

# REGIONAL DEVELOPMENT CORRIDORS AND SPATIAL DEVELOPMENT INITIATIVES – SOME CURRENT PERSPECTIVES ON POTENTIALS AND PROGRESS

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## **1. Introduction**

This paper has been prepared for the South African Transport Conference. The purpose of the paper is to provide a brief overview of development prospects, projects and progress in respect of selected regional development corridors in southern Africa<sup>1</sup>.

The various development corridor initiatives need to be viewed against the backdrop of a number of socio-economic imperatives that are facing the SADC member states<sup>2</sup>. They include the following:

- The need to increase the rate of economic growth in the region.
- The need to develop the regional economy in a manner that would render it far more diversified, stronger, and internationally competitive.
- The need to significantly speed up the rate of employment creation, both formal and informal. Related to this is the need to create jobs that are sustainable in the long term.
- The need to create viable business opportunities for small and medium scale entrepreneurs (SMEs). (Particularly in context of the formal sectors increasing inability to generate permanent jobs.)
- The need to identify policies and strategies, and support projects and programmes, which will provide a sustainable basis for empowering local communities.
- The need to derive sustainable strategies and programmes to facilitate the rehabilitation and expansion of the region's infrastructure networks and facilities, and also to improve on the quality and reliability of the logistical services provided in terms of such infrastructure and facilities.
- The need to mobilise/secure far greater levels of private sector investment and lending in support of the broader socio-economic development process.

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<sup>1</sup> *The focus of this paper has, in context of this particular conference, been placed on the regional development corridors/SDIs that are underpinned to a significant degree by transportation development.*

<sup>2</sup> *The Southern African Development Community (SADC) is an economic grouping of fourteen countries, namely, Angola, Botswana, Democratic Republic of the Congo (DRC), Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. The primary objective of the SADC alliance is to promote economic growth and development, to alleviate poverty, enhance the standard and quality of life of the peoples of Southern Africa and support for the socially disadvantaged through regional integration.*

- The need to develop an integrated and coherent framework and strategy within which private and public sector, as well as donor support can be successfully mobilised to support economic reform and socio-economic development.
- The need to develop efficient and effective planning and decision-making processes in support of macro-economic growth and socio-economic development at national and regional level.

It is within the context of the above mentioned issues (the list is by no means comprehensive), that the rehabilitation of the regional transport corridors, and the further development of these transport corridors into diverse multi-sectoral development corridors based on the principles and strategies applied in Spatial Development Initiatives (SDI) programme has become a very high strategic development priority. The successful implementation of the Maputo Development Corridor had the effect of boosting support within SADC for the concept of multi-sectoral economic development corridors and for the particular planning and investor mobilisation approach embodied in the SDIs.

This paper, takes a brief look at the background issues and trends that underpin the development corridor initiatives in Southern Africa, and the key principles and strategies that are fundamental to the SDI approach. The paper also provides a brief overview of selected regional development corridors where the transportation infrastructure networks are a key component. In this overview the emphasis is placed on highlighting some of the main economic and infrastructure development projects that are currently being considered as the 'anchor projects', as well as commenting on the degree of progress being achieved. In the final part of the paper, an assessment is made of some of the key observations and issues arising from the various development corridor initiatives, and where appropriate certain proposals in support of these initiatives are put forward.

## **2. SADC economic priorities**

The economic vision of SADC is to transform the fourteen countries of Southern Africa from operating as individual fragmented markets into a single integrated vibrant and globally competitive market characterised by free movement of goods, services, capital and labour. To translate this vision into reality, the SADC countries have negotiated, amongst other things, a series of "Protocols" or legally binding regional agreements that define the framework and mechanisms for achieving such integration<sup>3</sup>.

The SADC Member States support the principle and strategy of closer economic cooperation as a means of promoting economic development within the context of the global economy. In this regard there are a number of perceived socio-economic development opportunities and benefits.

Amongst the main key *economic development opportunities* that would arise from regional integration are the following: *Firstly*, the diversification of the regions industrial base based

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<sup>3</sup> *Two of the key Protocols are the Protocol on Trade and the Protocol on Transport, Communications and Meteorology (Protocol on TCM). In terms of the latter protocol, the vision for infrastructure development in Southern Africa is to create a seamless, integrated, efficient, cost-effective and responsive transport and communications system that is characterised by partnership between the public and private sectors and that acts as a catalyst for (as well as accelerates) the goal of socio-economic growth and integration for the region.*

on each countries inherent development potential and related comparative advantages<sup>4</sup>. *Secondly*, regional industrial specialisation, and particularly specialised regional processing activities (that can take place as a result of the larger regional market)<sup>5</sup>. *Thirdly*, a regional approach to the mobilisation of FDI. Foreign direct investment is more likely to be attracted to the region within the context of larger markets, and an economic policy and strategy framework that is regionally integrated and collaborative. *Fourthly*, the sharing of the regions training and capacity building skills for the wider benefit of the southern African members.

The key *economic benefits* that are to be derived for the SADC Member States from a regionally cooperative and integrated approach are seen to include enhanced scale economies; the promotion of competition and innovation at a regional level; providing a stimulus to investment and productivity; the institutionalisation of conflict management; and enhanced bargaining in international fora. Further benefits include a reduced dependence on primary product exports; as well as scale gains from implementation of large regional projects; reduced economic disparities and inequities among Southern African countries; and improved economic management and performance through regional cooperation.

### **3. From regional transport corridors to regional development corridors**

If one looks back at the original set of objectives of the Maputo Development Corridor initiative it is evident that from the outset the strategists promoting the initiative were not solely concerned with the re-establishment of the historical transport corridor. Whilst the initial infrastructure anchor projects were strategically vital in their own right, they had further strategic importance because of their ability to support the broader socio-economic development process. One of the key achievements of initiatives like the Maputo Development Corridor was the impact it achieved in assisting/facilitating the development of new, or expansion of existing economic opportunities, and as such supporting the establishment of a development corridor.

### **4. The SDI approach – key principles and strategies.**

There are a number of key principles that underpin the SDI approach, and it is the application of these principles that appears to have been largely responsible for the level of success achieved with the programme.

#### **Co-operation, collaboration and integration in terms of economic policy and strategy.**

Prior to the political changes in South Africa, the rest of the region had not been able to design and implement collaborative and integrated economic policies and strategies that included South Africa. On the contrary, South Africa's 'pariah' status had the effect of forcing the South African economy to be managed as a closed economy (i.e. import

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<sup>4</sup> *The lack of diversified industrial development in the southern African countries has been a key impediment to enhanced regional trade. Opportunities for the development of value added production is particularly important. Such processed products fetch higher prices in the markets, and are less vulnerable to the price instabilities that effect primary commodities. The potential for regional integration will remain limited as long as economies are dependent on a limited number of often similar commodities for export. In this regard it is important to consider opportunities for trade in the "non-traditional" tradables including water and energy, both of which are becoming increasingly scarce in the region.*

<sup>5</sup> *Most of the countries in southern Africa have small domestic markets and low purchasing power.*

substitution rather than export oriented growth), and at the same time making it very difficult for any of the neighbouring economies to proactively integrate their economies with that of South Africa's, (which was also by far the largest in the region).

With a democratic government coming into power in South Africa, the political obstacles were removed, and immediately there was increased emphasis from all members of SADC to move towards greater regional integration of economic and development policies and strategies.

### ***Focus on existing transportation/development corridors***

There are two main aspects to note in this regard. *Firstly*, the Regional Development Corridors have been selected as priorities for public sector support (financial, technical and political) specifically because of their inherent, but currently under-utilised potential for sustainable economic development. The SDI concept cannot simply be applied anywhere – the long-term sustainability and success of the Development Corridors depends to a significant degree on the existence of proven, inherent, un/under-utilised economic development potential. As such, for development corridors to be developed in a manner that is sustainable in the long term, they need to reflect and be built around the characteristics of the economy in the corridors hinterland.

*Secondly*, the selected regional corridors are not new creations. In all cases there is a particular emphasis placed on the rehabilitation and/or expansion of existing transportation and economic infrastructure, and on enhancing the operational efficiency and effectiveness. These transportation corridors developed over the past decades directly in response to the prevailing space economy. If one considers the corridors currently being promoted by SADC it is evident that these are the predominant transportation and/or Development Corridors that have developed over a long period of time and today provide the backbone for intra-regional and international trade between and for the SADC countries<sup>6</sup>. As such they are the 'lifelines' of the continental SADC economies, and their cost effectiveness, efficiency, reliability determine to a great extent the current and future international competitiveness of the region.

### ***The promotion of development corridors rather than transportation routes***

The SDI approach/concept places emphasis on developing these transportation corridors not only as transportation routes linking in resource rich areas with coastal ports, or even linking a few nodes along a transportation route, but rather on simultaneously exploiting the variety of other development opportunities that arise along the route. As such the emphasis is on supporting the establishment of development corridors. These supplementary economic investment and development opportunities arise by virtue of locational advantages in relation to the enhanced transportation networks and the more efficient, effective and reliable transportation services. In addition, once certain lead

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<sup>6</sup> *These corridors carry the bulk of long distance traffic within SADC and represent essential transport axes for export and import trade both within SADC and between SADC and the rest of the world including the rest of Africa. It has been estimated (WB, 2000) that if one excludes the movement of coal and iron ore, which use dedicated rail lines, these corridors are used for the movement of between 45% and 53% of SADC imports and exports with the rest of the world, and are also vital (54%) for intra-SADC traffic. It is exactly because of the strategic role of these corridors that (bearing in mind that transport within SADC is generally inadequate and less efficient than in many regions of the world), the development of the existing main transport corridors into more efficient and effective routes has attracted considerable political interest amongst the Member States.*

investments have been made, a number of spin-off upstream and/or downstream investment opportunities arise.

