSBP) in Paga (National Border between Burkina Faso and Ghana) <p><u>Logistics (2026-2033)</u></p> <ul style="list-style-type: none"> Strengthening of Operation of Noépé OSBP (National Border between Ghana and Togo) Strengthening of Operation of Elubo-Noé OSBP (National Border between Côte d'Ivoire and Ghana) Strengthening of Operation of Paga OSBP (National Border between Burkina Faso and Ghana)
Benin	Nigeria
<p><u>Logistics (2026-2033)</u></p> <ul style="list-style-type: none"> Project for Strengthening of Implementation of Customs Union for Sub-Regional Products at National Borders Project for Construction and Operation of Sanvee Condji – Hillacondji One-Stop-Border Post (OSBP) (National Border between Benin and Togo) 	<p><u>Logistics (2026-2033)</u></p> <ul style="list-style-type: none"> Project for Strengthening of Implementation of Customs Union for Sub-Regional Products at National Borders Project for Construction and Operation of One-Stop-Border Post (OSBP) at Seme (National Border between Benin and Nigeria)

Source: JICA Study Team

Table 11.5 Priority Projects for Essential Strategy No. 5

Essential Strategy Mo. 5 <Strategic Upgrading of Abidjan-Lagos Corridor Transport Infrastructure (Motorways)> and its Priority Projects	
UEMOA Commission	
<ul style="list-style-type: none"> UEMOA and ECOWAS Programme for Coordination and Promotion for Implementation of Development of Abidjan-Lagos Mega Coastal Economic Corridor (West Africa Coastal Mega-Region) 	
Burkina Faso	Togo
NA	<p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> Projects for Construction of Abidjan-Lagos Motorway <ul style="list-style-type: none"> Project for Construction of Greater Lomé Sections of Abidjan-Lagos Motorway <p><u>Road (2026-2033)</u></p> <ul style="list-style-type: none"> Projects for Construction of Abidjan-Lagos Motorway <ul style="list-style-type: none"> Project for Construction of Togo's Central and Eastern Sections of Abidjan-Lagos Motorway <p><u>Logistics (2018-2025)</u></p> <ul style="list-style-type: none"> Project for Operationalization of Noépé OSBP at the National Border with Ghana Project for Construction and Operation of Sanvee Condji – Hillacondji OSBP at the National Border with Benin Project for Construction and Operation of Logistic Platforms (Truck Terminals) in a Hinterland Area of Lomé Port <p><u>Logistics (2026-2033)</u></p> <ul style="list-style-type: none"> Strengthening of Operation of Noépé OSBP at the National Border with Ghana Strengthening of Operation of Sanvee Condji – Hillacondji OSBP at the National Border with Benin
Côte d'Ivoire	Ghana
<p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> Projects for Construction of Motorways and Urban Roads for Greater Abidjan <ul style="list-style-type: none"> Improvement of Three Intersections by Construction of Flyovers in Greater Abidjan Construction of 4-Lane Motorway of the East Exit Line Cocody-Bonoua Construction of 4-Lane Motorway of Y4 Ring Road: Anyama - Cocody Section Construction of 4-Lane Motorway of Y4 Ring Road: Anyama – Attinguié Section Construction of 4-Lane Motorway of Y4 Ring Road: Cocody – Riviéra 6 Section Construction of 6th Bridge (part of Y4 Ring Road) Construction of 4-Lane Motorway of Y4 Ring Road: Aerocité Section 	<p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> Projects for Strengthening of National Roads in the Coastal Corridor <ul style="list-style-type: none"> Construction of East-West Motorway in Greater Accra Replacement of Ankobra Bridge (Coastal Corridor) Replacement of Iture Bridge (Coastal Corridor) Widening of Accra – Tema Motorway up to 6 Lanes (Abidjan - Lagos Corridor) Construction of Motorway between Tema and Prampram (Abidjan-Lagos Corridor) <p><u>Road (2026-2033)</u></p> <ul style="list-style-type: none"> Projects for Construction of Abidjan-Lagos Motorway <ul style="list-style-type: none"> Construction of Outer Ring Road for Sekondi-Takoradi as part of Abidjan-Lagos Motorway (Coastal Corridor) Construction of Abidjan-Lagos Motorway between Accra (Kasoa)- Cape Coast

