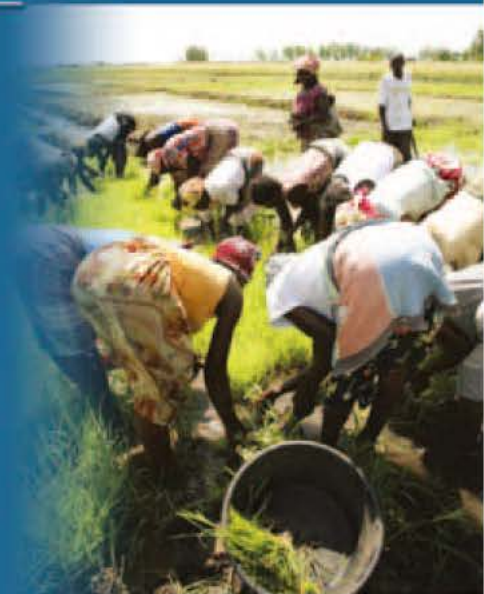




Southern Africa

Growth Belt

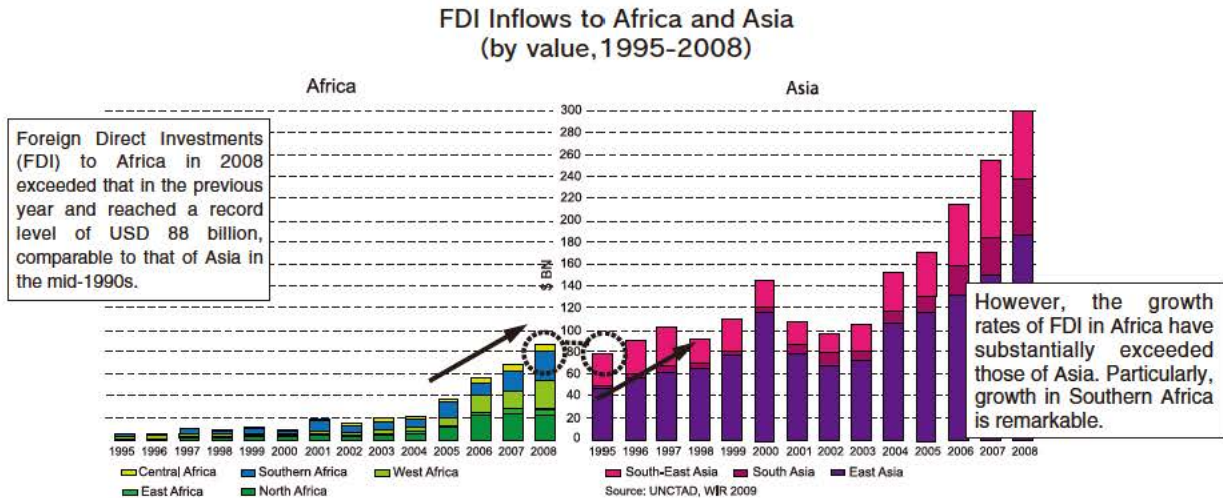
— Integrated Regional Transport Program —



1. Why Southern Africa Now?

Africa's Economy is Where Asia was 15 Years Ago

While 34 of the world's poorest 48 nations are in Africa, recent growth in foreign direct investment (FDI) suggests that the continent is becoming increasingly competitive, analogous to the experience of Asia 15 years ago. In particular, economies in Southern Africa grew significantly over the last decade. The region's abundance of natural resources (e.g., minerals, energy) and its productive agricultural sector has led to exponentially increased trade with emerging market partners such as China, India, and Brazil. However, while the region's balance of trade is moving in a favorable direction, inadequate transport (as well as energy and information and communications technology) infrastructure poses a major bottleneck to the region's achieving its full growth potential.



2. What Will be the Desirable Growth Scenarios?

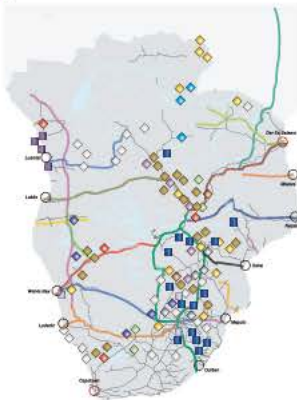
Pursue Expansion and Diversification of the Regional Economy

While the existing economy in Southern Africa is dependent on exporting mineral output and trade with South Africa, the region offers development potential in agriculture, service, and manufacturing, which may contribute to expansion and diversification of the regional economy.