### ***Greater regional competitiveness via regional integration and collaboration.***

The economic vision of SADC is to transform the fourteen countries of Southern Africa from operating as individual fragmented markets into a single integrated and globally competitive market characterised by free movement of goods, services, capital and labour. (The main benefits to be achieved via this new approach are described in section 2 above.)

### ***A far greater emphasis on the role of the private sector***

One of the most noticeable changes over the past decade has been the policy shift across southern Africa towards the 'crowding in' of private sector. This 'crowding in' takes two predominant forms.

*Firstly*, whereas the private sector had in the past not been allowed to develop and operate certain elements of public infrastructure (such as regional roads, railways etc. where the private sector was 'crowded out' by the public sector) the governments in the region have changed policy to actively encourage, support and facilitate the involvement of the private sector in such areas. The private sector was/is seen by governments to offer exciting alternatives and opportunities in terms of project appraisal<sup>7</sup>, project financing<sup>8</sup>, construction<sup>9</sup>, operation and maintenance<sup>10</sup>. Government will provide clear terms and conditions guiding private sector involvement in the provision of public goods.

A *second* aspect of this 'crowding in' approach is something of a by-product, but one that is vitally important never-the-less. By crowding in a greater number of individual private sector investors, developers, and operators into a particular geographical area there appears to be a perceived and real lessening/mitigation of investment risk for the private sector, whilst at the same time providing positive marketing and development momentum for the investment area.

### ***Institutional collaboration (vertical and horizontal)***

The further processes of planning, design and implementation of the Development Corridors and their component projects is to be supported by far greater and more active support by the participating Regional Governments, as well as between all relevant departments within individual national Governments. This ensures greater co-ordination and integration of economic and development policy and strategy. It also promotes coordination of effort and resources from the side of all involved government departments.

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<sup>7</sup> *Ensuring rigorous risk analysis, including the identification of risks, assessment of their impact, deriving strategies to allocate such risks, and then strategies to mitigate such risks.*

<sup>8</sup> *Including mobilizing other financiers, with related benefits in terms of sharing of risks and general capacity building.*

<sup>9</sup> *Adherence to conditions of agreement and allocation of responsibilities, time and cost frameworks as well as to agreed upon standards.*

<sup>10</sup> *Proper arrangements and a long-term commitment to the operation and maintenance of the created assets.*

The focused planning approach results in a far speedier decision making process, and in turn a speedier implementation of projects and programmes. In practice, institutional structures that have been formed to assist in this process include bi-lateral government structures (Maputo Development Corridor involving the governments of Mozambique and South Africa) and tri-lateral government structures (Lubombo SDI involving the governments of South Africa, Swaziland and Mozambique) working groups (Trans Kalahari Working Group with members from Botswana, Namibia and South Africa), and certain public/private partnerships (such as the Walvis Bay Corridor Group). In general these structures are all intended to facilitate coordination and cooperation between the different countries, to develop and implement strategies jointly, to identify and promote investment opportunities, to mobilise investors, and to facilitate the investment process.

## **5. An overview of progress achieved in terms of selected regional development corridors**

There are at present at least 14 Regional Development Corridor and/or SDIs underway. They are the Maputo Development Corridor (South Africa and Mozambique); Nacala Development Corridor (Malawi and Mozambique); Beira Development Corridor (Zimbabwe and Mozambique); Zambezi Valley SDI (Mozambique, Zimbabwe and Malawi); Lobito Development Corridor (Angola, Zambia and Democratic Republic of Congo); Coast to Coast SDI (Namibia, Botswana, RSA, Swaziland and Mozambique) including the Walvis Bay Development Corridor (Namibia and Botswana) and the Trans Caprivi Corridor (Namibia and Zambia); Mtwara Development Corridor (Tanzania, Malawi and Zambia); Gariep SDI (South Africa and Namibia); Swaziland Tourism and Biodiversity Corridor (RSA, Swaziland & Mozambique); Lubombo SDI (Mozambique, Swaziland and South Africa); Okavango Upper Zambezi SDI (Zimbabwe, Botswana, Angola, Namibia and Zambia); Tazara Development Corridor (Zambia and Tanzania); Malange Development Corridor (Angola and Democratic Republic of Congo); and the Namibe Development Corridor (Angola, Namibia and Zambia).

Nine of these initiatives are development corridor initiatives where the transportation development infrastructure plays a fundamental role in facilitating the broader socio-economic development process. These are discussed<sup>11</sup> (moving from Tazara in the East round the south of Africa to Malange in the West) further below:

### **5.1 Tazara Development Corridor**

The TAZARA Development Corridor is at this stage in its very early stages of conceptualisation. The governments of Tanzania and Zambia, which have a long history of cooperation and collaboration, have agreed in principle to develop this Corridor<sup>12</sup>.

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<sup>11</sup> *Malange and Namibe Development Corridors are not discussed as they are in their very early stages of conceptualisation*

<sup>12</sup> *The two countries already jointly own the 'Tanzania-Zambia Railway Authority' (TAZARA) railway line that links Zambia to Tanzania. The TAZAMA pipeline was also jointly owned and there was close collaboration in the construction of the TANZAM Highway, which is the major international road link between the two countries.*

Efforts at present are focused on the rehabilitation and upgrading of the road and rail infrastructure that would in effect enhance the linkage between southern Africa and East Africa<sup>13</sup>. The Tazara rail and road corridor linking Zambia via northern Malawi to Dar es Salaam provides the shortest rail route from the Copper Belt to any port (1970km from Ndola compared to 2130km to Maputo)<sup>14</sup>. The TAZARA Development Corridor traverses some of the most fertile land in northern Zambia and southern Tanzania. The corridor area has large potential agriculture, tourism, mining, forestry and fishing. The aim is to develop the Tazara Development Corridor as a link between southern and eastern Africa<sup>15</sup>.

There are a number of existing elements of infrastructure that are strategically important, and that are to be rehabilitated/maintained and in some cases upgraded. They include the following: *Firstly*, the road link from the south (South Africa, Zimbabwe, Zambia) to the port of Mpulungu on Lake Tanganyika where goods are transhipped on to lake vessels for onward conveyance to Rwanda, Burundi and eastern Zaire. *Secondly*, the road link from the south right through to Dar-es-Salaam in Tanzania<sup>16</sup>, which is one the busiest and major arteries of the SADC Regional Trunk Road Network (RTRN). *Thirdly*, the rail link from the south (South Africa, Zimbabwe and Zambia) all the way to Tanzania<sup>17</sup>. *Fourthly*, the rail link from the south to the Zambian provincial town of Kasama, where goods are transhipped on to road up to the port of Mpulungu

Potential new transportation infrastructure investment projects include the following: *Firstly*, the construction of a rail link to connect the port of Mpulungu to an all rail link through the TAZARA railway system at a location called Nseluka. This would avoid the current transshipment from road to rail at Kasama. *Secondly*, the upgrading the port of Mpulungu on Lake Tanganyika into a regional port including construction of storage facilities. *Thirdly*, improving shipping services for both passenger and freight on Lake Tanganyika to cater for increased traffic to Rwanda, Burundi and Eastern Zaire. *Fourthly*, the possible concession of the TAZARA railway (currently under discussion between the two governments of Zambia and Tanzania). *Fifthly*, the construction of the Isoka-Muyombe-Chama road to provide a reliable road link between the Malawi Northern Corridor and the TAZARA Corridor.

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<sup>13</sup> *It would also improve linkages to central Africa as well as the Great Lakes Area (comprising the countries of Burundi, Rwanda and eastern Zaire).*

<sup>14</sup> *There is increasing traffic on this route from two directions, the south from South Africa, Zimbabwe and Zambia and the north, from the Malawi Northern Corridor. The traffic comprises largely, sugar, cement, fuel and machinery. The competitiveness of the route has been badly affected by the performance of Zambia railways and the management of both Tazara and the port of Dar es Salaam. The railway has been operating at about a third (1999) of designed capacity of about 1.8 million tons per annum.*

<sup>15</sup> *Thus far, this initiative has yet to identify/specify the major economic development projects. It seems most likely that the initial set of economic development projects would be focused on the utilisation of the corridors rich natural resource base for activities in the mining, agriculture and tourism sectors. Subsequent to these primary activities being implemented, greater emphasis would be placed on secondary 'upstream and downstream' activities.*

<sup>16</sup> *Beitbridge, Chirundu, Lusaka, New Kapiri-Mposhi, Nakonde, Mbeya, Iringa, Morogoro up to Dar-es-Salaam*

<sup>17</sup> *Through the rail systems of Spoornet, Beitbridge-Bulawayo Railway (BBR) or National Railways of Zimbabwe (NRZ), Zambia Railways (ZRL) and TAZARA it is possible to run trains all the way from the port of Durban in South Africa to the port of Dar-es-Salaam in Tanzania.*

It is really too early to gauge the achievements of this initiative as it is still in the early stages of conceptualisation. The focus at present is on the establishment of institutional capacity on the ground to facilitate the planning (macro and projects level) for the initiative<sup>18</sup>.