<ul style="list-style-type: none"> ➢ Construction of 4-Lane Motorway of the West Exit Line (Songon) • Rehabilitation of National Road between Songon and San-Pédro <u>Road (2026-2033)</u> • Project for Construction of 6-Lane Motorway between Bonoua and the border of Ghana <u>Road (2034-2040)</u> • Construction of 4th bridge (Île Boulay) of Greater Abidjan • Construction of Motorway between Abidjan and San-Pédro <u>Logistics (2018-2025)</u> • Construction and Operation of One-Stop-Border Post (OSBP) at Noé/ Elubo (National Border between Côte d'Ivoire and Ghana) 	<ul style="list-style-type: none"> ➢ Construction of Abidjan-Lagos Motorway Section between Cape Coast – Sekondi-Takoradi (Coastal Corridor) ➢ Construction of Outer Ring Road for Greater Accra <u>Road (2034-2040)</u> • Construction of Abidjan-Lagos Motorway between Prampram - Sogakope (Coastal Corridor) <u>Logistics (2018-2025)</u> • Project for Operationalization of One Stop Border Post in Noépé (at the National Border with Togo) • Project for Establishment of One Stop Border Post in Elubo-Noé (at the National Border with Côte d'Ivoire) <u>Air Transport (2018-2025)</u> • Construction of New Airport in Sekondi-Takoradi <u>Urban Transportation (2018-2025)</u> • Project for Urban Transportation Master Planning for Greater Accra
Benin	Nigeria
<u>Road (2018-2025)</u> <ul style="list-style-type: none"> • Project for improvement of urban road in Cotonou <ul style="list-style-type: none"> ➢ Improvement of Intersections in Cotonou. • Projects for Construction of Abidjan-Lagos Motorway <ul style="list-style-type: none"> ➢ Project for Construction of Cotonou Sections (bypass) of Abidjan-Lagos Motorway • Project for Construction of motorway to connect Porto Novo to Abidjan-Lagos Motorway. 	<u>Road (2018-2025)</u> <ul style="list-style-type: none"> • Projects for Construction of Abidjan-Lagos Motorway • Project for Construction of Greater Lagos Sections of Abidjan-Lagos Motorway

Source: JICA Study Team

Table 11.6 Priority Projects for Essential Strategy No. 6

Essential Strategy No. 6 <Strategic Upgrading for Establishment of Efficient and Region-Wide Cargo Transport Networks (Railways, Multi-Modal Dry Ports, Inland Water Transport and Pipelines)> and its Priority Projects	
UEMOA Commission	
<u>Programme for Capacity Development of the International Railway Committee by Implementing Railway Development Planning Studies</u>	
<ul style="list-style-type: none"> • Project for Studying and Implementing Possible Measures for Promoting Railway and Truck Multi-Modal Transport Utilizing Sitarail • Project for Study on Ouagadougou-Lomé Railway • Project for Study on a Loop Railway of Abidjan-Ouagadougou-Niamey-Cotonou • Project for Study on Ouagadougou-Accra-Tema Railway 	
Burkina Faso	Togo
<u>Railway (2018-2025)</u> <ul style="list-style-type: none"> • Preliminary Technical Study on Railway Development between Ouagadougou and Cinkasé • Project for Replacement and Rehabilitation of Old Railway Bridges and Improvement of Track of Existing of Railway Line • Project for Rehabilitation of Track of Kaya and Ouagadougou Railway Line and Construction of Railway between Tambao and Kaya through Dori for Transporting Manganese Ore from Tambao Mine • Projects for Development of Loading and Off-Loading Facilities for Cattle at Railway Stations of the following railway stations together with Cattle Waiting Pens <ul style="list-style-type: none"> ➢ Railway Station in a Suburban Area of Ouagadougou ➢ Railway Station in a Suburban Area of Bobo-Dioulasso ➢ Railway Station in Kaya <u>Railway (2034-2040)</u> <ul style="list-style-type: none"> • Project for Development of Loading and Off-Loading Facility for Cattle at Cinkasé Railway Station together with Cattle Waiting Pens <u>Logistics (2018-2025)</u> <ul style="list-style-type: none"> • Project for Construction and Operation of Multi-Modal Dry Port for Ouagadougou including Construction of Access Road from N1 to Ouagadougou Multi-Modal Dry Port • Project for Strengthening of Operation of Bobo-Dioulasso Multi-Modal Dry Port • Project for Expansion of Bobo-Dioulasso Multi-Modal Dry Port <u>Logistics (2034-2040)</u> • Project for Construction and Operation of Multi-Modal Dry Port of Cinkasé 	<u>Railway (2018-2025)</u> <ul style="list-style-type: none"> • Project for Construction of Railway from Lomé to Blitta <u>Railway (2026-2033)</u> • Project for Construction and Operation of Railway from Blitta to Kabou <u>Railway (2034-2040)</u> • Project for Construction and Operation of Railway from Kabou to Cinkasé of Burkina Faso <u>Sea Port (2018-2025)</u> • Promotion of Land Use Restructuring of Terminal and Waterfront Areas surrounding Lomé Port for Effective Port Operation and for Attracting Enterprises of Logistics Industry and Processing Industry • Promotion of Reduction of Port Charge at Lomé Port <u>Logistics (2018-2025)</u> • Project for Construction and Operation of Multi-Modal Dry Port in Blitta <u>Logistics (2026-2033)</u> • Project for Construction and Operation of Multi-Modal Dry Port in Kabou <u>Logistics (2034-2040)</u> • Project for Construction and Operation of Multi-Modal Dry Port in Cinkasé of Burkina Faso

