

CHAPTER 5
BASIC POLICY FOR
DEVELOPMENT OF
THE SENA CORRIDOR

Chapter 5 Basic Policy for Development of the Sena Corridor

5.1 Significance of Development of the Sena Corridor

5.1.1 Historical Background

Table 5-1 and Figure 5-1 show the historical background of Malawi's transport network. The major transitions of the transport network are as follows.

- a) Before 1970: The Sena Corridor was the major gateway to Malawi
 - The branch line of the Sena Railway was the main transport mode, supplemented by the Shire–Zambezi inland waterway transport.
 - Export and import goods were mainly transported by railway due to cheaper transport cost.
- b) 1970–1983: The Sena Corridor and Nacala Railway were the major gateways to Malawi
 - The branch line of the Sena and the Nacala Railway were the main transport modes even after civil war broke out in Mozambique.
 - Inland waterway transport lost its function.
- c) 1983–1992: Malawi suffered greatly from loss of access to ports in Mozambique
 - Due to the civil war, all transport links through Mozambique were cut.
 - Most of the cargoes between Malawi and RSA were transported via Zambia and Zimbabwe, incurring much longer transport times and higher costs.

Table 5-1 Historical Background of Malawi's Transport Network

Item	1960	1970	1977	1983	1992	1997	2011
Road	Road to Durban (2,340 km)	Beira Road (825 km)	All road links via Mozambique were cut To Durban via Lusaka (3,300 km)		Beira and Durban Corridor (main corridor) (Beira: 825 km, Durban: 2,340 km)		
Railway	Sena branch line (575 km)	Nacala Railway (800 km)	Sena branch line and Nacala Railway were cut		Operation between Limbe–Nsanje	Operation only between Limbe–Makhanga	
Inland Waterway	Shire–Zambezi Inland Waterway (530 km)						
Remarks		Nacala Railway completed	Civil war in Mozambique		Peace agreement in Mozambique	Chiromo washaway	

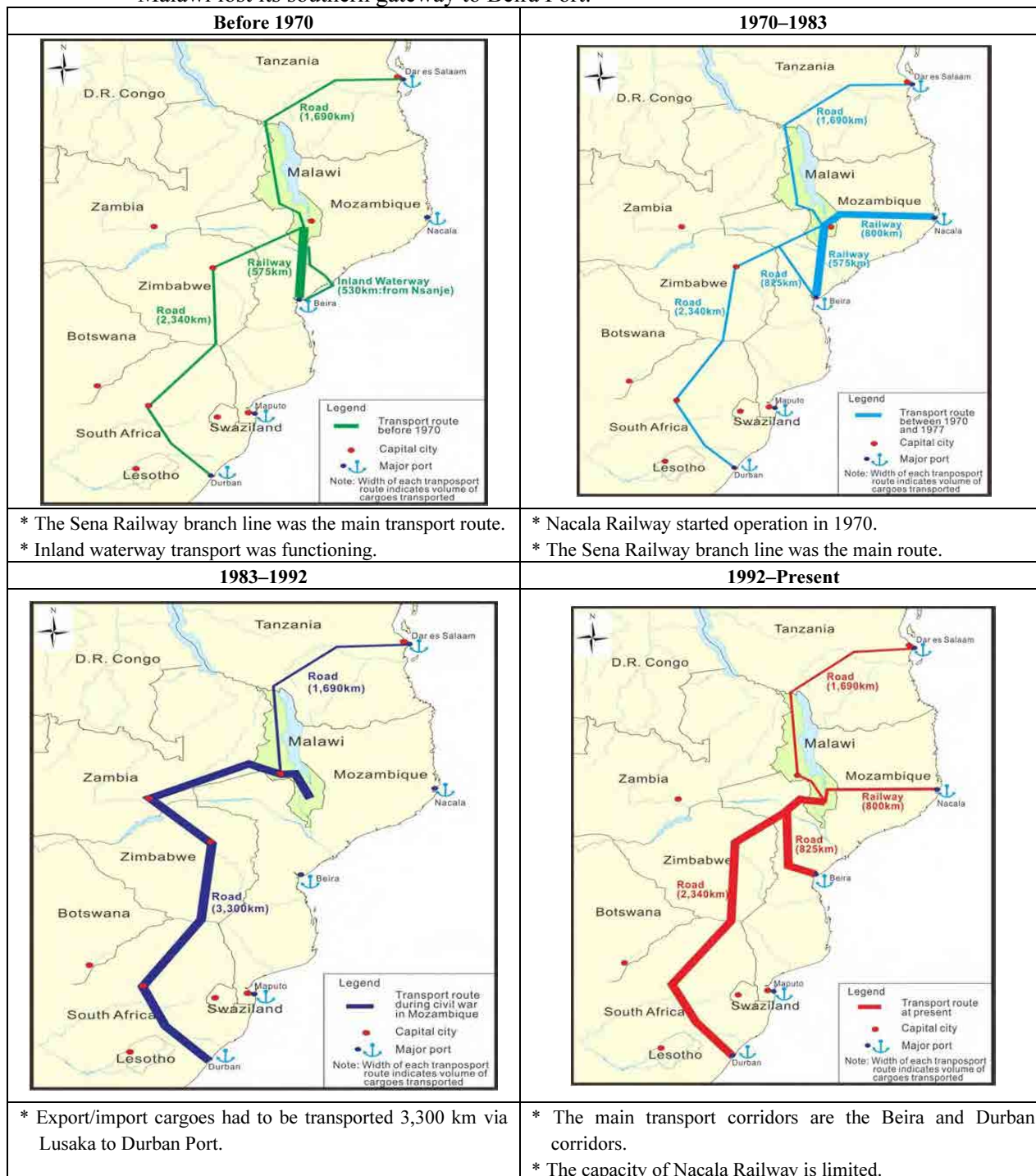
Note: The width of each bar of each transport mode indicates its importance as noted in the remarks

█ - Main transport route █ Supplemental transport route

Source: Study Team

d) 1992–Present: Beira and Durban Corridors are major transport corridors

- After the peace agreement in Mozambique, the transport routes to RSA and Beira Port became the main transport routes (62% of total trade is through Beira Port).
- The branch line of the Sena Railway completely lost its functions, particularly after the Chiromo washway in 1997.
- Malawi lost its southern gateway to Beira Port.



Source: Study Team

Figure 5-1 Historical Background of the Transport Network to/from Malawi

5.1.2 Landlocked Country and International Transport Corridors

For a landlocked country like Malawi, transport routes to neighbouring countries and ocean ports are crucial for importing and exporting products. These transport routes enable economic growth and development, and are thus important for national security.

For Malawi, there are several transport routes to neighbouring countries and some of the existing corridors are defined as international transport corridors as part of the North–South Transport Corridor defined by SADC as gateways to neighbouring countries and ocean ports, as follows:

- Beira Corridor to Beira Port: Southwestern gateway
- Durban Corridor to RSA and Durban Port: Southwestern gateway
- Nacala Corridor to Nacala Port and Zambia: Eastern and Western gateway
- Dar es Salaam Corridor to Dar es Salaam Port: Northern gateway

Since each corridor has advantages and disadvantages, they should complement each other and provide reliable transport routes for users. However, since the branch line of the Sena Railway ceased to function, there is no direct transport corridor from the Southern Region of Malawi to Beira Port at present.

5.1.3 Status of the Sena Corridor

1) Traffic Function

If the Sena Corridor is developed, it will serve as both an international corridor as well as a domestic corridor in the Study Area, instead of only as a domestic corridor at present. Figure 5-2 shows the status of the Sena Corridor in comparison with other international corridors and national roads in Malawi.