## **5.2 Mtwara Development Corridor**

The corridor's planning area includes the Northern Region, and parts of the Central Region of Malawi, the northern areas of Mozambique, the southern and south-western regions of Tanzania, and the Eastern and North-eastern provinces of Zambia.

The primary objectives of the MtDC are to link the southern regions of Tanzania with Malawi and Zambia across Lake Nyasa and Mozambique. *Secondly*, to provide strategic access for Malawi to the port of Mtwara. *Thirdly*, to mobilise investment in support of the utilisation of the MtDCs tremendously rich natural resource base.

There are three main components of strategy: *Firstly*, the development of the necessary physical infrastructure to underpin the development of the MtDC as both a transportation and economic development corridor. *Secondly*, the mobilisation of private sector and donor investors/investment in support of the utilisation of the inherent and under-utilised development potential. *Thirdly*, related human resource and social development programmes.

The inherent development potential of the area is very high. All four countries have very good agricultural, mining and tourism development potential, which provide a potentially very sound basis for a wide range of economic activities. There are a number of particularly impressive economic projects that have been identified. They include *firstly*, the development of US\$ 100 million Mchuchuma<sup>19</sup> Coal mine. The coal is intended for use in the generation of electricity (thermal power station) for industries and agriculture, for domestic use and also for export. The total coal reserve is 535.75 MT with 158.8 million tons in the proved category and 376.95 million tons in the indicated category. The project is scheduled to be implemented by the year 2004. *Secondly*, the development of the Liganga Iron Ore reserves, which according to geological investigations and studies are estimated between 45 million and 1200 million tons<sup>20</sup>. *Thirdly*, the development of the Songo Songo Island gas reserves (estimated project cost of US\$375 million) that are estimated to have about 540 billion cubic feet of proven recoverable gas. In terms of this initiative that is already in an advanced stage of negotiation, two 35 million cubic feet per

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<sup>18</sup> Zambia has taken steps to set up an SDI Unit in the Ministry of Commerce, Trade and Industry that will work closely with the Planning Unit of the Ministry of Communications and Transport. The proposed SDI Unit will not only look at the TAZARA Corridor, but other Corridors such as Beira, Nacala, Trans-Caprivi and Walvis Bay that Zambia is already involved in and others that are likely to emerge such as those to link Zambia to Angola and the Democratic Republic of Congo.

<sup>19</sup> The Mchuchuma/Katewaka Coal Field (MKCF) is located in the south-western part of Tanzania near Manda on Lake Nyasa and close to the border with Malawi in the West and Mozambique in the South. It is reasonably well located relative to the Tazara railway line as well as the TANZAM highway.

<sup>20</sup> The National Development Corporation wishes to exploit the Liganga iron ores for purposes of processing Titanium, Vanadium, Iron and steel products (studies have shown that these elements can be economically extracted).



day processing units will be built on SongoSongo Island<sup>21</sup>. In addition the gas reserves at Mnazi Bay in Mtwara are to be developed for power generation and other applications<sup>22</sup>. *Fourthly*, the development of the coastal and inland fisheries industries<sup>23</sup>. *Sixthly*, the Mtwara corridor is very well endowed with fertile lands, numerous water sources and areas suitable to irrigation. It is estimated that the MtDC contains about 268 000 hectares of land suited to irrigated agriculture<sup>24</sup>. *Seventhly*, The potential for a wide variety of coastal and inland tourism activities is very good<sup>25</sup>. The corridor offers the opportunity to develop nature based photographic and consumptive tourism, cultural tourism, adventure/experiential tourism all of which are key growth sectors in the world tourism industry. *Eighthly*, the Mtwara corridor is very rich in biodiversity in terms of forests, wild animals and fish. About 60% of the Mtwara region with a total land area of 1 672 000 hectares is covered with forests of various types including mangroves fuel wood plantations, forest reserves and public land forests<sup>26</sup>. *Ninthly*, the tremendously rich natural resource base can also be developed for a range of manufacturing and processing activities<sup>27</sup>. *Tenthly*, the deep natural harbour of Mtwara provides the opportunity for the development of a free trade zone. A total of 260 acres of land is available for EPZ activities<sup>28</sup>. *Eleventhly*, there are very suitable deposits of gypsum, anhydrite and rock salt situated in the MtDC, in the Lindi Region. All four deposits are within 30km of each other<sup>29</sup>.

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<sup>21</sup> *The natural gas from the wells will be processed on the Island, and it will be shipped to Dar es Salaam for electricity generation and for other uses. The gas plant will lead to improvements in the islands infrastructure including potable water, gas and power supply, the development of an airstrip and wharves.*

<sup>22</sup> *A power station of 12 MW has been planned for construction at Mtwara. Some foreign investors have already shown interest in investing in the project, but the extent of the reserves has to be finally assessed.*

<sup>23</sup> *The Mtwara Corridor offers opportunities for fisheries development in both coastal (Mackerels, Rays, sharks, Rabbit fish, Sardines, Parrot fish, Sward fish, Queen fish, Half Beaks and scavengers) and inland waters (Tilapia, Haplochromine, Sardine Barilius, prawns). Opportunities exist for fish capture, aquaculture, and the production of seaweed's. In Lake Nyasa there is the potential for aquarium fish, some of which are unique to the world. Specific projects under consideration include Deep Sea fishing, seaweed farming, fresh water fish farming, semi-intensive prawn farming in Lindi, supply of boats and accessories, Lake Nyasa Aquarium Fish export promotion.*

<sup>24</sup> *The major cash crops in the MtDC include Cashew nuts, Coconut, Soya beans, Tobacco, Coffee, Tea, Pyrethrum, Cotton, Cocoa, Sugar Cane, and Sisal. Major oil seeds in the MtDC include Simsim, Groundnuts, Sunflowers and Castor oil. Fruits include Oranges, mangos, Papaya, Bananas and Pineapples. Livestock includes Cattle, Goats, Sheep, and Pigs.*

<sup>25</sup> *This sector contributes 16.5% of GDP, earns the country 50% of its foreign exchange earnings and employs some 35 000 people. The number of tourists has increased from 295 312 to 401 331 between 1995 and 1998. It is expected that over 500 000 tourists will visit Tanzania in 2001.*

<sup>26</sup> *Since the MtDC has such poor access most of the forests remain in very good condition. These natural forests also serve as water catchments, provide habitats for wild animals, potential areas for Ecotourism, and are rich in flora and fauna species that are new to science.*

<sup>27</sup> *The range of agro-processing activities that is being considered includes edible oil manufacture, Cashew nut processing, fishing and fish processing, handicraft production, saw milling, food processing, beer brewing, soft drink manufacture, bottling of drinking water, fertilizer production and small scale sugar production.*

<sup>28</sup> *The proposed industrial activities include garment industry, leather goods, toys, sisal rope and twine and sisal bags, gemstone cutting and jewellery, cashew nut processing and exporting, paper*

Supplementing and at times underpinning the economic development projects are a number of infrastructure development projects. They include *firstly*, the development of the Mchuchuma Thermal Power station at a cost of US\$360 million<sup>30</sup>. *Secondly*, the power transmission system linking the new power station into the national grid, as well as additional lines to previously unsupplied areas of southern Tanzania (at a cost of US\$ 110 million). *Thirdly*, the development of a petroleum products pipeline from Mtwara to Mbamba Bay<sup>31</sup>. *Fourthly*, the development of various regional water supply schemes aimed at providing urban and rural communities with access to improved water and sanitation facilities. *Fifthly*, the upgrading and development of Mtwara Port. *Sixthly*, the upgrading of the inland ports of Mbamba Bay and Manda both of which are located on Lake Nyasa. Presently, whilst Mtwara port has capacity the inland ports require substantial investment if they are handle the projected transit traffic from Malawi. *Seventhly*, the upgrading of the Mtwara Airport. *Eighthly*, the upgrading of various roads<sup>32</sup> that will facilitate access for Malawi and Zambia to the Port of Mtwara, as well as between the major anchor projects within the corridor. *Ninthly*, the upgrading of the telecommunications services in the southern region of Tanzania, which have not kept pace with those in the rest of the country.

Looking ahead, the National Development Corporation (NDC) of Tanzania has been charged with the responsibility for strategic planning in terms of the Mtwara Development Corridor. The role of the NDC includes the identification and scoping of projects; the development of projects to a pre-feasibility stage; commissioning of viability and/or techno-economic studies; the marketing of investment projects (with feasibility studies) to the private sector; general guidance to prospective private sector investors; and where appropriate to function as the sponsor and Government representative in joint venture projects managed by the private sector. Whilst tremendous progress had been made thus far in planning the MtDc and in terms of the identification of investment projects, the future focus needs to shift to the detailed packaging of these investment opportunities as single

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*production, oil seeds processing and exporting, fruit processing/canning, and assembly of low price high technology consumer goods.*

<sup>29</sup> *The central deposit lies to the west of the Dar es Salaam – Lindi road, about 96km from Lindi. (Pindiroy Gypsum deposit – reserve of 1.5 million tons to a depth of 28.5 meters; Mbaru Gypsum deposit – reserves of 1.1 million tons; Mkomore deposits – not yet ascertained)*

<sup>30</sup> *The power station will only be viable if a credible power purchase agreement is obtained from credible offtakers. The EIA has been undertaken in accordance with Tanzanian Government and World Bank standards.*

<sup>31</sup> *This 973km line will transport and supply petroleum products to the southern regions of Tanzania, Malawi and northern Mozambique. Tanzania is completely dependent on imported petroleum products. Between 1972 and 1984 consumption of petroleum remained stagnant at around 630 000MT. Since 1985 this trend changed, and consumption is now around 990 147 MT (1997). The current petroleum products supplied to Malawi through Dar es Salaam port is around 66 500 Houbour (HBT) tons (2000/01), which constitutes some 50% of the total demand for Malawi. It is anticipated that when the Mtwara-Mbamba pipeline is comes into operation, the entire demand for Malawi could pass through this pipeline. Furthermore it is projected that by the year 2005 the total petroleum products demand for Malawi will be 288 145 000 litres, and by 2015 demand will be 1 075 892 000 litres.*

<sup>32</sup> *Including the Dar es Salaam-Lindi-Mtwara-Mnamba Bay Road and the Mtwara/Masisi/Turundu/Songea/Mbinga/Mbamba Bay Road. The upgrading and development of the Manda-Mchuchumba-Mlimba Highway and railway is intended to link Mchuchuma Coal Mine and Power station and Liganda iron and Steel projects to the TAZARA corridor.*

entities and as an integrated set of economic and infrastructural projects for prospective investors.