<p><u>Pipeline (2026-2033)</u></p> <ul style="list-style-type: none"> • Construction of Oil Multi-Products Pipeline between Ouagadougou and Bingo (National Border with Ghana) <p><u>Pipeline (2034-2040)</u></p> <ul style="list-style-type: none"> • Construction of Oil Multi-Products Pipeline between Bobo-Dioulasso and National Border with Côte d'Ivoire 	
Côte d'Ivoire	Ghana
<p><u>Railway (2034-2040)</u></p> <ul style="list-style-type: none"> • Construction of Railway to New Port in Île Boulay <p><u>Sea Port (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Construction of Cereal Berth at Abidjan Port • Expansion of San-Pedro Port <p><u>Sea Port (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Construction and Operation of New Mineral Terminal at San-Pédro Port <p><u>Sea Port (2034-2040)</u></p> <ul style="list-style-type: none"> • Construction of New Port in Île Boulay <p><u>Logistics (2018-2025)</u></p> <ul style="list-style-type: none"> • Construction and Operation of Multi-Modal Dry Port integrating Truck Terminal, Railway Cargo Station and Warehouses at PK 26 • Construction and Operation of Ferkessédougou Multi-Modal Dry Port <p><u>Logistics (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Construction and Operation of Multi Modal Dry Port at Man <p><u>Logistics (2034-2040)</u></p> <ul style="list-style-type: none"> • Project for Construction and Operation of Multi Modal Dry Port at Odienné <p><u>Pipeline (2018-2025)</u></p> <ul style="list-style-type: none"> • Operationalization of Yamoussoukro – Bouaké Section including Rehabilitation of Oil Storage in Bouaké (Abidjan - Ferkessédougou Oil Multi-Product Pipeline Project Phase 2) <p><u>Pipeline (2026-2033)</u></p> <ul style="list-style-type: none"> • Construction and Operation of Bouaké - Ferkessédougou Section (Abidjan - Ferkessédougou Oil Multi-Product Pipeline Project Phase 3) • Construction and Operation of Oil Multi-Product Pipeline for Section between Ferkessédougou – National Border with Burkina Faso 	<p><u>Railway (2018-2025)</u></p> <ul style="list-style-type: none"> • Strengthening and Reform of Regulatory Function of Railway Sector • Rehabilitation of Takoradi - Awaso Section of Western Railway Line • Upgrading of Tema - Accra Railway • Construction of Railway from Tema Port to Akosombo Port (Eastern Corridor) • Project for Rehabilitation of Tema Port-Boankra-Kumasi Section of Eastern Railway <p><u>Railway (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Construction of Kumasi-Paga Railway <p><u>Logistics (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Establishment of One Stop Border Post in Paga (at the National Border with Burkina Faso) <p><u>Logistics (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Establishment of Boankra Multi-Modal Dry Port <p><u>Inland Water Transport (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Upgrading of Debre Port at Volta Lake • Project for Upgrading Akosombo Port at Volta Lake <p><u>Pipeline (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Extension of Oil Multi-Products Pipeline from Buie Port to Debre Port in order to respond to Lowering of Water Level of Volta Lake • Project for Construction of Oil Multi-Products Pipeline between Tema and Kumasi <p><u>Pipeline (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Construction of Oil Multi-Products Pipeline between Kumasi and Buie • Construction of Oil Multi-Products Pipeline between Bolgatanga and Bingo

Source: JICA Study Team

Table 11.7 Priority Projects for Essential Strategy No. 7

Essential Strategy No. 7 <Strategic Upgrading of Transport Corridor Infrastructure by Emphasising the Importance of High-Speed Transport and Services (Motorways, High-Standard 4-Lane Roads, Air Transport and ICT)> and its Priority Projects	
UEMOA Commission	
<u>North-South Corridors' Motorways and High-Standard 4-Lane Roads</u>	
<ul style="list-style-type: none"> • Project for Promoting Implementation of the Sub-Regional Road Network Programme including Motorways and High-Standard 4-Lane Roads 	
<u>Construction of North-South Corridors' Motorways and High-Standard 4-Lane Roads Crossing National Borders (Technical Support and Support for Fund Procurement)</u>	
<ul style="list-style-type: none"> • Motorway between Banfora (Burkina Faso) – Ouangolodougou (Côte d'Ivoire) • 4-Lane High-Speed Way between Ouagadougou (Burkina Faso) – Bolgatanga (Ghana) • 4-Lane High-Speed Way between Dapaong (Togo) - Tenkodogo (Burkina Faso) 	
<u>Construction of East-West Roads Crossing National Borders (Technical Support and Support for Fund Procurement)</u>	
<ul style="list-style-type: none"> • Road Connecting Tamale (Ghana) – Yendi (Ghana) - Kara (Togo) – Parakou (Benin) • Road Connecting Ho (Ghana) - Atakpamé (Togo) - Bohicon (Benin) • Road Connecting Sunyani (Ghana) – Abengourou (Côte d'Ivoire) 	
Burkina Faso	Togo
<p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> • Projects for Strengthening of Primary Transport Corridors by Upgrading Ring Roads, Replacement and Rehabilitation of Old Road Bridges and Improvement of Road Pavement <ul style="list-style-type: none"> ➢ Widening of Inner Ring Road (Tensoba Boulevard) of Ouagadougou ➢ Rehabilitation of National Road (N16) between Koupéla and Cinkasé (Border of Togo) ➢ Rehabilitation of National Road (N4) between Koupéla 	<p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> • Projects for Construction of Lomé New Airport Access Motorway <ul style="list-style-type: none"> ➢ Project for Construction of Motorway between Lomé Bypass and New International Airport (including Tsévié Bypass) • Projects for Upgrading to 4-Lane High-Speed Way in Lomé-Ouagadougou Corridor <ul style="list-style-type: none"> ➢ Construction of 4-Lane High-Speed Way between Tsévié