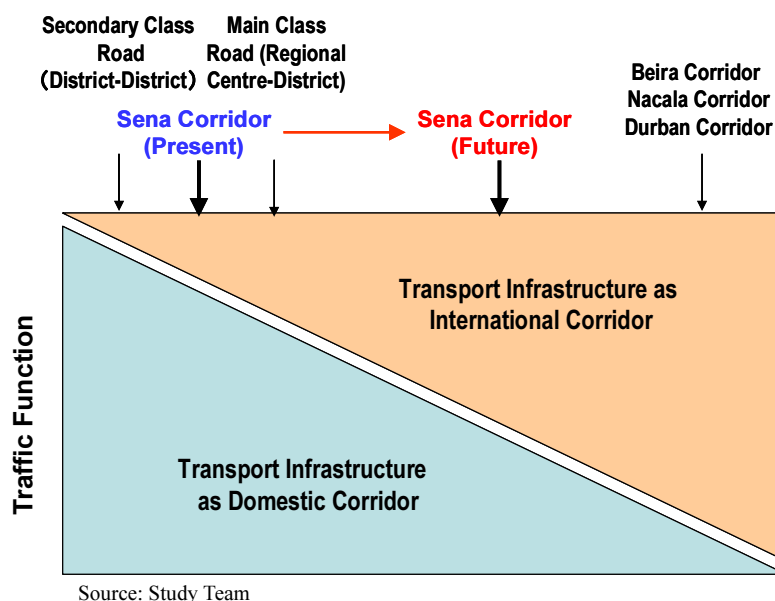
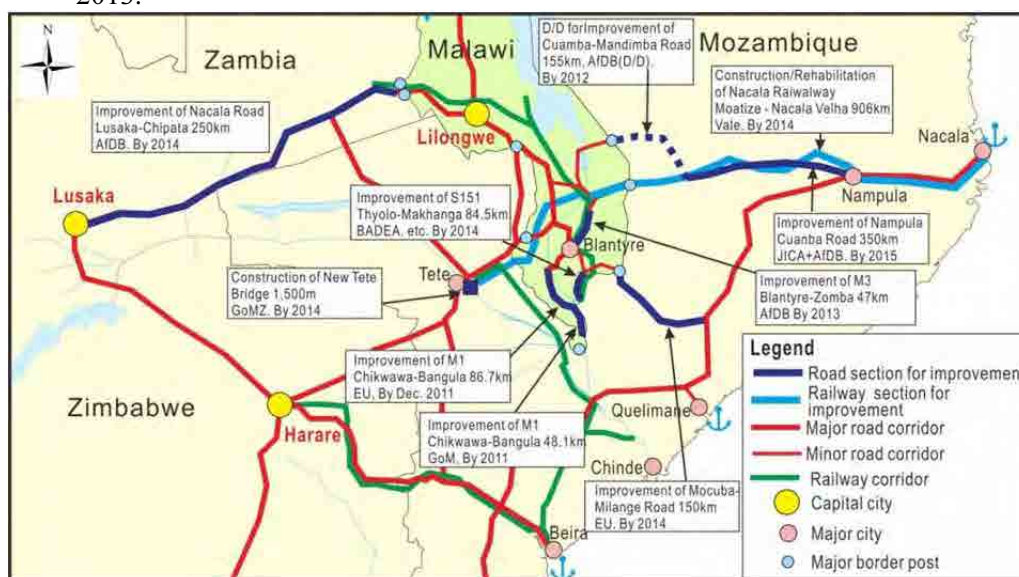


Figure 5-2 Status of the Sena Corridor compared with Other Corridors and National Roads

5.1.4 On-going and Planned Transport Network Development Project

Several transport network development programmes are either underway or planned in the region to strengthen the functions of the transport corridors at present, as shown in Figure 5-3.

- Construction and rehabilitation of the Nacala Railway between Moatize and Nacala-a-Velha Port by Vale planned to be completed in April 2014³.
- Improvement of Nacala road corridor (JICA and AfDB) planned to be completed in 2015 or 2016.
- Construction of New Tete Bridge (Government of Mozambique (GoMZ)) planned to be completed in 2013.
- Improvement of Milange–Mocuba road (EU, GoMZ) planned to be completed in 2014.
- Construction of Lilongwe Bypass as part of Nacala road network (AfDB).
- Improvement of M1 between Chikwawa and Bangula (EU and GoM) planned to be completed in December 2011.
- Improvement of M1 between Bangula and Nsanje (EU and GoM) planned to be completed in 2011.
- Improvement of M3 between Blantyre and Zomba (AfDB) planned to be completed in 2013.



Source: Study Team

Figure 5-3 Ongoing Transport Network Improvement Programmes in the Region

5.1.5 Freight Demand Forecast

According to the freight demand forecasted by the Study, the future export and import freight flows are as illustrated in Figure 5-4, based on the existing transport network plus the new railway line to be built by Vale. This figure shows that the huge demand for transporting mineral products to Nacala Port from the Moatize coal mine and Zambia will dramatically

³ The GoM is engaged in negotiations with Vale on the project.

change the logistics situation in Malawi.

The major findings of the freight demand forecasts are as follows:

- Approximately 80% of export cargo uses the Beira Corridor to Beira Port and the Durban Corridor to RSA and Durban Port at present.
- Approximately 64% of import cargo uses the Beira and Durban Corridors from Beira Port and RSA, while 14% of import cargo uses the Nacala Corridor at present.
- In 2030, about 51% of export cargo will use the Nacala Corridor, while the share of the Beira and Durban Corridors will decrease to 43%.
- The huge demand for coal from the Moatize coal mine and copper from Zambia will consume most of the capacity of the Nacala Railway with only the remaining capacity available for freight to/from Malawi.
- This trend will be the same in 2030, even though the demand for import cargo will almost triple.

5.2 Development Potentials and Major Issues in the Study Area related to the Sena Corridor

To draw up the basic concept and identify the necessity of developing the Sena Corridor, the development potentials and major issues are analysed in three areas: 1) Southeastern Africa as a wide area in the region, 2) the whole of Malawi, and 3) the Study Area.

5.2.1 Development Potentials and Major Issues in Southeastern Africa related to the Sena Corridor

Table 5-2 summarises the development potentials, major issues and challenges in achieving the potentials in Southeastern Africa.

Table 5-2 Development Potentials and Major Issues in Southeastern Africa

Major Issues	Challenges	Development Potentials
1. Transport network for logistics. 2. Regional economic integration under SADC Treaty.	1. Strengthen SADC transport network. 2. Alternative corridor to Beira Port.	1. Mineral deposit development. 2. Agricultural development. 3. Increase of workforce.

Source: Study Team

(1) Development Potentials in Southeastern Africa

Development potentials in the regional development in Southeastern Africa are as follows:

- 1) Coal from the Moatize coal mine generates a very large volume of transport, which will significantly affect existing logistics chains in the region, mainly in Malawi and Mozambique. There are also development potentials in the region for continuous mining of copper in Zambia, as well as exploitation of uranium, nickel and bauxite in Malawi.