### 5.3 Nacala Development Corridor

The concept of the Nacala Development Corridor was derived jointly by the governments of Malawi and of Mozambique in order to exploit the significantly under-utilised natural resources present in the two countries<sup>33</sup>. Although the inherent potential for agricultural<sup>34</sup>, forestry, industrial<sup>35</sup>, mining<sup>36</sup> and tourism<sup>37</sup> development is very good, the inadequacies of the infrastructure networks have hampered the utilisation of this development potential. Presently, the corridor in both countries is characterised by high unemployment rate, low levels of literacy, and an urgent need for increased economic activity. A key strategy by the two countries is that of generating economies of scale for the development of required infrastructure, marketing of production, and utilising/exploiting the inherent natural resource based development potential.

**The most significant of the proposed economic development projects** in the Nacala corridor include *firstly*, opportunities related to the development of the Mulanje Mountain bauxite reserves (estimated at 29 million tons); the gypsum reserves near Dorwa (12.8 million tons), limestone near Machinga (10 million tons), silica sands near Mchinji (1.6 million tons), gold exploration activities in the Lilongwe, Mangochi and Lower Shire regions. It is also anticipated that there will be a number of mining and mineral processing investment opportunities related to the Nacala Chloride Cluster and the titanium plant. There are also hydrocarbons deposits including oil and coal under the waters of Lake Malawi, but the extent of these deposits need to be more accurately quantified. *Secondly*, the expansion of a wide range of agricultural development projects (already underway)<sup>38</sup>.

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<sup>33</sup> *Geographically the Nacala Development Corridor extends from Mchinji in the west of the central region of Malawi and runs east across the country to Machinga and south to Nsanje. It therefore covers the central and southern part of Malawi and extends eastwards into Mozambique to the coast at the port of Nacala.*

<sup>34</sup> *The Corridor has considerable potential for the development of specialised high value crops to complement the traditional crops, and to enhance export oriented diversification. Conditions for the rearing of livestock and poultry are also very good. There is good potential for forestry development, including a range of indigenous species (jambier, pau-preto, umbila, and chanfuta), which to-date have only been utilised to around 25% of their potential.*

<sup>35</sup> *Industrial development in Mozambique has been focused on food, beverages and tobacco, textiles and garments, metallurgy, equipment, cement production and salt extraction. The inherent potential of the area suggests that the existing activities could be expanded by further developments in terms of agro-industries, food industries, fisheries, timber based industries and mining. A similar set of activities is also evident in Malawi plus activities related to the chemical industry.*

<sup>36</sup> *Minerals such as bauxite, phosphate, granite, coal, silica sand, gold, uranium, granite etc.*

<sup>37</sup> *The Corridor offers a wide diversity of tourism development potential that remains under-utilised in both countries. Potentially this corridor could be developed to provide the full spectrum of nature based (photographic and consumptive), cultural, and adventure tourism products. Furthermore, these experiences can be developed and offered to tourists in very different natural environments – from a coastal setting, to Bushveld, to high altitude montane grasslands and forests.*

<sup>38</sup> *In Malawi these include Coffee production and processing; large and small scale sugar production; rice production; tea production and processing; tobacco production; floriculture, cotton production and ginnery; milk production; maize production and milling; beans and cassava production; fish production; Macadamia nuts production and processing; rehabilitation of rice*

The emphasis is to be placed on primary production, as well as processing for value adding. *Thirdly*, tourism development opportunities including coastal tourism developments in Mozambique, combined with Malawi's nature/cultural based potential in the existing game/nature reserves that are very under-utilised, together with a variety of opportunities on islands within Lake Malawi, as well as adjacent to the Lake, and the Shire river.

In order to unlock the investment potential of the Corridor, the Malawi and Mozambique Governments will continue to expand and rehabilitate the strategic infrastructure that underpins this development corridor. The most significant elements of infrastructure include *firstly*, the rehabilitation of the deteriorating road infrastructure in Malawi and Mozambique. Transportation costs in Malawi are amongst the highest in southern Africa<sup>39</sup> and this has serious negative impacts on their economy. Studies are to be undertaken during 2001 on the Mozambique side of the corridor to consider the options for the upgrading of the road network running more or less in parallel with the railway line. The upgrading of the border post facilities and systems is also likely to be a focus area of this initiative. *Secondly*, the further development and better utilisation of Nacala Port, which has excellent potential as a deep water port<sup>40</sup>, as well as the inland ports at Monkey Bay, (southern end of Lake Malawi) and the port of Chipoka (27 nautical miles north of Monkey Bay), which is the most convenient port for transporting goods to and from Blantyre and Lilongwe, as there is a railway line as well as a good road between the two cities. *Thirdly*, the upgrading and concessioning of the Nacala-Cuamba-Lichinga railway line<sup>41</sup> stretching for 800km with a 77km loop to Entre Lagos to serve Malawi<sup>42</sup>. The transit times for trains from the Malawi border to Nacala often exceed 30hours with many stops due to equipment breakdown. Studies have shown that with a fully functional Nacala Railway line, Malawi (that currently has to export most of its goods via the very distant ports of Dar-es-Salaam and Durban) could reduce the cost of production by 20%. *Fourthly*, the upgrading of the two main airports in Malawi (Lilongwe and Blantyre), as well as considering option for the conversion of Nacala Military airport for civilian use. *Fifthly*, the revamping of the Malawi telecommunications infrastructure<sup>43</sup>. *Sixthly*, the need to explore other options for meeting the demand for power such as via the regional integration of power networks in SADC has been identified<sup>44</sup>.

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*schemes; irrigation schemes; fish, duck and pig farming; and fruit production and processing. On the Mozambican side the major agricultural opportunities are targeted at the production and processing of cashews, maize, rice, groundnuts, sugar cane, tea, sunflower, tobacco, sisal, vegetable oil, cotton as well as livestock and poultry.*

<sup>39</sup> *Transport costs in Malawi are estimated to be between 2.5 and 3 times higher than those prevailing in South Africa and Zimbabwe.*

<sup>40</sup> *It has an access channel of about 800 meters wide and 60 meters deep allowing unrestricted access to any type of vessel and is also sheltered from the winds.*

<sup>41</sup> *The railway and port operations of Nacala have already been concessioned to SDN whose sister company also operates the railway system in Malawi.*

<sup>42</sup> *The 580km section of railway from Cuambo to Nacala was recently rebuilt to a high international standard with 48 kg rail and concrete sleepers. The 70km section from Cuambo to Entre Lagos at the Malawi border is in a poor state of repair, and 20km per hour speed restrictions are required.*

<sup>43</sup> *Malawi has a low national average of 3 lines per 1000 people. The Malawi Government has initiated a MK300 million to this programme already.*

<sup>44</sup> *Malawi depends on a reliable supply of electricity for domestic, industrial and commercial uses from HEP generated in the middle Shire River. However, the Shire River cannot be relied upon to meet Malawi's long term power demands.*

A considerable amount of further work is required to prepare these projects individually as well as collectively (as an integrated set of projects) for private sector and donor investment. The further strategic planning and project identification, assessment and preparation for investor mobilisation is to be managed inter alia via the SDI process. An investors conference is planned for the latter part of 2001.

#### **5.4 Beira Development Corridor**

The Beira Development Corridor initiative aims to develop an economic development corridor linking Zimbabwe, Zambia and Malawi to the port of Beira in Mozambique. A key objective is to re-establish and upgrade the infrastructural linkages between the resource rich inland areas in Malawi, Zambia and Zimbabwe and the port of Beira. In particular, to develop a more reliable, efficient and effective transport corridor between Beira and Harare, between Beira and Tete, and between Beira and Blantyre, which will if efficiently and effectively operated reduce the cost of imports into the region, whilst at the same time increasing the potential competitiveness of exports to be routed, via Beira, overseas.

Whilst this initiative has been underway since 1997 much of the current emphasis continues to be on identifying and assessing the inherent and under-utilised development potential of the area, and with trying to conceptualise a set of integrated infrastructure and economic development projects. From the outset the initiative has been based on a set of resource based, downstream processing and infrastructure projects.

The **major resource based projects** include the reopening of existing mines for export<sup>45</sup>, new mining developments<sup>46</sup>, and agricultural developments including primary production of sugar, tobacco, and forestry. Related processing projects are also included<sup>47</sup>.