<p>and Kantchari (Border of Niger)</p> <ul style="list-style-type: none"> ➤ Construction of Inner Ring Road of Bobo-Dioulasso (Southern Section) ➤ Rehabilitation of National Road (N8) between Bobo-Dioulasso and Koloko (Border of Mali) ➤ Rehabilitation of National Road (N7) between Bobo-Dioulasso and Niangoloko (Border of Côte d'Ivoire) ➤ Replacement of Laleraba Bridge for Crossing the National Border between Burkina Faso and Côte d'Ivoire <ul style="list-style-type: none"> • Projects for Construction of Motorway for Ouagadougou-Abidjan Corridor <ul style="list-style-type: none"> ➤ Construction of Southern Sections (between N1 and N4) of Ouagadougou Outer Ring Road (Southern Bypass) ➤ Construction of Motorway between Ouagadougou and Koudougou <p><u>Road (2026-2033)</u></p> <ul style="list-style-type: none"> • Projects for Construction of Motorways of Ouagadougou-Abidjan Corridor <ul style="list-style-type: none"> ➤ Construction of Southern Section (between N1 and N8) of Bobo-Dioulasso Outer Ring Road (Southern Bypass) ➤ Construction of Motorway between Koudougou and Bobo-Dioulasso • Projects for Upgrading to 4-Lane High-Speed Ways to Neighbouring Countries <ul style="list-style-type: none"> ➤ Construction of 4-Lane High-Speed Way between Ouagadougou and Koupéla ➤ Upgrading of Road N6 to a High-Standard 2-Lane Road between Ouagadougou and Léo ➤ Upgrading of Road N 20 to a High-Standard 2-Lane Road between Léo and Djipologo (toward Eastern Corridor of Côte d'Ivoire) ➤ Upgrading of Road N 20 to a High-Standard 2-Lane Road between Ouessa and Hamile (toward Wa of Ghana) ➤ Upgrading of Road N 12 to a High-Standard 2-Lane Road between Djipolgo and Gatapoula (toward Bouna of Côte d'Ivoire) <p><u>Road (2034-2040)</u></p> <ul style="list-style-type: none"> • Projects for Upgrading to 4-Lane High-Speed Ways to Neighbouring Countries <ul style="list-style-type: none"> ➤ Upgrading to a 4-Lane High-Speed Way between Koupéla and Cinkassé including Bypass for Koupéla (toward Togo) ➤ Upgrading to a 4-Lane High-Speed Way between Koupéla and Fada N'Gourma including Bypass Road for Fada N'Gourma (toward Niger and Benin) ➤ Upgrading to a 4-Lane High-Speed Way between Ouagadougou and Paga (toward Tamale) <p><u>Urban Transportation (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Urban Transportation Master Planning for Greater Ouagadougou <p><u>Logistics (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Construction and Operation of One-Stop-Border Post (OSBP) at Laleraba (National Border between Burkina Faso and Côte d'Ivoire) <p><u>Air Transport (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Construction and Operation of New International Ouagadougou Airport in Doshin • Project for Expansion and Renovation of Passenger Terminal Buildings of Existing Ouagadougou International Airport for Converting it to an Airport for Domestic and Sub-Regional Flights <p><u>ICT (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Establishment and Operation of Data Centre located in Ouagadougou • Project for Nationwide 5,000km Optic Fibre Cabling Project 	<p>and Notsé</p> <ul style="list-style-type: none"> ➤ Construction of Sokodé Bypass Road as part of 4-Lane High-Speed Way <ul style="list-style-type: none"> • Projects for Upgrading of East-West Roads <ul style="list-style-type: none"> ➤ Project for Upgrading of East-West Road Connecting Kara with Kétao at East Side National Border (toward to Parakou of Benin) and with West Side National Border (toward to Yendi and Tamale of Ghana) ➤ Project for Upgrading of East-West Road Connecting Notsé with East Side National Border (toward Bohicon of Benin) and with West Side National Border (toward to Ho of Ghana) • Project for Reconstruction of Three Bridges of National Road No.1 for Strengthening of Lomé-Ouagadougou Corridor <u>Road (2026-2033)</u> • Projects for Construction of 4-Lane High-Speed Way <ul style="list-style-type: none"> ➤ Construction of Kara Bypass Road as part of 4-Lane High-Speed Way ➤ Construction of 4-Lane High-Speed Way from Notsé to Atakpamé including Atakpamé Bypass • Projects for Improvement of Road between Kougnonhou and Nyamassila for Agricultural Potential Areas in Plateau Region <u>Road (2034-2040)</u> • Project for Construction of 4-Lane High-Speed Way from Atakpamé to Kara <u>Logistics (2018-2025)</u> • Project for Operationalization of Cinkassé OSBP at the National Border with Burkina Faso • Project for Construction and Operation of Logistic Platforms (Truck Terminals) in a Hinterland Area of Lomé Port <u>Logistics (2026-2033)</u> • Strengthening of Operation of Cinkassé OSBP at the National Border with Burkina Faso <u>Air Transport (2018-2025)</u> • Project for Functionalization of Kara Regional Airport by Operationalizing Lomé- Kara Line) <u>ICT (2018-2025)</u> • Project for Improvement of ICT Connection (including Construction of Fibre Optic Cable from Lomé to Cinkassé)
Côte d'Ivoire	Ghana
<p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> • Projects for Construction of Motorways and Urban Roads for Greater Abidjan <ul style="list-style-type: none"> ➤ Improvement of Solibra Intersection by Construction of 	<p><u>Road (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Upgrading of National Road No. 2 between Tema Roundabout and Atimpoku to 4-Lane Road (Eastern Corridor) • Projects for Strengthening of North-South Central Corridor