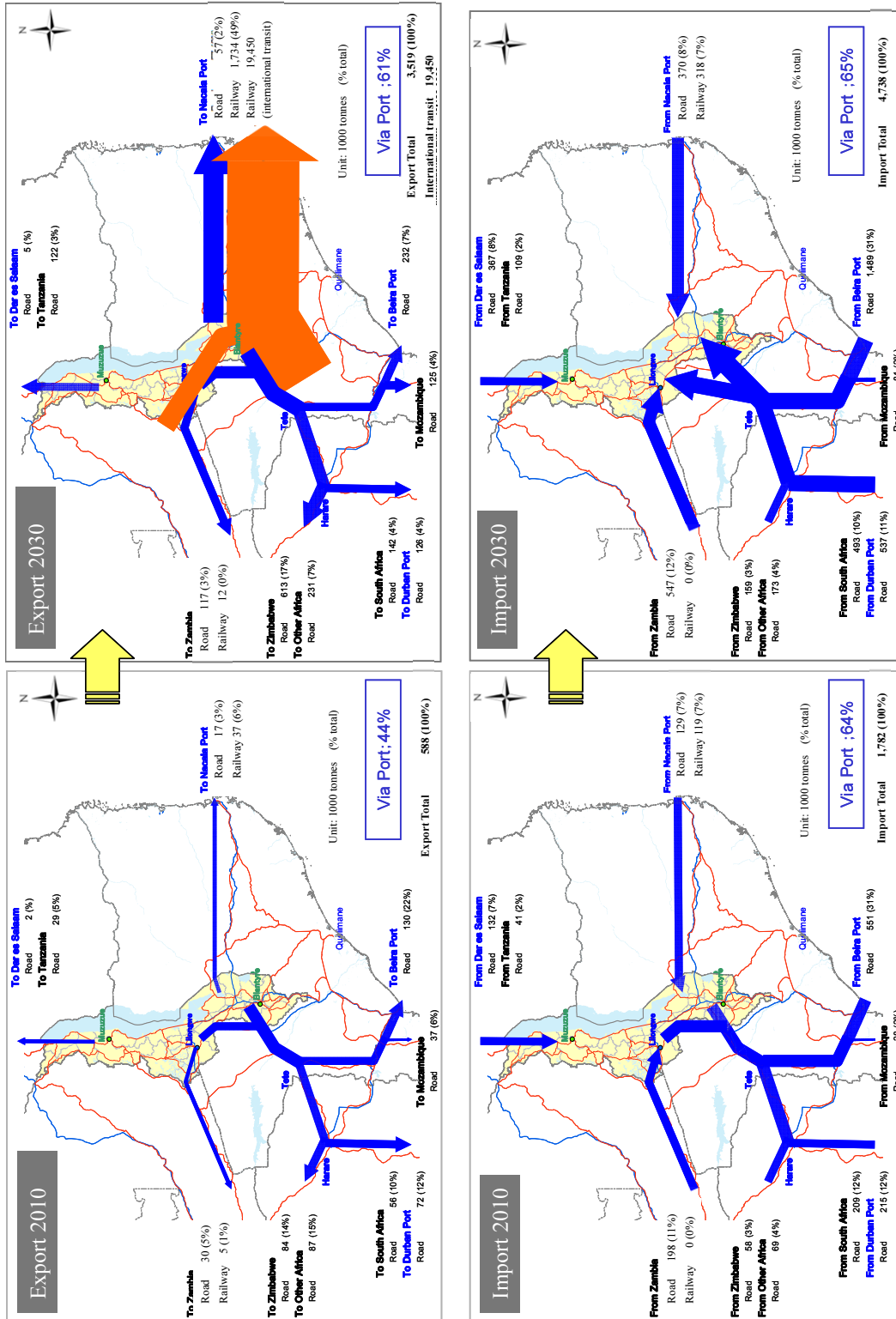
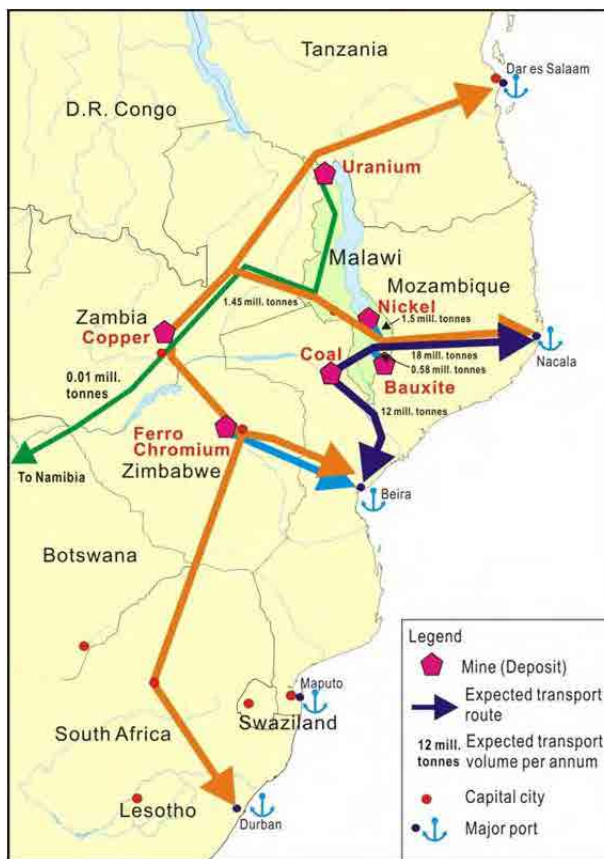


Figure S-4 Future Export and Import Freight Flow

Source: Study Team
 Note: Percentages shown in boxes

- 2) Agricultural development in Malawi (3% per annum by 2014/15 under the Agriculture Sector Wide Approach (ASWAp)) and neighbouring countries will increase productivity.
- 3) High population growth (2.3% per annum in SADC countries⁴) will increase the workforce.

Figure 5-5 illustrates the expected transport routes of mineral products from Malawi and neighbouring countries.



Source: Study Team

Figure 5-5 Expected Transport Routes of Mineral Products

- (2) Major Issues in Southeastern Africa
Major issues for regional development in Southeastern Africa are as follows:

- 1) In order to transport huge volumes of mineral as well as agricultural products, it is necessary to improve the transport network in Southeastern Africa for logistics to increase transport capacity.

- 2) There are initiatives for the regional economic integration and harmonisation of trade in Southern Africa led by SADC and COMESA, respectively. These initiatives will require cooperation among countries in transporting transit cargoes across neighbouring countries.

- (3) Challenge in Southeastern Africa

Challenges for regional development in Southeastern Africa are as follows:

- a) Strengthening the SADC Transport Network

It is necessary to strengthen the transport network for international logistics to support regional economic integration under the SADC Treaty.

- b) Alternative Corridor to Beira Port

It is necessary to develop an alternative corridor to Beira Port to strengthen the redundancy of the transport network in Southeastern Africa.

- (4) Measures for the Transport Sector

Several transport network development programmes are either underway or planned in Southeastern Africa. When these projects are completed, the functions of the Nacala, Beira and Durban Corridors, and the newly established Quelimane Sub-Corridor will be improved as

⁴ Formulation of the SADC Regional Infrastructure Development Master Plan, Revised First Draft Plan, September 2010, EU.

follows:

- The transport capacity of the Nacala Railway will be significantly increased to handle the demand for transporting huge volumes of coal.
- The Nacala road corridor will transport cargoes between Nacala Port, Malawi and Zambia.
- The traffic capacity of the Beira and Durban Corridors will increase to bypass the congested centre of Tete City.
- Quelimane Port will become another ocean port that Malawi can use, even though its cargo handling capacity is much less than that of other large ports in Mozambique. In addition, the road section between Milange and Mocuba will be able to use detour routes to Nacala and Beira Ports from the Southern Region of Malawi.

(5) Measures for Other Sectors

One measure to secure smooth logistics in Southeastern Africa is to harmonise trade under the COMESA initiative, even though Mozambique is not a member of COMESA.

(6) Major Role of the Sena Corridor

a) Additional corridor to increase transport capacity in Southeastern Africa

The major role of the Sena Corridor is an additional corridor to increase transport capacity and accommodate the increasing demand for freight in Southeastern Africa.