The **downstream projects** are focused on *firstly*, the chemical industry<sup>48</sup>, *secondly*, the development of Steel Mini Mill and an aluminium smelter (Flour Daniel Kaiser) at Beira, *thirdly*, the development of a coal fired power station (linked to the opening of the Moatize coking coal mine)<sup>49</sup>, and *fourthly* a number of tourism projects<sup>50</sup>. The development of a

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<sup>45</sup> *Moatize mine offers the utilisation of Africa's best deposit of coking coal, which is much sought after by the world's steel mills. The huge coal deposit lies beneath the dormant Moatize mine some 600km north of the port of Beira. The mine has been closed since the early 1990s as a result of the (then) civil war. The reopening of the Moatize mine would require capital expenditure of around US\$375 million.*

<sup>46</sup> *Associated with the 'Great Dyke' geological formation in Zimbabwe, and include Chrome, Nickel, iron ore and platinum..*

<sup>47</sup> *Key related development initiatives include the development of the Beira wood chip plant, new forestation projects, IFLOMA privatisation (1 550 000 cubic meters stock of wood), the development of a particle board plant (20 000 cubic meters) and a 26 000 cubic meter saw mill, and the development of a mechanical pulp mill at Mutare.*

<sup>48</sup> *These include the development of a synthetic diesel and methanol plant, a phosphoric acid plant and an ammonia cluster, all of which would be located at Beira. The development of a phosphates concentrates plant at Dorowa (south of Harare) would feed the phosphoric acid plant at Beira. There is also an ongoing programme of exploration for 'commercially exploitable' gas reserves off the coast of Beira.*

<sup>49</sup> *Investigations by the private sector related to the viability of reopening the Moatize coking coal mine include the development of a coal fired power station (US\$1 billion) producing around 1000MW of electricity. This power station would utilise the steaming coal that would become available as part*

variety of industrial development zones/parks at Dondo (just north of Beira), Harare, Beira, Savane and Mutare is also envisaged.

**The major infrastructure projects** under consideration include *firstly*, the Moatize Thermal power station, *secondly*, the upgrading of the Sena railway line (to facilitate the transfer of coking coal through Beira), *thirdly*, the upgrading of Beira Port to allow Panamax ships (50-60 000dwt) to utilise the port. *Fourthly*, and related to the port upgrading is the development/upgrading of the grain, citrus cold storage and general cargo and container facilities, as well as the development of a dedicated bulk material handling and/or ship loading facility. *Fifthly*, the development of a multi-modal transportation route linking Beira to the Copper Belt in Zambia<sup>51</sup> has been proposed. *Sixthly*, the development of a reliable and relatively inexpensive electricity supply (vital for the development of a viable stainless steel plant) either by upgrading the existing power line from Cahora Bassa, or the development of a second electricity line following the alignment of the Sena railway line<sup>52</sup>. *Seventhly*, the development of a gas pipeline from Safala/Temane to Beira that would feed the iron and steel and Diesel projects at Beira. A second set of pipelines are the oil and gas pipelines from Beira to Harare.

Between 1997-99 the JCI group and the Mozambique Government developed an integrated development programme around the above mentioned anchor projects. By integrating the projects they were able to develop important synergies which combined to make the export products more competitive, as well as making certain key infrastructure elements economically and commercially viable, and also making certain services (such as energy) more locally affordable<sup>53</sup>.

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*of the process of mining the coking coal. The intention is that this power would be fed into the Zimbabwe grid. In this regard, it should be noted that SADC demand for electricity is expected to surpass capacity in the next twenty years.*

<sup>50</sup> *Focused on the Zimbabwe Eastern Highlands, the Zambezi Valley, and the Gorongosa Park, but also with the idea of developing a larger set of tourism products and destinations including the Zambezi-Luangwa TFCA, Great Zimbabwe, Gaza-Kruger-Gonarezhou TFCA, Dongola, Okavango Upper Zambezi International Tourism Zone amongst others.*

<sup>51</sup> *Presently a considerable amount of goods do in fact move from the Ndola area through to the Port of Beira, but they are forced to take a very 'round about' route. One proposal is to develop an efficient and effective multi-modal corridor. This corridor would not only potentially provide a more efficient and effective service, and a considerably shorter route. The route would run by rail from Ndola to Kafue. Then by road from Kafue to Lions Den in Zimbabwe. Then by rail again from Lions Den to Beira (the Harare-Beira line would require upgrading). This routing would save about 700km off the current rail routing, and if operated efficiently, cost effectively and reliably could attract considerable additional freight through the port of Beira.*

<sup>52</sup> *This line would start at the existing Cahora Bassa HEP station, or at the proposed Moatise thermal power station, or at the proposed Mapande Ncua HEP station. It has been estimated that the investment cost to upgrade and establish these power distribution lines would be about US\$1 Billion.*

<sup>53</sup> *The Hot Briquette Iron (HBI) Reduction Plant, the Steel Mini Mill, the refinery and Sasol's synthetic diesel and methanol plant were all predicated on gas being supplied at Beira at a reasonable cost. The proposed Power plant and associated transmission lines to connect with the regional grid were dependent on the development of the Moatize Power Plant. The rehabilitation of the Sena line would also be impacted upon by the ability to export at competitive rates the high quality coking coal from Moatize. The ability to use the steaming coal for power generation would impact on the ability to market the high quality coking at competitive prices. Similarly, if the Sena line was upgraded the coking coal would be exported via Beira FTZ at a rate that would reduce the cost of the steaming coal for the power plant. The deep-water terminal at Beira FTZ would be more viable if both the coal*

However, a potential weakness with this highly integrated set of infrastructure and economic development projects is the impact of one or more of the key inputs in this complex set of infrastructure and economic project not being feasible and/or implementable. This issue has become critical right now with the current view by explorationists that the Sofala gas Field is not going to be able to be developed commercially. This will impact negatively on the development of the Hot Briquette Iron Reduction Plant, the Steel Mini Mill, the Refinery and the Sasol synthetics plant as was originally envisaged. (Sasol has earmarked the entire capacity of Temane for transfer to SA via the new pipeline.)

For this reason current efforts (via the SDIs) need to focus on considering whether or not certain of the projects could not be developed in another manner, at a different scale, tapping into different world and regional markets, and utilising differing economies of scale to justify the development of key elements of infrastructure. One key aspect that needs to be noted is that the entire JCI proposal was based on the principle of all elements being commercially viable. If this principle was replaced by one justifying the use of public and/or grant funds for certain elements (such as the capital cost of certain key infrastructure elements) the financial feasibility of certain development projects would/could improve significantly.

### **5.5 Limpopo Development Corridor**

This initiative between South Africa, Zimbabwe and Mozambique (and ultimately Botswana and Zambia) is spatially focused on the Limpopo River Basin. The primary objective of the initiative is to foster increased economic activity through investment in the processing and beneficiation of minerals, agricultural produce, and tourism, whilst ensuring that these developments take place in an environmentally sound manner. Key strategies in support of this include the rehabilitation of strategic infrastructure, and the mobilisation of private sector investors to assist in the implementation of the strategic economic development projects.

**The main economic development projects** include the following: *Firstly*, mining and mineral processing projects focused on mineral sands deposits at the Limpopo River Mouth at Chibuto. Initial feasibility studies indicate that the Corridor Sands project, located 180kms north of Maputo, and are believed to be the world's largest deposit of titanium<sup>54</sup>. The proposed US\$1 billion investment<sup>55</sup> in the mine is expected to create 1000 employment opportunities in the Gaza Province of Mozambique. If the smelter is constructed at Chibuto, further investments would also be required to bring electricity up from Maputo and to construct an 85km railway spur linking the site with the Limpopo railway line. *Secondly*, substantial rehabilitation and expansion of irrigated agricultural

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*and gas reserves were developed together. The development of the deep-water terminal was vital to the coal exports because it would be able to accommodate bulk carrier vessels. These vessels would be suitable for the transportation of iron ore into Beira as well as the export of coking coal (return trip), and bulk exports such as sugar and wood chips. (SATCC, 2001)*

<sup>54</sup> *Estimates are that the deposit contains, in the immediate target area alone, around 75 million tons of titanium dioxide. Initial tests have also confirmed that the deposit contains high quality smelter feed ilmenite.*

<sup>55</sup> *WMC, an Australian mining house has recently taken an option to invest in a feasibility study that would consider the construction of a titanium smelter in the area.*

development in the Combomune-Chokwe area is also currently under investigation<sup>56</sup>. Chokwe also has approximately 23 000 hectares of land under irrigation<sup>57</sup>. Whilst the existing levels of agro-processing activities are very low, there is still a considerable amount of the basic infrastructure in place that could support these sorts of activity<sup>58</sup>. At present a number of studies and investigations are underway to re-establish the sugar growing and processing activities at Maragra Sugar and at Xinavane Sugar. The rehabilitation processes (including the upgrading of the sugar mill) have commenced with support from the Illovo Sugar Ltd and the Tongaat Hullet Group (the two largest sugar groups in Africa) as well as the Development Bank of Southern Africa (which is focusing on the establishment of small growers). *Thirdly*, tourism development projects including the recently agreed upon Gaza/Kruger/Gonarezhou Trans Frontier Park (a nature based tourism development zone of some 260 000 square kilometres), as well as coastal developments at Xai Xai and Chonguene, and the Zinhave and Banhine Reserves in Mozambique.