<p>Flyovers in Greater Abidjan</p> <ul style="list-style-type: none"> ➤ Construction of 4-Lane Motorway of the North Exit Line (Anyama) ➤ Construction of Vridi-Bietry Bridge (for Better Access to Abidjan Port) <p>• Projects for Construction of North-South Motorway of Abidjan-Ouagadougou Corridor</p> <ul style="list-style-type: none"> ➤ Construction of Bypass Road for Yamoussoukro (part of Motorway) ➤ Construction of 4-Lane Motorway between Yamoussoukro and Bouaké ➤ Construction of Western Section for Bouaké Outer Ring Road (part of Motorway) <p>• Upgrading of Road between Anyama and Abengourou</p> <p>• Upgrading of Road between Boundiali – Tingréla</p> <p><u>Road (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Construction of Motorway between Bouaké and Niakaramandougou • Project for Upgrading of Road between Bondoukou and Bouna • Project for Upgrading of Road between San-Pédro and Man to 4-Lane Road <p><u>Road (2034-2040)</u></p> <ul style="list-style-type: none"> • Construction of 4-Lane Motorway between Niakaramandougou and Ouangolodougou • Upgrading of Road between Man – Odienné – the border of Mali • Upgrading Road between Anyama and Bondoukou to 4-Lane Road <p><u>Logistics (2018-2025)</u></p> <ul style="list-style-type: none"> • Construction and Operation of One-Stop-Border Post (OSBP) at Laleraba (National Border between Côte d'Ivoire and Burkina Faso) <p><u>ICT (2018-2025)</u></p> <ul style="list-style-type: none"> • Construction and Management of Data Centre in Grand-Bassam • Construction and Management of Public Cyber Centres (5,000 sites) <p><u>ICT (2026-2033)</u></p> <ul style="list-style-type: none"> • Project for Continued Construction and Management of Public Cyber Centres (5,000 sites) 	<p>Road</p> <ul style="list-style-type: none"> ➤ Improvement of Tema Intersection by Construction of Flyovers ➤ Construction of High-Speed Way on National Road No.1 between Nkawkaw and Kumasi (Central Corridor) (Continuation of Widening of Accra - Kumasi Road) ➤ Construction of Greater Kumasi Outer Ring Road North-East Section (Central Corridor) ➤ Upgrading of National Road No.1 between Tamale-Yaipe and Tamale- Savelugu to 4-Lane Road (Central Corridor) ➤ Completion of North-East Section of Inner Ring Road in Tamale ➤ Replacement of Buipe Bridge (Central Corridor) ➤ Replacement of Yapei Bridge (Central Corridor) <p>• Projects for Improving East-West Road in Inland Areas</p> <ul style="list-style-type: none"> ➤ Improvement of Regional Road between Tamale and the National Boarder with Togo (Nachemba) ➤ Improvement of National Road between Sunyani and the National Boarder with Côte d'Ivoire (Gonnokron) <p><u>Road (2026-2033)</u></p> <ul style="list-style-type: none"> • Projects for Upgrading to 4-Lane High-Speed Way for North-South Central Corridor ➤ Construction of 4-Lane High-Speed Way on National Road No.1 between Buipe and Savelugu including Bypass Road for Tamale as part of High-Speed Way (Central Corridor) ➤ Construction of 4-Lane High-Speed Way on National Road No.1 between Kumasi and Kintampo including Bypass Road at Techiman and Kintampo (Central Corridor) <p>• Upgrading of National Road No. 9 between Tamale and Bimbila</p> <p>• Projects for Improving East-West Road in Inland Areas</p> <ul style="list-style-type: none"> ➤ Upgrading of National Road No. 11 between Bolgatanga and Bawku to 2-Lane High-Standard Road ➤ Upgrading of National Road No. 13 between Lawra and Navrongo to 2-Lane High-Standard Road <p>• Projects for Construction of Greater Kumasi Outer Ring Road South-East Section</p> <p><u>Road (2034-2040)</u></p> <ul style="list-style-type: none"> • Construction of Abidjan-Lagos Motorway between Prampram - Sogakope (Coastal Corridor) • Construction of High-Speed Way between Kintampo and Buipe (Central Corridor) <p><u>Logistics (2018-2025)</u></p> <ul style="list-style-type: none"> • Project for Construction of Ashaiman Truck Terminal along Accra-Tema Motorway <p><u>ICT (2018-2025)</u></p> <ul style="list-style-type: none"> • Tema ICT Park Expansion Project • Project for Construction of Community Information Centre in Tema • Project for Development of ICT Park at Cape Coast
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Source: JICA Study Team