Scenario A)
Growth Led by Mineral Resources Development

Key Strategies

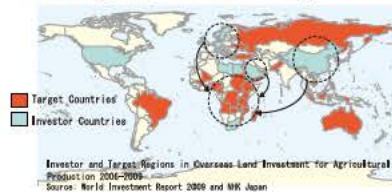
- Revitalize mineral resource development in Angola, Botswana, the DRC, and Zambia.
- Develop basic infrastructure (electric power, transport) and induce investment in manufacturing (both processing and assembly) as well as other sectors (agriculture, forestry and tourism).
- Specifically, promote public and private investment in energy development projects (e.g., thermal power, hydroelectric power, gas) in order to secure electric power supplies.



Scenario B)
Growth through Intra-Regional Trade

Key Strategies

- Utilize the regional trade potential of South Africa. Through local procurement of raw materials, agricultural products and services of South African companies, increase productivity and income of neighboring countries.
- Promote regional trade centered around trade with South Africa leading to increased productivity and income through local procurement (e.g., of raw materials including agricultural products, services) by South African companies.
- Expand intra-regional trade that does not go through South Africa, including trade in agricultural products and livestock, intermediate goods, and consumer goods.



Global interest in agricultural resources in Southern Africa can be seen from the map above showing overseas land investments for agricultural production.

Scenario C)
Diversification and Advancement of the Industrial Structure through Global Trade

Key Strategies

- Streamline institutions to facilitate trade and infrastructure and diversifying and sophisticating the industrial structure by utilizing export process zones, free-trade zones, industrial parks, and large-scale farms which exercise prominent cooperation with local industries.
- Diversify inter-regional exports, specifically promote exports to emerging markets such as China, India and Brazil.
- While utilizing foreign direct investments (FDIs) from countries with strong commercial ties, such as China and India, conduct necessary improvements for the business environment.

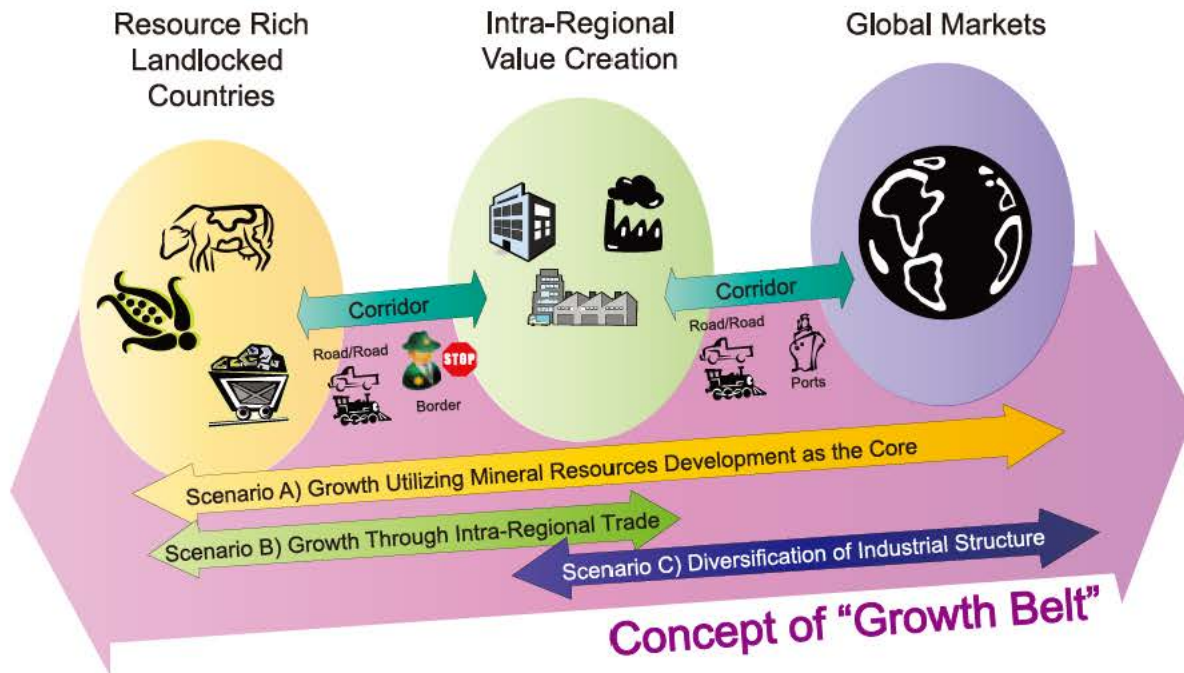


Trade with Brazil, India and China are not only limited to raw natural resources, but also include intermediary commodities and end consumer products, suggesting the diversification of trade.