(7) Targets Achieved by Developing the Sena Corridor

At the Southeastern Africa level, the targets which will be achieved by developing the Sena Corridor are as follows:

a) To secure sustainable economic growth of Malawi and neighbouring countries

This target will be achieved by providing a stable and multi-modal transport corridor network for the export and import of products.

b) To strengthen the redundancy of the transport network

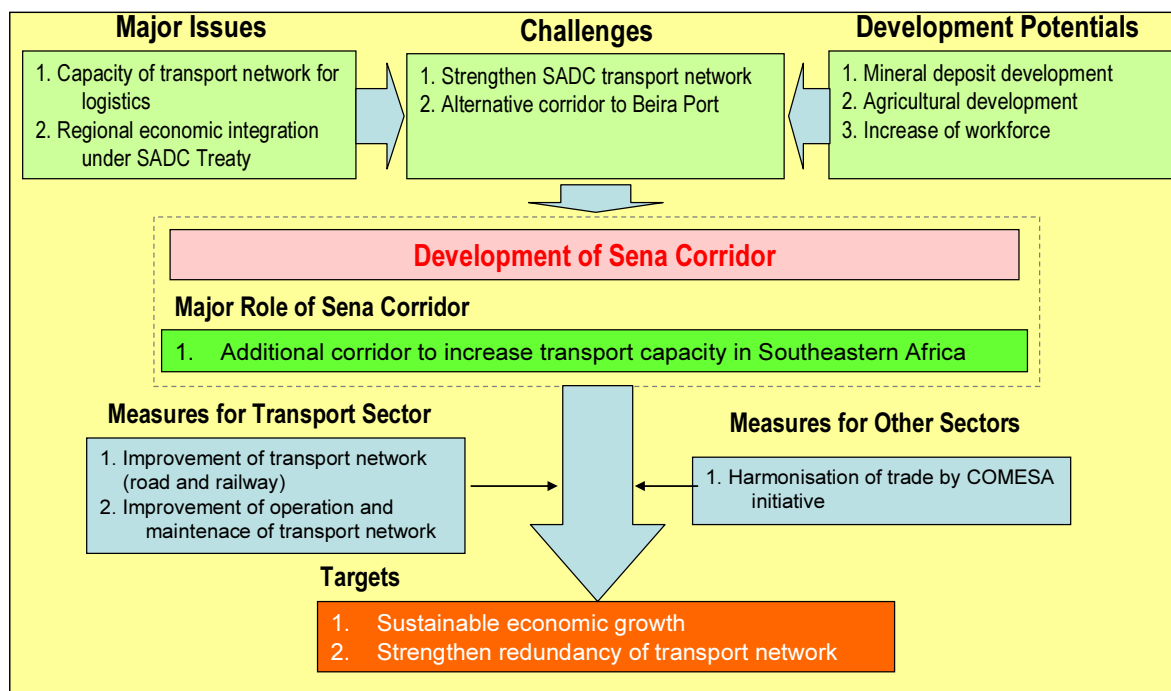
This target will be achieved by improving alternative networks to reduce risks and improve national security.

(8) Necessity of Developing the Sena Corridor to Achieve the Development Potentials of Southeastern Africa

Based on the development potentials in Southeastern Africa, the necessity of developing the Sena Corridor is identified and described below, while the relationships among the development potentials, major issues and challenges of the Sena Corridor are schematically illustrated in Figure 5-6. The Sena Corridor needs to be developed to achieve: i) sustainable economic growth in Malawi and ii) strengthen the redundancy of the transport network.

5.2.2 Development Potentials and Major Issues in Malawi related to the Sena Corridor

Malawi has various development potentials. Table 5-3 summarises the development potentials, major issues and challenges in achieving the potentials.



Source: Study Team

Figure 5-6 Necessity of Developing the Sena Corridor to Achieve the Development Potentials of Southeastern Africa

Table 5-3 Development Potentials and Major Issues in Malawi

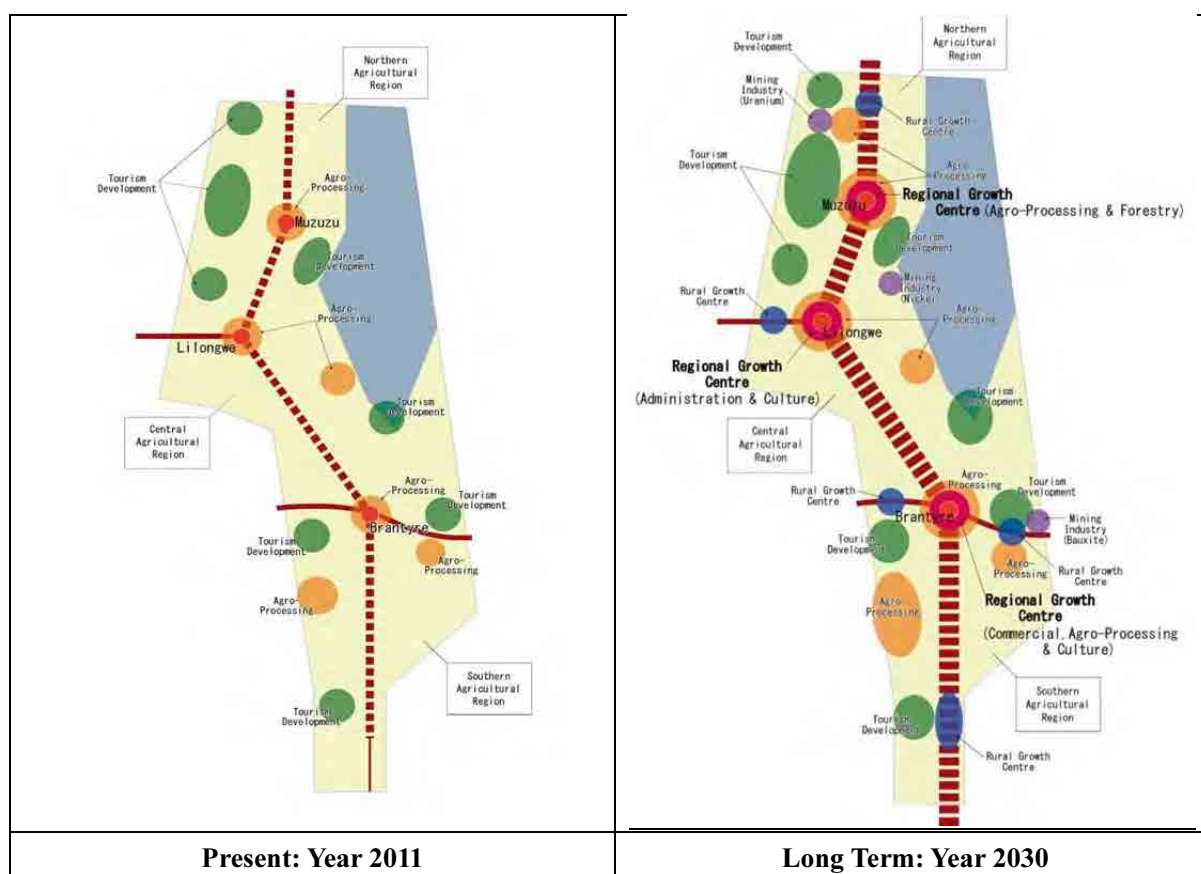
Major Issues	Challenges	Development Potentials
<ol style="list-style-type: none"> 1. Expensive and unreliable transport. 2. Lower FDI and merchandise trade. 3. Negative trade balance. 4. Lower international competitiveness of export products. 5. High poverty ratio. 	<ol style="list-style-type: none"> 1. Improve access to ocean ports and international markets 2. Promote exports by agricultural development. 3. Secure the steady import of fuel and fertilizer. 	<ol style="list-style-type: none"> 1. Functional classification of regional growth centres. 2. Development of agro-processing industry and tourism development. 3. Increase of workforce. 4. Exploitation of mineral deposits (uranium, bauxite, nickel, etc.).