Table 11.8 Priority Projects for Essential Strategy No. 8

Essential Strategy No. 8 <Supporting of Small and Medium Enterprises, Development of Human Resources for Economic Sectors and Strengthening of Basic Social Services in order to Enable More People to Participate in Emerging Development Opportunities due to Sub-Regional Corridor Development> and its Priority Projects	
<ul style="list-style-type: none"> • It is necessary to formulate projects which can form linkage between private companies coming to invest in economic sectors of inland areas and local small and medium size enterprises in increasing business opportunities in inland areas. • Agricultural products and agro-processing products which are selected as growth economic sectors are expected to develop in inland areas. Therefore, it is necessary to formulate projects for strengthening and establishing vocational training schools for human resources development related to such specific products. • Basic education and basic health services in inland areas are less developed compared to coastal areas. Therefore, it is also necessary to formulate projects for improving such basic services in inland areas for increasing populations of both rural areas and urban areas. 	
Burkina Faso	Togo
<ul style="list-style-type: none"> • Should be Identified at the Implementation Stage for WAGRIC Master Plan 	<ul style="list-style-type: none"> • Should be Identified at the Implementation Stage for WAGRIC Master Plan

Côte d'Ivoire	Ghana
<ul style="list-style-type: none"> Should be Identified at the Implementation Stage for WAGRIC Master Plan 	<ul style="list-style-type: none"> Should be Identified at the Implementation Stage for WAGRIC Master Plan

Source: JICA Study Team

Table 11.9 Priority Projects for Essential Strategy No. 9

Essential Strategy No. 9 <Development of Systems and Activities of Environmental Management that could Respond to Potential Risks to the Natural and Social Environments that are Increasing across Wide Areas due to Sub-Regional Corridor Development> and its Priority Projects	
<ul style="list-style-type: none"> Both social and environmental impacts are expected to increase due to development of the north-south corridors and the coastal corridor. Therefore, it is necessary to formulate projects for strengthening institutions, organisations and human resources for monitoring such environmental impacts. It is also necessary to formulate projects to establish environmental laboratories and develop human resources in inland areas for testing various environmental data. 	
Burkina Faso	Togo
<ul style="list-style-type: none"> Should be Identified at the Implementation Stage for WAGRIC Master Plan 	<ul style="list-style-type: none"> Should be Identified at the Implementation Stage for WAGRIC Master Plan
Côte d'Ivoire	Ghana
<ul style="list-style-type: none"> Should be Identified at the Implementation Stage for WAGRIC Master Plan 	<ul style="list-style-type: none"> Should be Identified at the Implementation Stage for WAGRIC Master Plan

Source: JICA Study Team

Table 11.10 Priority Projects for Essential Strategy No. 10

Essential Strategy No. 10 <Strengthening of Security Measures for Maintaining Safe and Secure Societies and Sustainable Economies in the Sub-Region> and its Priority Projects	
<ul style="list-style-type: none"> More movements of goods and people will be generated within the sub-region and between the sub-region and outside the sub-region, due to development of the north-south corridors and the coastal corridor. To correspond to such increase in movements, it is necessary to formulate projects for installing equipments and providing trainings to strengthen security at national borders, sea ports, airports and along main corridors. 	
Burkina Faso	Togo
<ul style="list-style-type: none"> Project for Strengthening of Airport Security by Installing Security Equipment Other projects should be Identified at the Implementation Stage for WAGRIC Master Plan 	<ul style="list-style-type: none"> Project for Strengthening of Airport Security by Installing Security Equipment Other projects should be Identified at the Implementation Stage for WAGRIC Master Plan
Côte d'Ivoire	Ghana
<ul style="list-style-type: none"> Project for Strengthening of Airport Security by Installing Security Equipment Other projects should be Identified at the Implementation Stage for WAGRIC Master Plan 	<ul style="list-style-type: none"> Project for Strengthening of Airport Security by Installing Security Equipment Other projects should be Identified at the Implementation Stage for WAGRIC Master Plan

Source: JICA Study Team

Chapter 12 Conclusions and Recommendations

12.1 Conclusions

(1) A New Initiative to Transform the Economic Structure and Spatial Structure

Under the influence of the past trend of economic development that was heavily dependent on primary commodities, such as minerals and agricultural products, and also while making efforts at development of economic sectors targeting their own countries' markets, it is not easy for WAGRIC countries to promote development of economic sectors in inland areas and to reduce the speed of expansion of the regional disparity between the inland areas and coastal areas. As a result, the socio-economy of inland areas would continue to deteriorate, out-migration from inland areas would be accelerated and import of agricultural, livestock and fisheries products and processed food and drink would be expanded. In the long run, under this situation, it is difficult for WAGRIC countries to take advantage of their own demographic dividend.