3. Corridors are Key for Growth

Corridors Connect and Diversify the Regional Economy





The existing 18 corridors in the region connect local mineral and agricultural resources with the global markets. The study proposed re-defining the role of regional economic and transport corridors according to growth scenarios (strategies), building on the growth belt concept, which encompasses the integration of resources, value creation, and global markets.



4. Bottlenecks to Growth Belt Development

Various Hard (Physical) and Soft (Institutional) Bottlenecks to Address

The existing bottlenecks along each corridor are explained in detail on the next page and can be categorized as follows:

<p>ROADS</p>  <p>Roads in the major corridors are being improved with support from various international development partners. However, there have been difficulties in maintaining pavements at serviceable levels.</p>	<p>RAILWAYS</p>  <p>Railways have been deteriorating. The privatization of railways has resulted in extremely long waiting times at ports before cargo can be loaded on trains, hence causing extremely low productivity.</p>	<p>PORTS</p> <p>The performance of the region's ports has been poor. The ports are always congested since cargo handling capacity lags growing demand. Import and export procedures require considerable time, and the detention of goods at ports has become a major obstacle to efficient distribution.</p> 
<p>BORDER FACILITIES</p> <p>Clearance times vary at the major border crossings from one to five days. Transporters need to cross several borders between ports and landlocked destinations. One-Stop Border Post (OSBP) services enhancing administrative processes were initiated at Chirundu (Zambia – Zimbabwe) in December 2009 with assistance from JICA and the U.K. Department for International Development (DFID). Other border crossings may also benefit from OSBP implementation and associated improvements.</p>	<p>REGION-WIDE REGULATIONS</p> <p>Transporters are required to pay different fees and charges to each government along a corridor. Regional economic communities (RECs) facilitating intra-regional trade are working to lower and integrate such regulations and taxes in order to reduce transport costs.</p> 	

5. Distribution of Regional Resources and Corridors

The Study Team identified potential elements for growth including mineral and natural resources and agro products along the 18 corridors in the ten countries. The following chart summarizes the geographic distribution of resources and the relation between these elements, which offer the potential for realizing a growth belt in each corridor.

Mineral and Natural Resources

-Mineral and energy resources such as coal, uranium, and copper conglomerate are found along a vertical North-South axis through the DRC, Zambia, Zimbabwe, and South Africa, and including the Copperbelt.

The following percentages of global reserves exist in the Southern Africa Region:

- 22% of Copper
- 40% of Cobalt
- 87% of Platinum
- 58% of Diamond
- 32% of Vanadium
- 40% of Chrome
- 10% of Nickel

Agricultural Resources

-High production in staple products such as maize, sugarcane, cassava, dairy products, potatoes, and seed cotton in the region including DRC, Tanzania, Mozambique, Malawi and South Africa. Particularly in Malawi, 85% of the population is employed in Agriculture and generates over 90% of export earnings.

-Some countries in Southern Africa have high shares of agricultural FDI inflows

-Large-scale land acquisitions are occurring in the region, including in Angola, the DRC, Tanzania, and, Zambia



Nacala Cashew Farm

1 Tripoli-Windhoek Corridor

Potential Resources :
Countries Traversed : Angola, DRC, Namibia
Situation and Challenges :
 -Long border crossing times
 -Missing links in the road network

2 Malange Corridor

Potential Resources :
Countries Traversed : Angola
Situation and Challenges :
 -Extensive rehabilitations conducted by Chinese firms

3 Lobito Corridor

Potential Resources :
Countries Traversed : Angola, DRC, Zambia
Situation and Challenges :
 -Rehabilitation required for Lobito rail link linking the port with the DRC/Zambia Copperbelt
 -Repair and development of mines following the extended conflict in the DRC has been hampered by the lack of reliable transport to the sea