Source: Study Team

(1) Development Potentials in Malawi

The development potentials in Malawi analysed from various development programmes are summarised below (refer to Chapter 2):

- 1) Several projects with a target year of 2015 under PSIP are listed to encourage regional development in Malawi. It is necessary to define the following regional growth centres with their own function: i) Lilongwe: Administration centre, ii) Blantyre: Commercial and agro-processing centre, and iii) Mzuzu: Agricultural and forestry centre. These regional growth centres are supported by local growth centres in other parts of the region. It is also important to strengthen the transport axes connecting these regional growth and local growth centres, in order to activate the development potential of each region, as shown in Figure 5-7.



Source: Study Team

Figure 5-7 Regional Development Potentials in Malawi

- 2) The main industry in Malawi is agriculture and export-oriented products, such as tobacco, sugar, tea, and pulses, which have long been cultivated. The productivity of these products can be increased by providing farmers with sufficient materials, such as fertilizer. Development of the agro-processing industry is also necessary. The export of processed agricultural products will boost revenues for the national economy, which is planned under the MDGS.
- 3) High population growth (2.8% per annum in Malawi) will increase the workforce.
- 4) There are mineral deposits: i) Uranium in the Northern Region, ii) Bauxite in the Southern Region, and iii) Nickel in the Central Region.

(2) Major Issues in Malawi

Based on analyses of several economic indicators (refer to Chapter 2), the major issues for regional development in Malawi are as follows:

- 1) The high cost and unreliability of transport are major obstacles to economic development in Malawi.
- 2) The proportion of FDI in GDP at about 1% was the lowest among Southeastern African countries in 2009. The proportion of merchandise trade in GDP at about 52% was lower than in Mozambique and Zambia (about 8 to 10 points lower).
- 3) The trade balance has been negative and the trade deficit was about 77% (US\$ 909

million) of export value in 2009.

- 4) Due to high transport costs, the international competitiveness of export products is lower than that of other non-landlocked countries.
- 5) The per-head poverty ratio in Malawi in 2005 was 52.4%⁵, of whom 22.4% were ultra-poor in 2005.

(3) Challenge in Malawi

Challenges for regional development in Malawi are as follows:

a) Improve access to ocean ports and international markets

Since Malawi is a landlocked export-oriented country, top-priority challenges are to improve access to ocean ports and international markets by improving the transport network.

b) Promote exports by agricultural development

To maintain GDP growth, it is necessary to boost exports by agricultural development, including cash crops and processed agricultural products.

c) Secure the steady import of fuel and fertilizer

Fuel (petroleum, diesel oil and paraffin) and fertilizer are mainly imported from RSA. Their prices are high because of long-haul transportation and unreliable deliveries. Hence, it is necessary to secure the steady import of fuel and fertilizer by improving the transport network.

(4) Measures for the Transport Sector

Several transport network development programmes are either underway or planned in Malawi. When these projects are completed, the functions of the Nacala Corridor and main roads in Malawi will be improved.

(5) Measures for Other Sectors

There are several agricultural development programmes, such as the cotton development programmes with a target year of 2015, under PSIP to encourage agricultural cultivation and the development of the agro-processing industry at present. The Green Belt Initiatives will also provide irrigation systems in areas lacking sufficient water for farming.

(6) Major Roles of the Sena Corridor

At the national level, the major roles of the Sena Corridor are as follows:

a) A part of the main north-south axis in Malawi

M1 and the branch line of the Sena Railway are part of the main north-south axis in Malawi.

b) Southern gateway to Beira Port as an additional international corridor

There is no southern gateway to Beira Port at present. Reopening the Sena Corridor will provide a southern gateway to Beira Port and develop an additional international corridor.

c) Access route to Blantyre from rural growth centres

M1, S151 and the branch line of the Sena Railway will serve as access routes to Blantyre from rural growth centres in Chikwawa, Nsanje and Thyolo Districts.

⁵ Poor: MWK16,165 per annum, Ultra poor: MWK10,029 per annum

(7) Targets Achieved by Developing the Sena Corridor

At the national level, the targets to be achieved by developing the Sena Corridor are as follows:

a) Sustainable economic growth of Malawi

This target will be achieved by providing a stable and multi-modal transport corridor network for the export and import of products.

b) Improve international competitiveness of export products

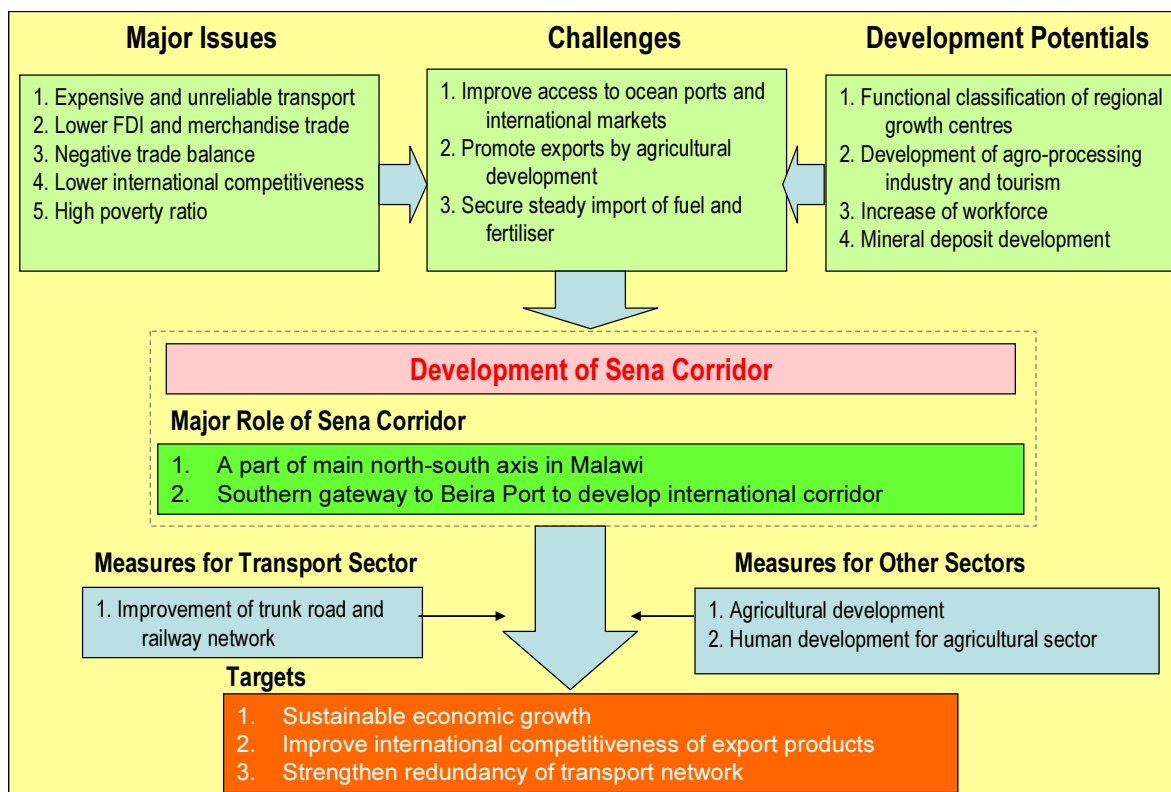
This target will be achieved by providing a choice of route or mode for transporting export products to reduce transport costs.

c) Strengthen the redundancy of the transport network

This target will be achieved by improving alternative networks to reduce risk and improve national security.