***The major existing infrastructure components*** of this SDI include the following: *Firstly*, the Limpopo Railway line that has been concessioned (along with the Goba line and the marshalling yards at Maputo Port) to Consortia 2000. *Secondly*, the rehabilitation of the road network running parallel to this railway line<sup>59</sup>. *Thirdly*, a further road linkage between the Maputo Development Corridor and the Xai Xai Pafuri route. The current proposal is that the existing route from Moamba to Sabie to Macia be rehabilitated and/or upgraded. *Finally*, in support of the practical operationalisation Gaza Kruger Gonarezhou TFCA, the building of a bridge across the Limpopo at or near Crooks Corner, as well as the upgrading of related immigration facilities will need to be implemented.

Looking ahead, the broader Limpopo Development Initiative is in its early planning and project identification stages. The Governor of Gaza has established a technical unit from within the Provincial Administration to pursue this initiative. In addition, from a national level, a project manager has been appointed to facilitate the required planning, project preparation, and investor mobilisation processes. Progress is more tangible at an individual project level. Specific project related institutional arrangements have also been developed to facilitate the GKG Transfrontier Park, and processes are already underway to put in place the frameworks for tourism development, community involvement and protection, the training of game rangers and for law enforcement<sup>60</sup>.

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<sup>56</sup> *Chokwe is well located relative to the urban markets (3 hours from Maputo and 8 hours from Johannesburg).*

<sup>57</sup> *A development programme has been implemented in this area since 1997, and with the support of France, Portugal and Japan an amount of US\$ 100 million has been raised to rehabilitate the irrigation infrastructure and for rural development. This area used to be a focal point for the processing of cotton, sugar and fruits.*

<sup>58</sup> *The floods have however resulted in a certain amount of damage to this infrastructure.*

<sup>59</sup> *The Xai Xai to Pafuri road runs parallel to the railway line. Whilst the first part of the road between Xai Xai and Chokwe is in reasonably good condition, the second part between Chokwe and Pafuri is in need of rehabilitation.*

<sup>60</sup> *The World Bank, USAID and the German Development Bank are providing financial assistance to this process.*



## 5.6 Maputo Development Corridor

The Maputo Development Corridor<sup>61</sup> (MDC) was initiated on the basis of four **objectives**. They were *firstly*, to rehabilitate the core infrastructure along the corridor with minimum impact to the fiscus (road, rail, port, energy, border post). *Secondly*, to maximise investment in both the inherent potential of the corridor area and in the added opportunities which the infrastructure rehabilitation created. *Thirdly*, to ensure that the development impact of this investment is maximised, particularly to disadvantaged communities. *Fourthly*, to ensure sustainability by developing policy, strategies and frameworks that encompass an holistic, participatory and integrated approach to development.

Since its inception, a number of major economic and infrastructure development projects have been successfully implemented.

**The major infrastructure projects included** the reconstruction of the US\$ 250 million Witbank – Maputo road on the basis of a Build Operate Transfer (BOT) toll road project. A *second* key infrastructure project was the rehabilitation and operation of Maputo Port.<sup>62</sup> The *third* main infrastructure project was focused on the rehabilitation and upgrading of the railways network in southern Mozambique. This included the main lines from Maputo Port to Zimbabwe (Limpopo Line), to Swaziland (Goba Line), to South Africa (Ressano Garcia Line) and the marshalling yard at Maputo Port. The *fourth* main project was focused on the development of two new 400kv electricity lines from South Africa into southern Mozambique, and the building of a new sub-station in Maputo next to the Mozal project.<sup>63</sup> The *fifth* key infrastructure project was focused on the upgrading of the Ressano Garcia Border post between South Africa and Mozambique.

**The major economic development projects** included the following: *Firstly*, the development of the Mozambique Aluminium Smelter (MOZAL)<sup>64</sup>. *Secondly*, the development of the Maputo Iron and Steel Plant (MISP) using magnetite from Phalaborwa (in South Africa) and natural gas from the Pande fields north of Maputo. *Thirdly*, the development of the Beluluane Industrial Park (BIP)<sup>65</sup>. *Fourthly*, the development of natural gas resources<sup>66</sup>.

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<sup>61</sup> *The Maputo Development Corridor initiative was initiated in 1995 as an economic corridor linking the Gauteng province in South Africa, (the economic heartland of the South African economy), to its closest port – Maputo City in Mozambique. The initiative was focused on rehabilitation and upgrading the traditional trade and transport links as a basis for broad economic development of the Corridor area. It should be noted that in the 1970's 40% of exports from Gauteng went through Maputo and some 300 000 South African tourists visited Mozambique annually.*

<sup>62</sup> *The Government of Mozambique expects to achieve 'financial closure' by June 2001 for a 15-year management agreement with Mersyside Docks and the Harbour Company from Liverpool (UK).*

<sup>63</sup> *This electricity infrastructure was also intended to serve energy requirements in the rural and urban communities along the way.*

<sup>64</sup> *Established initially to produce 250 000 of aluminium per year, a decision was taken recently to double the smelter, bringing the construction value up to US \$ 2 billion and future output to 500 000 tons of aluminium per year. The feed stocks for the smelter come in from Australia and the bulk of the aluminium is to be exported to Japan. A dedicated port terminal has been constructed at Matola for this purpose.*

<sup>65</sup> *In a joint venture, involving CPI (Mozambique) Chiefton (Australia) and Grinaker (South Africa), the government of Mozambique has encouraged the establishment of an industrial free zone adjacent to MOZAL. Compromising some 600 hectares, the Beluluane Industrial Park aims to attract a mix of*

In addition to the key infrastructure and economic development/investment projects there were specific interventions in terms of ***institutional capacity building and policy research*** and development. A substantial support programme was initiated in Mpumalanga (Province in South Africa) in 1998, and it is hoped that the recent formation of structures in government in Mozambique is likely to see the emergence of a similar programme to complete the “supporting base” for the MDC initiative<sup>67</sup>.

The ***development of appropriate institutional structures to assist the public and private sectors*** in identifying, designing and implementing projects as part of the corridor developments was also a priority focus area.

***In terms of progress achieved to-date with the main infrastructure investment projects***, the following picture emerges. *Firstly*, the N4 Toll Road is operational, and is estimated to have contributed 6220 permanent, temporary and casual employment opportunities, and provided 702 contracts for small and medium scale enterprises at a value of SAR 304 million. About 20 260 people also benefited from various project/management/life skills training programmes to date. The medium to longer-term benefits of this project should include the guarantees on the road quality, safety and traveling times over the concession period, and the business development opportunities and employment generation still to be obtained from further road construction and long term maintenance. *Secondly*, the rehabilitation of Maputo port is proceeding well and the Government of Mozambique expects to get financial closure with Merseyside Docks and Harbour Company in June 2001. *Thirdly*, the Southern Mozambique Railways Network has been concessioned<sup>68</sup>, although the negotiations in terms of the Ressano Garcia line are still ongoing. *Fourthly*, in terms of the electricity supply projects, Eskom (SA), EDM (Mozambique) and the Swaziland Electricity Board joined forces in the implementation a project known as Motraco, which is now complete and is supplying electricity into Mozal.

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*foreign, regional and local investment into heavy industry, manufacturing and hi-tech. The key features of BIP are industrial free zone status (with a variety of attractive fiscal and other incentives), state of the art infrastructure, good access, a linkage programme into the local economy and turn-key development capacity. A range of industries has already expressed a substantial interest (SATCC, 2001), and construction of the first factories commenced June 2001.*

<sup>66</sup> *Following successful exploration in the Temane gas field in Mozambique and a more recent acquisition of exploration rights in the Pande gas field in Mozambique, Sasol is now well placed to rapidly develop the natural gas industry in the region. Sasol plans to construct a US \$ 1 billion, 1000 km pipeline from the gas fields of Mozambique to Secunda in Mpumalanga. The initial customers for such a pipeline are considered to be the Maputo Iron and Steel Project, Sasol itself in Sasolburg and Secunda (as key a feedstock for fuel and chemical plants) and potentially some 600 industries that are already linked to a Sasol gas supply line inside South Africa (SATCC, 2001)*

<sup>67</sup> *The programme included a strategic environmental management plan (SEMP), an LED programme in 26 towns, an SMME programme, tourism and agricultural sector processes and a communications programme. The “policy research and capacity building programme” was initiated to assess and learn from international best practice in key areas such as tourism-led development, models for community empowerment, best practice for border control, as well as the design and implementation of training and capacity building programmes of direct relevance to activities underway in the Maputo development corridor.*

<sup>68</sup> *It was concessioned in two parts. The first part is the Limpopo line to Zimbabwe, the Goba line to Swaziland and the marshalling yards near Maputo. Agreement has been reached on the concessioning of this portion of infrastructure. The second part is the Ressano Garcia line to South Africa. The Government of Mozambique identified Spoornet as the preferred bidder, but the parties have been unable to reach an agreement on a concession. Negotiations have recently been reopened in an attempt to seek a long-term solution.*

*Fifthly*, considerable progress has been made with the upgrading of systems and facilities related to the Komatipoort/Ressano Garcia border post. There was to be a move away from the traditional border post model to a concept that can simultaneously deal with managing illegal movement whilst speedily facilitating legal movement<sup>69</sup>. The first phase of such an approach is now underway at an estimated cost of US\$ 5 million.