The new initiative to transform the economic and spatial structure for seeking the future vision is designed by paying attention to economic sectors targeting growing sub-regional markets. This new initiative based on the orientation to sub-regional markets is technically possible because the world demand for primary commodities is considered to continue to increase. The economic sectors' orientation to sub-regional markets could be secured by the existing institutional and implementation framework for a customs union.

(2) New Initiative Reconstructed by Selectively Combining of Existing Policies and Strategies

The new initiative recommended by the WAGRIC Master Plan is not composed of totally new elements. However, it is reconstructed by selectively combining of existing policies and strategies, such as customs union, trade facilitation, and corridor infrastructure development, under the strongly determined "Strategic Objective", which put inland areas and development of economic sectors targeting sub-regional markets in the centre of the selected growth scenario and essential strategies.

(3) WAGRIC Master Plan for Implementing the New Initiative

A master plan for implementing the new initiative is formulated with the following composition:

- Future Vision for WAGRIC Sub-Region
- Growth Scenario for WAGRIC Sub-Region
- Socio-Economic Framework for WAGRIC Sub-Region
- Spatial Structure for WAGRIC Sub-Region
- Essential Strategies for WAGRIC Sub-Region
- Corridor Development Plan for Individual Countries
 - Strategies for Development of Economic Sectors
 - Strategies for Development of Infrastructure Sectors
 - Strategies for Urban Development
 - Strategies for Social Development
- Priority Projects

(4) Implementable Master Plan

The WAGRIC Master Plan has been formulated by the JICA Study Team and counterparts of WAGRIC counties. A series of technical discussion have been conducted by organizing

meetings of National-Level Joint Technical and Monitoring Committees, a Regional-Level Joint Technical and Monitoring Committee and a Regional-Level Joint Steering Committee, under the guidance of UEMOA Commission and Ghana Government. At the same time, a series of stakeholder meetings have been organized by involving various stakeholders including government institutions, private sectors and civil societies for the purposes of both SEA study and planning.

12.2 Recommendations

(1) WAGRIC Countries' Cooperation with Each Other in Corridor Development in the Same Direction

The WAGRIC Master Plan is composed of an integrated sub-regional development strategy and individual countries' corridor development plans. WAGRIC countries should cooperate with each other in making their efforts at corridor development in the same direction indicated by the WAGRIC Master Plan. The same direction is "Promotion of Economic Sectors oriented to Sub-Regional Markets" in both inland areas and coastal areas.

Individual countries' corridor development strategies of WAGRIC Master Plan are multi-sectoral, covering a variety of infrastructure sectors and economic sectors. Therefore, individual countries' different ministries and agencies should coordinate with each other for implementing integrated development in each country.

The production and export of primary commodities (minerals and agricultural products) to outside of the sub-region have supported their national economies, in addition to those of primary commodities. WAGRIC countries should emphasize the development of economic sectors targeting sub-regional markets, for the purpose of reducing the speed of expansion of the regional disparity

(2) Implementation Framework for WAGRIC Master Plan

When the WAGRIC Master Plan was formulated, the management for master plan formulation had two different lines, namely, the one for the three members of UEMOA and the other one for Ghana. However, at the stage of master plan implementation, it is strongly recommended to establish an integrated management framework by involving all the four countries.

The implementation of the WAGRIC Master Plan should be based on the institutional framework consisting of the following three-level committees, like the one for formulating the WAGRIC Master Plan:

- National-Level Joint Technical and Monitoring Committees (consisting of a variety of ministries and agencies in the four countries, Burkina Faso, Côte d'Ivoire, Ghana and Togo)
- Regional-Level Joint Technical and Monitoring Committee (consisting of technical representatives of several ministries from each country)
- Steering Committee (consisting of several ministers from each country)

At the same time, it is recommended to encourage the following entities to join this implementation framework in order to strengthen the implementation capacity of the WAGRIC Master Plan:

- Technical and Financial Development Partners
- ECOWAS
- West African Development Bank (BOAD)

(3) Necessary Actions to Initiate and Drive Sub-Regional Corridor Development and Necessary Actions to Secure Inclusive and Sustainable Development

In order to achieve “Sub-Regional Corridor Development oriented to Sub-Regional Markets”, it is necessary to take necessary actions to initiate and drive corridor development. These necessary actions are categorized into three sets of actions (Three Buttons):

- Button A: actions for development of economic sectors targeting sub-regional markets in addition to development of primary commodity sectors
- Button B: actions for expansion of the size of coastal markets by strengthening of implementation of customs union and by developing coastal east-west motorway
- Button C: actions for strengthening of north-south connectivity between inland areas and coastal areas by upgrading north-south corridor transport infrastructure

In addition to these actions, the fourth Button (Button D) of actions is also important for securing inclusive and sustainable development from social, environmental and security perspectives.

