Conference Handbook

SECOND PUBLIC-PRIVATE DIALOGUE FORUM ON INFRASTRUCTURE PROJECTS

17 - 18 March 2015 . Hyatt Hotel – Rosebank – South Africa

RAIL • PORTS • ICT • ENERGY

SADC 3P

sadc dfrc southern african development community development finance resource centre

Africa Infrastructure Desk
INFRASTRUCTURE CONNECTING AFRICA

NEPAD BUSINESS FOUNDATION

CONTENT

SECOND PUBLIC-PRIVATE DIALOGUE FORUM ON INFRASTRUCTURE PROJECTS

The annual SADC PPP/NEPAD Business Foundation Public-Private Dialogue Forum on Infrastructure Projects is a project-focused forum, which brings together public and private sector project owners, financiers and project promoters from the Southern African region, with the purpose of engaging key stakeholders on how to better partner and coordinate infrastructure development efforts. Through this forum, public and private sector will deliberate on how to accelerate the implementation of infrastructure projects that are experiencing challenges due to policy, technical, financing, political, institutional or regulatory bottlenecks.

Project focused interventions

Through the attendance of key stakeholders such as project owners, contracting authorities, private sector and financiers, the event seeks to highlight innovative partnerships and financing models that will drive projects to implementation. These key stakeholders are given the platform to provide credible and up-to-date information on the NBF and SADC PPP portfolio of projects with the aim of engaging the private sector on how to practically remove barriers to project implementation.

Practical/tangible solutions and opportunity identification

The forum seeks to highlight solutions to better corridor planning and packaging of projects. A practical approach is taken in discussing implementation plans, feasibility of planned projects and the reality of expected private sector involvement in these projects, based on how the projects are being packaged. The end goal is to be able to present private sector companies with tangible opportunities such as infrastructure concessions and a platform to offer goods and services.

Opportunities for private sector and the Africa.Inc approach

The forum also aims to highlight, drive and promote an "Africa.Inc" approach being spearheaded by the NBF Africa Infrastructure Desk (Afri-ID). The Africa.Inc approach will enable African companies to win infrastructure deals with the specific objective to ensure that infrastructure projects positively impact local economic development by ensuring local content development, industrialisation, job creation, transfer of skills, creation of SMEs and upliftment of local communities.

The Second Public-Private Dialogue Forum on Infrastructure Projects (Rail, Ports, ICT & Energy)

After the success of its first SADC Infrastructure Projects Forum in 2013, the NEPAD Business Foundation (NBF), in partnership with the SADC Secretariat and SADC PPP Network, planned the **The Second Public-Private Dialogue Forum on Infrastructure Projects for 17 and 18 March 2015, at the Hyatt Regency Hotel in Johannesburg, South Africa.**

EVENT DETAILS

Date and time	Day 1 : 08h30 – 18h00 (local time), Networking cocktail 18h30 Day 2 : 08h30 – 15h00 (local time)
Location	Hyatt Hotel, Rosebank, Johannesburg, South Africa
Programme main content	3 Keynote addresses from high level representatives from these organisations: NBF & SADC CEO, NEPAD Agency and SADC infrastructure Director 2 Plenary discussions on technical and financial challenges to develop infrastructure projects in the region. 8 Break-out sessions focused on targeted infrastructure projects with presentations by project owners from the rail, port, ICT and energy sectors.
Invitees	200 delegates including the following confirmed attendance: Project owners from the SADC region: • Tanzania Port Authorities • Tanzania Rail Limited • Zimbabwe Rail • Eskom Afri-ID Members: • Mott MacDonald PDNA • Letsema Consulting & Advisory • Cliffe Dekker Hofmeyr • Eskom • Royal Haskoning DHV • Santam Private Banks: • Nedbank • Barclays Africa • Standard Bank • HSBC • BNP • Ecobank