**As regards progress with the main economic development projects**, *firstly*, MOZAL is operational. At construction peak, there were more than 9000 people employed on site. Employment will reduce to just over 1000 as the smelter comes into full operation in early 2001. A linkage programme aimed at enhancing the employment and entrepreneurial opportunities is currently being implemented. Already some 200 projects with a value of over US \$ 100 million looking at upstream, side stream and down stream opportunities around this project. *Secondly*, in terms of the MISP Enron and the Government of Mozambique signed an implementation agreement in May 2001 (US\$1.1 Billion) for a plant producing 2 million tons of slab steel per annum<sup>70</sup>. *Thirdly*, there has been steady progress with the implementation of the BIP, and construction of the first factories is underway as of June 2001. *Fourthly*, over and above the above mentioned 'mega-projects, there has been considerable interest in the mining sector (new and expansion projects in nickel, chrome, coal in Mpumalanga); in agricultural (specifically the rapid growth in the sugar industry in this particular sub-region); in tourism (with new tourism plant being developed in Mpumalanga, Mozambique and Swaziland); in commerce (with substantial new commercial outlets in Maputo and Nelspruit); in transport; and in the development of health and educational facilities to meet the demands of this growth (SATCC, 2001, 11)

It is estimated that some US \$ 600 million in (mainly private sector) investment has been committed to the key infrastructure projects. Furthermore, private sector investment in this region over and above the infrastructure is conservatively estimated at US \$ 5500 million.

The economic growth rate within the sub-region has been running at an estimated 7.8% per annum since 1996, with Mozambique showing the highest growth. The sub-region's ability to continue to attract investment and to sustain these growth rates is inherently good, although increasing attention must be paid to sustainable environmental management.

From a job creation point of view, it is estimated that some 15000 jobs have been created in the MDC area through the larger infrastructure and sector projects. In order to sustain investment, job creation and empowerment the MDC has initiated and/or sponsored various cluster processes and linkage programmes to build long-term sustainability in key geographic areas and sectors.

In so far as the movement of freight and people through the Ressano Garcia/Komatipoort border post is concerned, it is also very evident that there has been strong and steady growth. The number of 'import entries' has increased from 267 in 1995/96 to 4130 in 2000/01 or 58% per annum<sup>71</sup>. In terms of exports, 'export entries' have increased from

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<sup>69</sup> *Based on experience elsewhere in the world, this new approach is characterised by pre-clearance facilities, technology to more effectively manage transboundary movement, and a substantially larger intelligence system to manage transboundary risk.*

<sup>70</sup> *In the 1998 / 1999 period, Enron (USA) and South Africa's IDC investigated the construction of the iron and steel plant in Maputo. The IDC withdrew from the project citing its over exposure to steel investments. ENRON however continued to pursue the project.*

<sup>71</sup> *Source: Customs – Lebombo Border post*

8070 in 1995/96 to 112595 in 2000/01. This is a growth on 55% per annum.<sup>72</sup>In terms of the movement of people through this border post, numbers (both ways) have increased from 365 229 (1993) to 1 946 329 (2000) representing a growth of about 27% per annum<sup>73</sup>.

Transboundary collaboration processes have seen the formation of a borderlands committee looking at a wide range of basic transboundary issues, including tourism, agriculture, health, education, infrastructure development etc.

Looking ahead, this initiative which is in its fifth year of implementation will focus on the following. *Firstly*, facilitating the continued implementation of the previously identified key infrastructure and economic projects<sup>74</sup>, as well as new infrastructure projects<sup>75</sup>. The new infrastructure projects have become increasingly important to pursue now that the initial priority projects are largely completed. This infrastructure is also particularly important in context of the now greater emphasis on tourism and agricultural-led developments that have tended to be treated as somewhat less of a priority than the large industrial projects described above. *Secondly*, building solid institutional structures with appropriate technical skills and support programmes, to ensure sustainability in the MDC initiative. *Thirdly*, facilitating a conscious transboundary collaboration process and building transboundary collaboration efforts in resource utilization, resource management, business joint ventures, investment marketing, industrial strategy and trade.

## **5.7 Coast to Coast SDI**

The Coast to Coast SDI differs from the other regional development corridors being discussed because it is not based on an historical transportation route. The concept of the Coast to Coast route came about with the completion of the Trans Kalahari Highway, which completed the trans-continental paved road from Maputo through to Walvis Bay.

The route connects some of southern Africa's most economically, politically, financially important cities and towns- Maputo, Nelspruit, Witbank, Middleburg, Pretoria, Rustenburg, Lobatse, Windhoek and Walvis Bay, whilst urban areas of Gaborone, Mbabane and

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<sup>72</sup> Source: Customs – Lebombo Border post

<sup>73</sup> Source: Immigration – Lebombo Border post

<sup>74</sup> There is still work to be done on getting some projects further into implementation such as the rail concession and the border-post upgrading. Similarly, facilitating the continued implementation of the major initial private sector investment projects, such as the MISIP, Mozambique/SA gas project, Beluluane Industrial Park.

<sup>75</sup> New project infrastructure project initiatives that are to be pursued (during 2001/2) includes the financing and development of the Maputo to Ponta do Ouro road that will link into the South African network at Kosi Bay. The completion of this road is strategically very important for tourism-led development between South Africa, Swaziland and Mozambique, and is also likely to facilitate a certain amount of general trade between Mozambique and Northern KwaZulu Natal. A second project, which is related to the development of this route between Kosi Bay and Maputo, is the construction of the Maputo-Catembe bridge. Further examples include the EN1 in Mozambique, power and rail connections to Chibuto for the titanium smelter, the Bulembu road linking Barberton in SA to Piggs Peak in Swaziland, the issue of consolidating international airport interests, the Maputo – Ponta do Ouro road, and the like.

Manzini are also functionally integral parts of this corridor economy<sup>76</sup>. Collectively these cities account for a huge proportion of the existing southern African economy, and the resource base on which they are located still has tremendous further growth and development potential. These cities are also amongst southern Africa's largest and fastest growing urban populations, and this urbanisation process, whilst creating a number of development challenges, also offers good opportunities for further economic development and employment creation in the primary, secondary and tertiary sectors.

There are two key issues that underpin the further development of this route. The *first* is concerned with the efficient and effective movement of goods and services (largely commercial freight for import and export) across the sub-continent and/or between any two points along the route. The *second* was to investigate the extent to which the existing road route across the sub-continent could be used as a basis for developing a Trans Africa Tourism Highway along similar lines to tourism routes developed in the USA and elsewhere. Related to this were strategies aimed at combining the differing tourism resources along the route of the corridor (differing environments, cultures, scenery, architectures, history, heritage, wild life etc.) to develop an extremely diversified tourism experience incorporating nature based, adventure, and cultural tourism products and experiences<sup>77</sup>.

Whilst considerable time and effort has been spent since 1998 on related investigations in terms of the tourism and transportation elements<sup>78</sup>, it has taken a long period of time to reach a point where the participating governments could formally agree to pursue this initiative. However, at a recent meeting of the five countries involved it was resolved that the tourism-led development initiatives would be pursued under the direction of the Regional Tourism Association of Southern Africa (RETOSA). It is also clear that the Maputo Development Corridor component is socio-economically justified and will continue to be pursued as a priority initiative. Similarly, it is clear that the Walvis Bay Corridor component<sup>79</sup> and the Trans Kalahari Highway component appear to be underpinned by a sound economic basis, and will be pursued under the leadership of the Trans Kalahari Highway Working Committee. An issue that remains unclear is whether or not there is any significant demand for a trans-continental route from Maputo to Walvis Bay.

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<sup>76</sup> *The planning area for the C2C overlaps with that of the Maputo Development Corridor, the Tourism and Biodiversity Corridor between Swaziland and South Africa, and the Walvis Bay Development Corridor.*

<sup>77</sup> *Similarly to promote a regional approach to the marketing, management and development of tourism infrastructure and facilities.*

<sup>78</sup> *Existing economic development initiatives identified as part of this initiative for further planning and feasibility study include agricultural development projects, tourism and accommodation, mining projects (primary and secondary processing and the reopening of previously marginal mines), and manufacturing projects.*

<sup>79</sup> *The main elements of the Walvis Bay Corridor include the port, the Trans Kalahari Highway, the Trans Caprivi Highway, and the extension of the northern route from Tsumeb to southern Angola. In terms of the Port of Walvis Bay the principal advantage of Walvis Bay is its locational advantage. For carriers operating between Southern Africa and the ports in Northern Europe and North/Central America, it presents itself as a potential first port of discharge or final port of loading for cargoes that are seeking the shortest transit times. In the present situation of an uncongested port of Walvis Bay (there is additional capacity in terms of road, rail and the port) and a periodically congested port of Durban, transit times between Gauteng and north-western hemisphere markets could be cut by between five and seven days. (Coast2Coast Development and Transport Study, 2000)*

## 5.8 Lobito Development Corridor

The Lobito Development Corridor initiative is aimed at the rehabilitation of the transportation network that linked Zambia, DRC and the central western parts of Angola with the Port of Lobito. The primary objectives of this initiative are to provide strategic access for the DRC, Zambia as well the inland provinces of Angola (Benguela, Huambo, Bie' and Moxico) to the coast, the port and international markets, and to enhance the level of linkages between the main towns in the provinces served by the Lobito Development Corridor.

From a natural resource perspective, the development potential of this corridor is excellent. It is well placed relative to a number of oil blocks that are to be concessioned<sup>80</sup>, very valuable Diamond reserves<sup>81</sup>, an estimated 12-20 million hectares of arable land as well as large grazing grounds along the corridor, and a plentiful supply of water to support agricultural activities. There is also considerable forestry<sup>82</sup> and coastal fishing<sup>83</sup> potential.