4 Namibe Corridor

Potential Resources :
Countries Traversed : Angola
Situation and Challenges :
 -Much anticipation for the repair of rail connections and the reopening of iron ore mines in Angola

5 Trans-Cunene Corridor

Potential Resources :
Countries Traversed : Namibia, Angola
Situation and Challenges :
 -Long Border crossing times at Oshikango/Santa Clara (3-5 days) due to complicated customs clearance processes
 -Although major volumes of freight traffic move over 1,000 km along this corridor between the Port of Walvis Bay and highly populated regions in Angola, the corridor railway link is available only for 850 km within Namibia

6 Trans-Kalahari Corridor

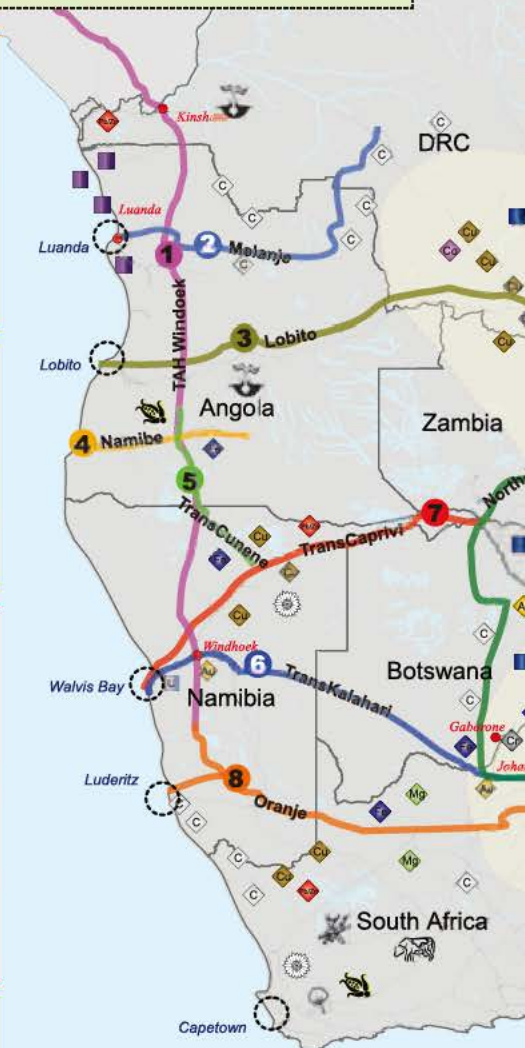
Potential Resources :
Countries Traversed : Namibia, Botswana, South Africa
Situation and Challenges :
 -Roads in relatively good condition although road traffic volumes are not especially high
 -Currently railway service is available only between the Port of Walvis Bay and Gobabis in Namibia
 -Rapidly increasing container traffic at the Port of Walvis Bay expected to exceed the current terminal capacity in the short term

7 Trans-Caprivi Corridor

Potential Resources :
Countries Traversed : Namibia
Situation and Challenges :
 -Railway link available only for 600 km from the port to Grootfontein
 -Congestion at the Port of Walvis Bay container terminal is expected to become an issue in the near future

8 Oranje Corridor

Potential Resources :
Countries Traversed : Namibia, South Africa
Situation and Challenges :
 -Since the large iron ore mines at Sishen are already served by the dedicated Sishen-Saldanah rail line, the potential benefits from developing this corridor may not be as high as others



Countries

-The region has 10 countries, a population of 230 million, and a total GDP of USD 570 million.

-Mineral resources are found extensively in the region's four landlocked countries, which creates a challenge for the transport system.