(8) Necessity of Developing the Sena Corridor to Achieve the Development Potentials in Malawi

The relationship between development potentials and major issues in Malawi, and the necessity of the Sena Corridor are schematically illustrated in Figure 5-8. The Sena Corridor needs to be developed in order to: i) achieve sustainable economic growth, ii) improve the international competitiveness of export products, and iii) strengthen the redundancy of the transport network.



Source: Study Team

Figure 5-8 Necessity of Developing the Sena Corridor to Achieve the Development Potentials in Malawi

5.2.3 Development Potentials and Major Issues in the Study Area related to the Sena Corridor

The Study Area has various development potentials. Table 5-4 summarises the development potentials, major issues and challenges in achieving the potentials.

Table 5-4 Development Potentials and Major Issues in the Study Area

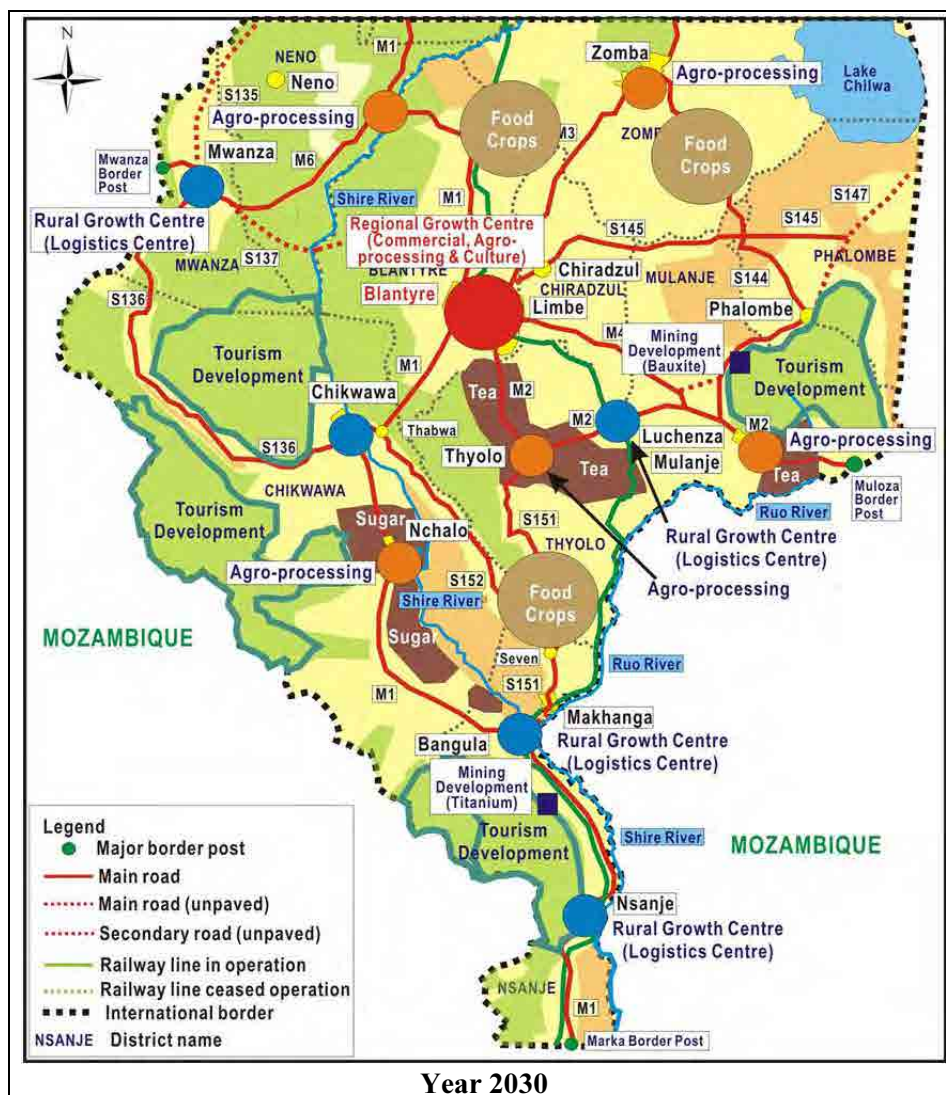
Major Issues	Challenges	Development Potentials
1. Highest poverty ratio in Malawi. 2. Economic disparity by area 3. Expensive logistics cost with long detour to an ocean port. 4. Disconnection of transport network.	1. Improve access to ocean ports and international markets. 2. Promote exports by agricultural development. 3. Secure the steady import of fuel and fertilizer. 4. Accelerate mobility of people and logistics to/from Blantyre. 5. Improve access in the Study Area.	1. Increase production of cash crops (sugar, cotton). 2. Promote function as food supply centre in Malawi. 3. Develop Blantyre as commercial and agro-processing centre. 4. Develop agro-processing industry, mining and tourism to attract more FDI. 5. Increase of workforce.

Source: Study Team

(1) Development Potentials

The development potentials in the Study Area analysed from various development programmes are summarised below (refer to Chapter 2):

- 1) Several projects with a target year of 2015 under PSIP are listed to encourage regional development in the Southern Region to achieve the MGDS targets, such as cotton development programmes and promotion of fruit production. Figure 5-9 schematically illustrates the areas where investment is expected following the present PSIP. Since Blantyre serves as the commercial and agro-processing centre in Malawi, the district centres in the Southern Region will serve as rural growth centres to support Blantyre.
- 2) Cotton development programmes under PSIP are underway in Chikwawa and Nsanje Districts to strengthen both agricultural productivity and agro-processing, together with irrigation projects under the Green Belt Initiatives. Since the climate in these two districts is suitable for cultivating cotton, this offers good potential for regional development.
- 3) Illovo Sugar Ltd. has been expanding its estate to increase production from 100,000 tonnes at present to 400,000 tonnes in 2020. This will increase job opportunities for local residents. At present, Illovo Sugar Ltd. employs about 7,000 workers.
- 4) There are deposits of bauxite at Mulanje, the development of which could greatly boost the regional economy in Mulanje District.
- 5) Construction of a new railway (138 km) and rehabilitation of the existing railway (99 km) by Vale (Chikwawa, Muwanza and Neno District), and development of the Shire–Zambezi Waterway Transport to/from Nsanje International Port will create job opportunities in related areas.
- 6) High population growth (2.4% per annum in the Southern Region) will increase the workforce.



Source: Study Team

Figure 5-9 Future Regional Development Potentials in the Study Area

(2) Major Issues in the Study Area

Based on analyses of economic activities and site conditions, the major issues for regional development in the Study Area are as follows:

- 1) The per-head poverty ratio is highest in Nsanje District, followed by other districts in the Study Area (see Chapter 2).
- 2) For transporting agricultural products, including sugar and cotton from Chikwawa and Nsanje Districts, there are logistics problems such as the steep gradient of the M1 road with risks of traffic accident and breakdown, and transshipment is necessary if the railway is used to transport products to an ocean port. These increase transport costs.
- 3) The railway and road networks are disconnected at Chiromo where embankments of both transport modes were washed away by flood in 1997.
- 4) Since the washaway of the railway line and road at Chiromo, the lives of people on the eastern side of the washaway section have become difficult, giving rise to economic disparity between the two sides of the washaway section (see Chapter 2).