The WAGRIC Master Plan is based on the four groups (four buttons) of necessary actions, which are furthermore divided into ten essential strategies. Priority projects are formulated to implement the ten essential strategies, not only by preparing new projects, but also by selecting existing projects. By following the WAGRIC Master Plan, each country should implement those priority projects for initiating and driving corridor development, and for securing inclusive and sustainable corridor development.

(4) Advance Investment in Upgrading of North-South Corridor Transport Infrastructure for Creating a Good Cycle between Infrastructure and Economic Sectors

Upgrading of north-south corridor transport infrastructure, such as motorway and high-standard four-lane roads and long-distance cargo railways, is essential for promoting development of economic sectors. Since inland areas have been underdeveloped, not enough cargo demand is expected that would justify high financial investment feasibility. However, advance investment in such upgrading of transport corridor infrastructure is necessary. Such an advance investment could create a good cycle of relationship between infrastructure development and economic sectors development.

(5) North-South Corridors, Coastal East-West Corridor and Inland East-West Roads

For developing economic sectors in inland areas and reducing the speed of expansion of regional disparity between inland areas and coastal areas, much effort should be devoted to development of both north-south corridors and the coastal east-west corridor. Inland east-west roads, as well as the coastal east-west corridor, are also important for promoting sub-regional economic integration.

(6) Economic Corridors and Transport Corridors

There are different types of corridors. The one is Economic Corridor. The other is Transport Corridor. Economic Corridors should accommodate major regional cities and economic sector development, which are strongly supported by both efficient long-term cargo transport infrastructure (railway, water transport and pipeline) and high-speed transport infrastructure (motorways, high-standard four-lane roads, air transport and ICT). On the other hand, Transport Corridors should concentrate more on developing transport functions, mostly those of roads.

Coastal Countries have more than two north-south corridors except for Togo. Each coastal country should concentrate its effort at developing only one Economic Corridor. Other north-south corridors should be developed as Transport Corridors. By promoting this kind of differentiated corridor development, limited resources of the public and private sectors can be utilized more efficiently and effectively.

By utilizing the customs union and motorway, the coastal east-west corridor development should play a significant role in promoting the sub-regional economic integration. In this sense, the coastal east-west corridor should be also developed as an Economic Corridor accommodating production capacities of economic sectors.

In the super-long term (beyond 2040), this coastal corridor would become a coastal mega-region equipped with a high-speed railway, as well as a motorway, connecting capital cities and regional cities which have metropolitan functions, production facilities, strategic sea ports, international airports and thriving economic sectors.

(7) Strengthening of Transport Nodes Connecting North-South Corridors and the Coastal East-West Corridor

It is necessary to implement, in a timely manner, the strengthening of transport node functions connecting north-south economic corridors and coastal east-west economic corridors. Since large metropolitan areas, such as Greater Abidjan, Greater Accra and Greater Lomé, are located at those nodes, traffic congestion would become too heavy to be solved because of their rapid population increase and economic growth, as well as their rapid urban expansion. If such a timely effort is not made at tackling the issues on the transport nodes, it is considered that transport time barriers on the north-south corridors and coastal east-west corridors would continue to be serious obstacles hindering development of economic sectors in inland areas.

(8) Other Economic Sectors to be Developed as part of Corridor Development

Although the scope of Project WAGRIC does not cover some economic sectors, such as tourism and commerce, it is necessary to conduct some studies for formulating action plans and projects related to those economic sectors for utilizing corridor development to be promoted at the stage of implementing the WAGRIC Master Plan.

(9) Community Participation and Gender Consideration

Community participation and gender mainstreaming should be promoted at the stage of implementing the WAGRIC Master Plan, which seeks the diversification of economic sectors in inland areas and coastal areas by targeting sub-regional markets, in addition to production and export of primary commodities. It is because necessary measures and actions for that purpose are not sufficient to create enough jobs and development opportunities for inland areas and female populations. Therefore, it is necessary to make efforts at bringing direct benefits to inland areas and female persons.

(10) Creation of Jobs and Development Opportunities along North-South Transport Corridors

The WAGRIC Master Plan specifies secondary north-south corridors in Côte d'Ivoire and Ghana as transport corridors, while Abidjan-Ouagadougou Corridor and Tema-Ouagadougou Corridor are to be developed as economic corridors. Therefore, it is necessary for the governments to making efforts at creating jobs and development opportunities along the secondary transport corridors.

(11) Formulation of Land Use Plan and Development Regulation for Coastal Environmental Conservation

Many lagoons are located in the coastal zone of Côte d'Ivoire, Ghana and Togo. In the coastal zone, the construction of a six-lane motorway is planned as part of Coastal East-West Corridor Development, which is one of the essential strategies composing the WAGRIC Master Plan. Furthermore, it is recommended by the WAGRIC Master Plan to develop the Abidjan-Lagos Mega Coastal Economic Corridor (West Africa Coastal Mega-Region) by accommodating metropolitan areas, productive facilities, high-standard infrastructure and by strongly connecting them not only by air transport and motorway but also by a high-speed railway. Therefore, it is necessary to formulate land use plans and development regulations in the coastal zone for conducting monitoring of the coastal

environment including lagoons and implementing measures for environmental conservation.