From a strategy point of view, the rehabilitation and upgrading of the Benguela Railway line that (potentially) runs from the Port of Lobito about 1300 kms inland in an easterly direction is central to this development corridor. This re-establishment and upgrading of this route would substantially improve access for the mining regions in DRC and Zambia, since this alignment offers the shortest link for these countries to markets in Western Europe and America. The *second* key element required for the re-establishment of this corridor is the rehabilitation of the existing road network (that has had virtually no maintenance for the last 20 years) that extends about 1800kms inland to facilitate far more efficient and effective linkages and access to services and inputs for all the urban centres along the route<sup>84</sup>. The mobilisation of donor and private sector investors, where applicable in partnership with the Government to undertake the necessary rehabilitation of the infrastructure and facilities, as well as their operation and maintenance is also a priority strategy.

Current reality is that many areas along the corridor have become completely inaccessible as a result of the destruction of infrastructure due to the war situation in Angola. In general the improvement of the efficiency of the corridor should contribute to more competitive exports, cheaper imports, and greater levels of intra-SADC trade. With improved access

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<sup>80</sup> *In 2000 Angola was producing 700 000 barrels of oil per day, and has an estimated 1.95 billion barrels of reserves in already developed fields, and a total of 3.2 billion barrels of reserves. Oil production currently constitutes 54.5% of GDP and 96.5% of exports, and 83.5% of government revenues.*

<sup>81</sup> *Including between 40 and 130 million carats of alluvial, and an estimated 180 million carats in 6 kimberlite pipes*

<sup>82</sup> *Presently about 150 000 hectares of Eucalyptus plantations (many abandoned) are located adjacent to the Lobito Corridor. The climatic conditions are very conducive to forestry, and the existing planted area could be expanded to about 235 000 hectares. In addition to the plantations there are substantial indigenous forest in the Lunda-Sul and Moxico Provinces which can yield about 50 000 cubic meters per year.*

<sup>83</sup> *Whilst this potential is not well utilised at present, in 1973 about 300 000 tonnes of fish were caught annually and 180 000 of these were processed. This declined to a catch of about 207 000 tonnes and processing of only 23 000 tonnes in 1993.*

<sup>84</sup> *These include Lobito, Benguela, Cubal, Ganda, Huambo, Kuito, Luena, Luau, Kolwezi, Likasi, Lubumbashi, Ndola, Kabwe and Lusaka.*

the DRC is expected to be able to re-route goods that have traditionally been sent through South Africa. This would result in significant transport cost savings, and should increase the competitiveness of DRC exports. It is hoped that reduced transport costs would result in a restarting of the mining activities such as manganese mining in DRC, as well as the movement of copper from DRC and Zambia, and iron ore from Cassinga to South Africa.

A **wide range of economic development projects** have been identified for possible implementation as part of the Lobito Development Corridor<sup>85</sup>. Similarly, the key infrastructure development projects have also been identified. They include the rehabilitation of the road infrastructure<sup>86</sup>, the rehabilitation of the Benguela Railway line<sup>87</sup>, and the rehabilitation and operation of Lobito Port (which is operating well below installed capacities – around 11.5%<sup>88</sup>). In addition to the above mentioned projects the need to upgrade the telecommunications, energy and water supply systems have also been identified as related priorities. Furthermore, the improvements of the airport at Benguela, Huambo, Kuito and Luena are also seen as important in support of the broader socio-economic development process.

However, notwithstanding the tremendous development potential, (if one considers the Namibe and Malange development Corridors in Angola the picture is very similar) practical progress with these initiatives has been and will continue to be severely hampered by the very unstable socio-political situation that inevitably hinders investment particularly from

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<sup>85</sup> They include the construction of a new oil refinery, the extension of the Lobinave Shipyard, the SONANGOL Fuel and Lubricat stocking base, the rehabilitation of the cement factory, the rehabilitation of the African Textile factory and the Emacel battery factories in Benguela, the repair and extension of the Lumaum Hydroelectric power plant; and a soft drinks factory (all between Lobito and Benguela). Moving eastwards projects include the rehabilitation of the sugar based alcohol plant, the development of a tomato paste and juices factory, the rehabilitation of the cellulose and paper factory, two breweries, a palm oil factory, soap factory, and a cooking oil factory (all near Catumbela). Possible economic development projects in the Huambo, Bie and Moxico Provinces include a soap factory, breweries, timber processing, bakeries, a flour factory, soft drink factory and an aluminium tableware factory in Moxico Province. (SATCC, 2001)

<sup>86</sup> About 56% of the tarred road in the Benguela Province is in a 'bad' condition (structural degradation between 60 and 80%); in Huambo 50% of the tarred road is in 'bad' condition; in Bie 105 of the tarred road is in 'bad' condition, and the entire earth section is in a bad or 'very bad' (over 80% degradation) condition. In Moxico province 100% of the 90km road is in a 'very bad' condition. (SATCC, 2001, 30)

<sup>87</sup> The majority of the railway structures including the line, bridges, pontoons, signalling equipment, workshops, power supplies were destroyed by the war. Certain sections of the line are so inaccessible that their condition is unknown. The remaining infrastructures are poorly maintained and much of the remaining infrastructure is also obsolete. All of the above combine to result in a service that is unsafe, inefficient, and currently operates at a loss. (SATCC, 2001, 31)

<sup>88</sup> In 1974 Lobito Port was handling 2 589 000 tons of traffic. By 1988 this had dropped to 535 000 tons and then down to 450 000 tons in 1995. (SATCC, 2001, 31 The Lobito Development Authority indicates that with certain rehabilitation works to the railway line, the usage of Lobito Port will increase significantly. With the rehabilitation of the Benguela line from Lobito to Kuito and the safe and regular operation of the route, cargoes through Lobito are expected to increase from 180 000 tons in year one, to 189 000 tons in year 5; to 214 000 tons in year 10; to 240 000 tons in year 15 and 250 000 tons in year 20. Then, with the rehabilitation of the line through to the border with DRC further growth of 36 000 tons by year 5; 66 000 tons by year 10 and a further 66 000 tons every 5 years thereafter. This steady decline in traffic is due to the fact that the CFB (Benguela) main line is not in operation. (In 1974 90% of goods passing through Lobito Port originated from railways activities.)

the private sector. Secondly, there is very limited local institutional capacity to under-take the necessary technical work required to identify and package projects for implementation. Because such a large proportion of public finances are being channelled into the war efforts, and/or the rehabilitation of infrastructures damaged by the war, very little progress is made with new developments.

## **6. Observations and issues arising**

It is clear that the SADC member states are attaching an increasingly high priority to regional integration and collaboration as a means of promoting greater levels of economic growth and development.

It is also evident that the rehabilitation of the transportation corridors is seen as one key strategy in support of regional integration. The opportunity for broader based economic development in response to and in support of the rehabilitation of the transportation infrastructure has also been acknowledged, and is also receiving general support.

It is clear from the overview of progress achieved with mature initiatives such as the MDC, that the socio-economic impacts of the development corridor approach can be very substantial. It is also clear that there are potential areas of weakness in terms of employment/cost; empowerment, SME development. To attain these objectives specific strategies need to be designed and implemented. Cannot leave this to chance.

Notwithstanding the limitations of SDI processes as were employed in the case of the MDC, there is increasing support for the principles and strategies that typically underpin the SDIs. This is largely due to the fact that they appear to be based solidly on economic reality both in terms of the prevailing socio-economic conditions in southern Africa, but also the requirements of the local, regional and international investors.

Looking at the emerging development corridor initiatives a few observations can be made. *Firstly*, a number of them have tremendous inherent development potential underpinned by diversified and rich natural resource base. *Secondly*, There has in certain instances been very encouraging progress in terms of identifying a range of potentially inter-related infrastructure and economic development projects. This initial work is vital to the subsequent mobilisation of investor support, both private and public. *Thirdly*, there continues to be a good deal of interest from the investor community in these development corridor initiatives. The level of attendance from donor and private investors, as well as the extent of the donor support for the preparations for the SATCC conference is some indication of this.

However, the recent evaluation of progress with Corridor related planning and project identification and preparation/packaging (that was done for the SATCC conference) highlighted the fact that considerably more work needs to be done by those countries involved with particular corridor initiatives if they hope to be successful in mobilising further investment from the donor and/or private sector. In this regard, one of the key comments that came up from the investor community at a number of occasions during the SATCC conference in Windhoek (April 2001) was that far greater levels of progress need to be attained by the various development corridor initiatives in terms of identifying, preparing and packaging individual projects for investor consideration. Furthermore, the point was stressed, that investors – particularly transportation infrastructure investors – need to understand the economic, financial and institutional inter-relationships between the various



different infrastructural components that invariably perform key functions within development corridors, as well as the same issues in terms of the key economic development projects that are ultimately users of the infrastructure to be developed and operated.

In context of the above comments it is presently evident that considerable further work will be required by the various Development corridor and/or SDI initiatives if the investment momentum is to be boosted. Investors need far more than ideas prior to agreeing to finance projects.

Finally, an issue that is often raised, but that cannot be overstressed is that of the importance of socio-political stability and sound governance as the necessary backdrop for investment. This is perhaps most evident in the context of the Lobito, Malange and Namibe Development Corridors in Angola, and also those corridors involving Zimbabwe. Suffice to say, both countries are tremendously resource rich, yet are experiencing tremendous socio-economic hardships.

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# **REGIONAL DEVELOPMENT CORRIDORS AND SPATIAL DEVELOPMENT INITIATIVES – SOME CURRENT PERSPECTIVES ON POTENTIALS AND PROGRESS**

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