(3) Challenges in the Study Area

Challenges for regional development in the Study Area are as follows:

a) Improve access to ocean ports and international markets

Since the main industry in the Study Area is export-oriented agriculture, a top-priority challenge is to improve access to ocean ports and international markets by improving the transport network from the Study Area.

b) Promote exports by agricultural development

To maintain GDP growth, it is necessary to boost exports by agricultural development, including cash crops and processed agricultural products.

c) Secure steady import of fuel and fertilizer

Fuel (petroleum, diesel oil and paraffin) and fertilizer are mainly imported from RSA. Their prices are high because of long-haul transportation and unreliable deliveries. Hence, it is necessary to secure steady import of fuel and fertilizer by improving the transport network.

d) Accelerate mobility of people and logistics to/from Blantyre

It is necessary to improve access for people and logistics to/from Blantyre to accelerate economic activity in the Study Area, by improving main and secondary roads and the railway line.

e) Improve access in the Study Area

To accelerate economic activity in the Study Area, it is necessary to improve access from communities to a market or main road, such as the secondary road network or railway line.

(4) Measures for the Transport Sector

Several transport network development programmes are either underway or planned in the Study Area. When these projects are completed, the functions of the Nacala Corridor, and main/secondary roads in the Study Area will be improved.

(5) Measures for Other Sectors

1) There are several agricultural development programmes, such as the cotton development programmes in Chikwawa and Nsanje Districts with a target year of 2015 under PSIP to encourage agricultural cultivation and the development of the agro-processing industry at present. The Green Belt Initiatives will also provide irrigation systems in areas lacking sufficient water for farming.

2) Illovo Sugar Ltd. plans to expand its estate with its own investment.

(6) Major Roles of the Sena Corridor

At the Study Area level, the major roles of the Sena Corridor are as follows:

a) Nearest Route to Beira Port

The Sena Corridor is the nearest route to Beira Port, assuming that it is improved.

b) Main Access Route to Blantyre from Rural Growth Centres

M1, S151 and the branch line of the Sena Railway will serve as access routes to Blantyre from rural growth centres in Chikwawa, Nsanje and Thyolo Districts.

(7) Targets Achieved by Developing the Sena Corridor

At the Study Area level, the targets to be achieved by developing the Sena Corridor are as follows:

a) Sustainable Economic Growth of Malawi

This target will be achieved by providing a stable and multi-modal transport corridor network for the export and import of products.

b) Poverty Alleviation

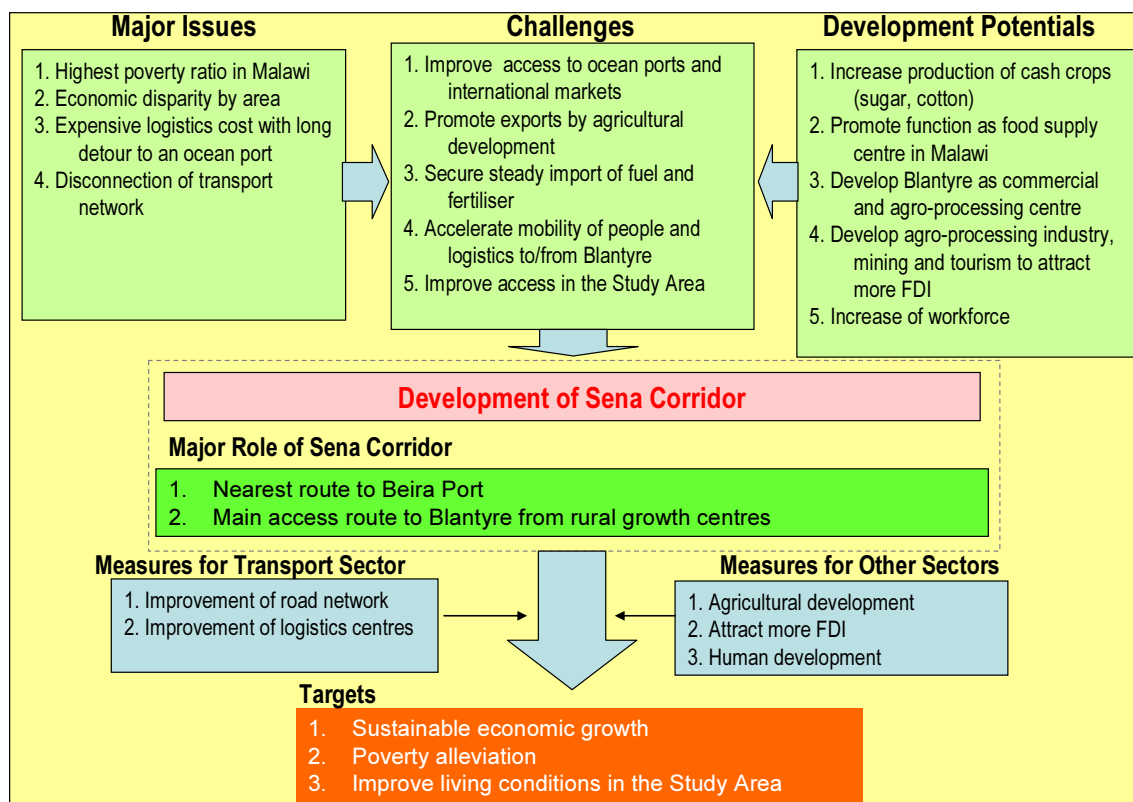
This target will be achieved by eliminating obstacles to poverty alleviation, such as poor infrastructure, particularly in Chikwawa, Nsanje and Thyolo Districts, to accelerate poverty alleviation by increasing household income in the Study Area.

c) Improvement of Living Conditions in the Study Area

This target will be achieved by improving mobility to a rural growth centre or Blantyre mainly from rural parts of the Study Area.

(8) Necessity of Developing the Sena Corridor to Achieve the Development Potentials in the Study Area

The relationship between development potentials and major issues in the Study Area, and the necessity of the Sena Corridor are schematically illustrated in Figure 5-10. The Sena Corridor needs to be developed in order to: i) achieve sustainable economic growth, ii) alleviate poverty, and iii) improve living conditions in the Study Area.



Source: Study Team

Figure 5-10 Necessity of Developing the Sena Corridor to Achieve the Development Potentials in the Study Area

5.2.4 Necessity of Developing the Sena Corridor

The necessity of developing the Sena Corridor for Southeastern Africa, the whole of Malawi and the Study Area is summarized in Table 5-5 considering the basic concept and the targets of developing the Corridor.

Table 5-5 Necessity of Developing the Sena Corridor

Area	Necessity
Southeastern Africa	<ul style="list-style-type: none"> • Huge demand for transporting mineral products to Nacala Port from the Moatize coal mine and Zambian copper mine is expected. The railway transport capacity of Malawi is limited to 2 million tonnes per year. • Beira Port accounts for 59% and the Tete Corridor for 62% of Malawi's export and import cargo. The lack of alternative routes accessible to Beira Port may negatively impact Malawi's economy.
Malawi	<ul style="list-style-type: none"> • Since roads handle 87% of Malawi's international cargo, it is necessary to shift to a multimodal transport system that includes roads, railways and inland waterways. • With the change of port business environment, Malawi's cargo handled at Durban Port is expected to shift to both Beira Port and Nacala Port. Thus, since the distance will be about one third, it is necessary to improve access to both ports in order to contribute to international competitiveness. • To secure the sustainable economic growth of Malawi and alleviate poverty, it is indispensable to build links among residential areas, markets and centres of industry.
Study Area	<ul style="list-style-type: none"> • Both domestic and international freight demand will increase owing to the increase of population and agricultural products, as well as mining development. Based on the characteristics and advantages of road and railway transport, it is necessary to formulate an efficient transport network that strategically meets these freight demands. • After formulating an efficient transport network, road transportation of exported sugar to Zimbabwe could be shortened by around 180 km and the altitude between the sugar factory and the international border connecting the Tete Corridor could be decreased by around 200 m. • The splitting of communities due to the disconnections reduces incomes and increases expenses for poor populations who face difficult access to markets. It is necessary to improve access to the commercial centres, rural centres and markets.