9 Central Corridor

Potential Resources :

Countries Traversed : Tanzania, Uganda, Rwanda, Burundi

Situation and Challenges :

- A significant shortage of railway rolling stock as well as damaged railway track threatens railway transport capacity
- The railway route to Uganda is not functioning due to the suspension of wagon ferry operation on Lake Victoria
- Delay and congestion at the container terminal at Port of Dar es Salaam

11 Cairo-Gabarone Corridor

Potential Resources :

Countries Traversed : Tanzania, Malawi

Situation and Challenges :

- The road standard is not high except in Egypt and along the southern sections of the corridor
- Most of the traffic along the route is local rather than long-distance or international

13 Mtwara Corridor

Potential Resources :

Countries Traversed : Tanzania, Malawi

Situation and Challenges :

- High potential for mining, but small port and out-of-service rail line linking the main agricultural areas to the port may be a bottleneck

15 Shire-Zambezi Corridor

Potential Resources :

Countries Traversed : Mozambique, Malawi

Situation and Challenges :

- With many river sections having depths of less than 1 m, extensive capital dredging is required for effective regional inland water transport
- Lack of an international port at the estuary

17 Beira Corridor

Potential Resources :

Countries Traversed : Mozambique, Zimbabwe

Situation and Challenges :

- No financing for Corridor road, which has a long unpaved section
- Sena Railway Line under rehabilitation /reconstruction
- Only small feeder vessels able to enter the Port of Beira

10 Dar es Salaam (TAZARA) Corridor

Potential Resources :

Countries Traversed : Tanzania, Malawi, Zambia

Situation and Challenges :

- Nakonde/Tunduma border crossing busy with long border crossing times (4-5 days)
- Deterioration of road conditions caused by heavy mineral transport
- Decreasing rolling stock availability on the TAZARA Line
- The long clearance time at the Port of Dar es Salaam
- Long dwell time at the container terminal (26 days)

12 North-South Corridor

Potential Resources :

Countries Traversed : South Africa, Zambia, Zimbabwe, Botswana, DRC

Situation and Challenges :

- The only missing road (bridge) link is currently at the Kazungula border crossing
- Long border crossing time (1-2 days) at Chirundu and Beitbridge addressed by ongoing projects
- Long border crossing times at Kasumbalesa, between Zambia and the DRC
- Railway operated inefficiently due to issues related to "hard" infrastructure and operations

14 Nacala Corridor

Potential Resources :

Countries Traversed : Mozambique, Malawi, Zambia

Situation and Challenges :

- Trunk route to the port currently serves low traffic volumes
- Most road sections unpaved and/or have high roughness levels
- Low railway operation speed and capacity due to track deterioration
- Traffic at the port is expected to increase rapidly beyond its current capacity

16 Limpopo Corridor

Potential Resources :

Countries Traversed : Mozambique, Zimbabwe

Situation and Challenges :

- Served by the rail line from Zimbabwe to Mozambique. The Mineral Sands Project in Mozambique will benefit from the Corridor

18 Maputo Corridor

Countries Traversed : South Africa, Mozambique

Situation and Challenges :

- Long border crossing time
- The limited depth and sedimentation of the Port of Maputo causes delays in port clearance

6. Prioritization of Corridors

An Effective Combination of Regional Resources and Corridors

Prioritization is necessary to realize the growth belt concept. The JICA Study Team analyzed the potential for integration of essential elements along each of the 18 corridors in terms of (i) contribution to growth scenarios, (ii) cost-benefit, and (iii) socio-economic impact in order to propose eight candidate growth corridors.

Corridor Development Analysis

Evaluation of Corridors on Contributions to Growth Scenarios

- Scenario A
- Scenario B
- Scenario C

Benefit/Cost Analysis

Benefit/Cost Score =
 Traffic Score ×
 (Benefit Score) ÷
 (Cost Score)

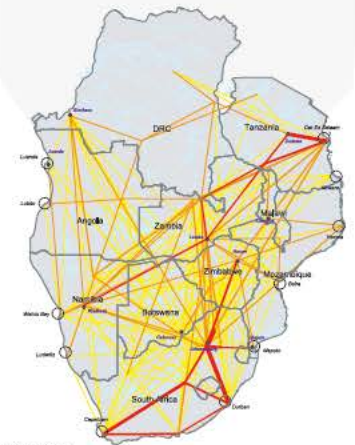
Socio-Economic Indicator Analysis

Each of the below factors were analyzed for each Country traversing the subject corridors.