Source: Study Team

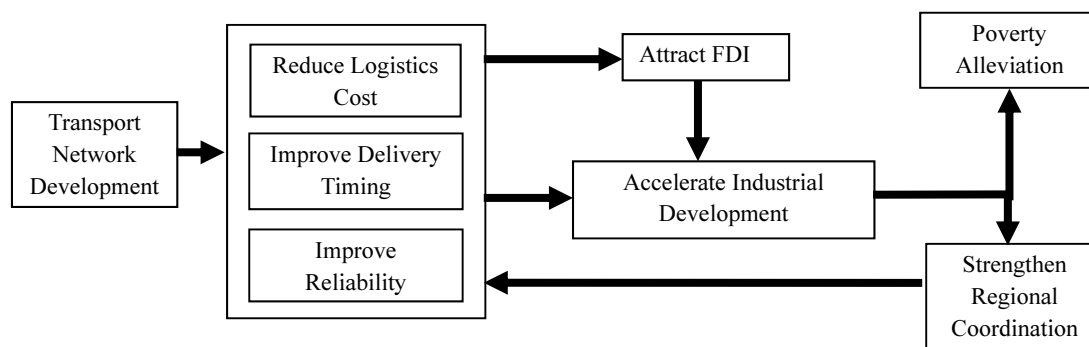
5.3 Basic Concept of Developing the Sena Corridor

5.3.1 Basic Concept of Developing the Sena Corridor

The basic concept of developing the Sena Corridor is to: i) achieve the regional development potentials, ii) address issues related to the transport network and iii) promote regional development in the Study Area. Figure 5-11 illustrates the ideal image development of the transport network. The key is to attract FDI for industrial development and poverty alleviation through regional coordination by improving the transport network.

Based on this image as well as the analyses for development of the Sena Corridor described in Section 5.2, the basic concept for development of the Sena Corridor to improve regional integration in Southeastern Africa, ensure sustainable economic growth in Malawi and alleviate poverty in the Study Area is proposed as shown in Figure 5-12.

The basic concepts and final development goal for the Sena Corridor are as follows.



Source: Study Team

Figure 5-11 Ideal Image of Development of the Transport Network

(1) Basic Concept

- a) For Southeastern Africa: Development of infrastructure network to support economic integration in Southeastern Africa

Economic integration under the SADC Treaty can be achieved through sustainable economic growth in the countries of Southeastern Africa by exporting products through the international corridors. The Sena Corridor will be a part of the infrastructure network developed in Southeastern Africa.

- b) For Malawi: Development of Arterial Transport Network to Support Efficient Export and Import

M1 and the branch line of the Sena Railway are part of the north-south axis of Malawi, which is a major arterial transport network used for efficiently exporting and importing products. Improved export and import routes will attract more FDI because of lower transport costs and improved reliability of transporting materials and products for investment.

- c) For the Study Area: Development of Transport Network to Alleviate Poverty

The main roads, secondary roads and the branch line of the Sena Railway are the main transport networks in the Study Area. If these transport networks are rehabilitated, people will gain easier access to markets and work places. This will give them opportunities to earn income, and thus escape from poverty.

(2) Development Goals

- a) Sustainable economic growth and poverty alleviation

The development goals of the Sena Corridor are sustainable economic growth and poverty alleviation in Malawi and the Study Area by improving the inadequate transport network and boosting regional development.

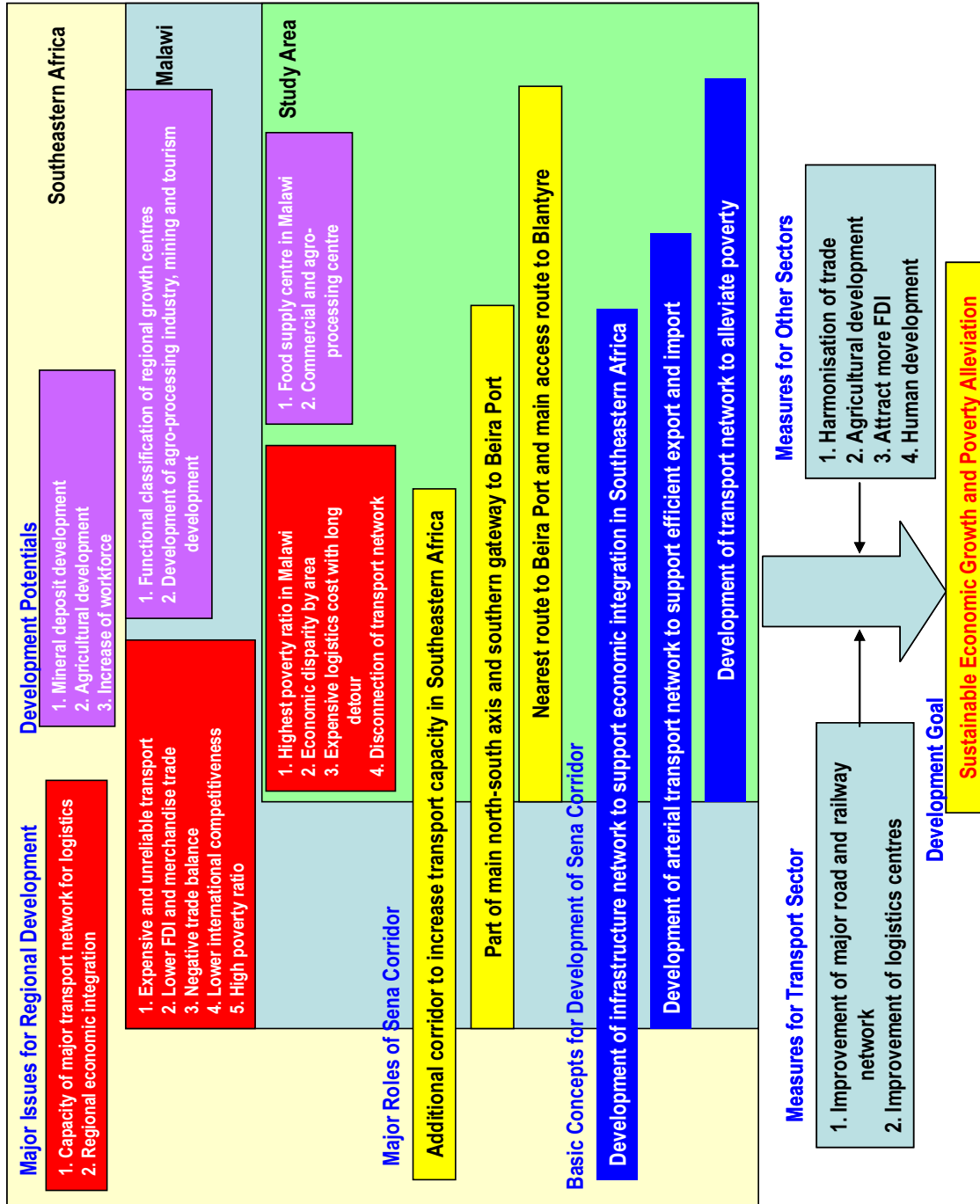


Figure 5-12 Basic Concept for Development of the Sena Corridor

Source: Study Team