- Demographic Potential
- Scale of Economy
- Governance
- Business Environment

Origin-Destination (OD) Analysis

Forecasting of traffic ODs based on OD sur-



2009

7. Proposal for “8 Growth Belt” Implementation

Short-Term and Long-Term Development Strategies

Short-Term Projects: To commence by 2012 Long-Term Projects: To be completed by 2020

A Lobito Corridor

Priority Sectors : Port and Railway

Development Direction :

Long term

Short-term projects are considered difficult for the Lobito Corridor due to a lack of institutional readiness. However, over the long term, the Lobito Corridor is essential as an outlet for the Zambian mining sector, and there are substantial potential benefits from rehabilitating the North-East Zambian Route



Port of Walvis Bay

B Trans-Caprivi Corridor

Priority Sectors : Port and Railway

Development Direction :

Short term

Container terminal development at the Port of Walvis Bay

Long term

Construction of a proposed railway



Kazungula Ferry

C North South Corridor

Priority Sectors : Bridge (Roads), Border Posts, and Railway

Development Direction :

Short term

Bridge construction and OSBP development along the road corridor

Implementation of measures to improve railway operations

Long term

Improvements of railway capacity through both hard and soft infrastructure measures



Trans-Kalahari / Mamuno Border

D Trans-Kalahari Corridor

Priority Sectors : Port and Railway

Development Direction :

Short term

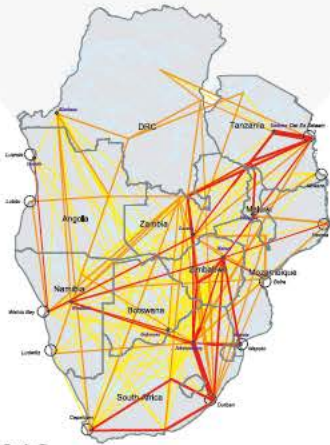
Undertake the first phase of construction of the container terminal at the port of Walvis Bay after the completion of the ongoing feasibility study

Long term

Extend the railway along the corridor
 Develop a new coal terminal at the port for the export of coal from Botswana



veys conducted at 10 border posts.



2019

Prioritization Process



Corridor Prioritization

- HIGH**
- Maputo Corridor
 - North-South Corridor
 - Dar es Salaam (Tazara) Corridor
 - Beira Corridor
 - Nacala Corridor
 - Trans-Caprivi Corridor
 - Trans-Kalahari Corridor
 - Lobito Corridor

- MED**
- Melange Corridor
 - Oranje Corridor
 - Trans-Cunene Corridor
 - Shire-Zambezi Waterway
 - Mtwara Corridor

- LOW**
- TAH Tripoli-Windhoek Corridor
 - TAH Cairo-Gaborone Corridor
 - Limpopo Corridor
 - Central Corridor
 - Namibe Corridor



E Dar es Salaam (TAZARA) Corridor

Priority Sectors : Port, Railway, and Border Post
Development Direction :

Short term

Rolling stock to improve railway service, streamlined port procedures, and rehabilitation of deteriorated road sections

Long term

Increase railway capacity to facilitate a shift of heavy minerals from road to rail

F Nacala Corridor

Priority Sectors : Railway, Port, and Road
Development Direction :

Short term

Rehabilitate roads and undertake feasibility studies for railway track rehabilitation

Long term

Rehabilitate of corridor railway and improve the port. Border post improvements should follow road improvements and the development of traffic



G Beira Corridor

Priority Sectors : Railway and Port
Development Direction :

Short term

Dredging at the Port of Beira
Rehabilitation of the Sena Railway Line with FS of unpaved road sections traversing major production areas, followed by basic and detailed design studies

Long term

Reduce railway and road transport time and costs including the implementation of OSBP



H Maputo Corridor

Priority Sectors : Border Post and Port
Development Direction :

Short term

Approaches to reducing the border crossing time

Long term

The physical development of the Port of Maputo and/or an alternative port in the vicinity of Maputo as well as an improvement in port operation systems





The Fourth Tokyo International Conference on African Development (TICAD IV) held in May 2008 emphasizes the importance of regional infrastructural development for the acceleration of economic growth in Africa. From such perspectives, the Japan International Cooperation Agency (JICA) has conducted a study for formulating desirable regional transport programs in Southern Africa, which has the highest cross-border traffic in Africa and significant potential for further economic growth due to its abundant mineral resource deposits.

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Photo Descriptions
(Front Cover – Clockwise from Top Corner)
Port of Nacala (Mozambique)
Farmers in Mozambique
Cassava Market in Luanda (Angola)

(Back Cover)
Road along the Nacala Corridor