	Development Banks: • Industrial Development Corporation (IDC) • Development Bank of Southern Africa (DBSA) • Export Credit Insurance Corporation of South Africa (ECIC) • African Development Bank (AfDB) • European Investment Bank (EIB) • Department for International Development (DFID) • Agence Française de Développement (AFD) • International Finance Corporation (IFC) - A member of the World Bank Group **Government Departments:** • Department of Public Enterprises (DPE) • Department of Trade and Industry (DTI) • Department of International Relations and Cooperation (DIRCO) • International Agencies • SADC Region • Common Market for Eastern and Southern Africa (COMESA) • NEPAD Planning and Coordinating Agency • African Union Commission
Cost	ZAR 1 500 per delegate (free admission for public sector)

ABOUT THE SADC SECRETARIAT

The Southern African Development Community (SADC) Secretariat is the Principal Executive Institution of SADC, responsible for strategic planning, facilitation, co-ordination and management of all SADC programmes. The organ is headed by the SADC Executive Secretary and is located in Gaborone, Botswana.

The Southern African Development Community (SADC) was established as a development coordinating conference (SADCC) in 1980 and transformed into a development community in 1992. It is an inter-governmental organisation whose goal is to promote sustainable and equitable economic growth and socio-economic development through efficient productive systems, deeper co-operation and integration, good governance and durable peace and security among fifteen Southern African member states. Member countries include: Angola, Botswana, the Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, the United Republic of Tanzania, Zambia and Zimbabwe.

The SADC Secretariat structure is designed to maximise and support the facilitation of the Member State policies and programmes to best contribute to the overall objectives of SADC – achieving Regional Integration and Poverty Alleviation.

Its vision is to become a reputable, efficient and responsive enabler of Regional Integration and Sustainable Development focused on providing strategic expertise and co-ordinating the harmonisation of policies and strategies that will accelerate Regional Integration and Sustainable Development.

The Mandate of the SADC Secretariat, as outlined in the SADC Treaty, is to provide the following:

- Strategic planning and management of the programme of SADC;
- Implementation of the decisions of the Summit and Council;
- Organisation and management of SADC Meetings;
- Financial and general administration;
- Representation and promotion of SADC; and
- Promotion and harmonisation of policies and strategies of Member States.

ABOUT THE SADC PPP NETWORK

The SADC Public-Private Partnership Network (SADC3P) was established in 2011 following a mandate placed upon the SADC Secretariat and the SADC Development Finance Resource Centre (DFRC) by the Ministers of Infrastructure of the Southern African Development Community (SADC). The primary objective of this initiative was to establish mechanisms for expanding the use of Public Private Partnerships as an instrument for financing infrastructure development in the SADC region.

SADC PPP Network's mission is to strengthen the capacity of the public sector to engage in PPPs and achieves its objectives through the following mandated and vital key activities within the SADC region:

- Establishing a network for sharing, collating, synthesising, analysing and disseminating information and know-how relating to PPP best practice, in particular project inception, financing, management and monitoring;
- Where needed and requested, the Network facilitates or provides policy, programme and capacity-building support to public sector institutions in member states;
- Provide guidance and support to public sector institutions relating to the design and staffing of bodies for the regulation and management of PPPs;
- Organise and facilitate professional meetings and training events with a general or sectoral focus;
- Facilitate linkages and relationships between private investors and public authorities in accordance with national rules and regulations.

Through these processes and activities, the Network contributes to the enhancement of the role that PPPs play in leveraging and mobilising private sector resources for infrastructure development in order to catalyse the development of infrastructure in the region in line with national, regional and continental infrastructure plans.

ABOUT THE NEPAD BUSINESS FOUNDATION

The NBF is one of Africa's membership-based organisations that promotes dialogue between the public and private sectors to facilitate and accelerate the implementation of programmes and projects with a developmental impact – charting new ground in public-private partnerships.

The NBF draws its mandate from the African Union (AU) and its implementation arm for the New Partnership for Africa's Development (NEPAD) goals, the NEPAD Planning and Coordinating Agency (NEPAD Agency) and delivers its objectives aligned to the NEPAD focus areas:

1. *Agriculture and Food Security;*
2. *Regional Integration and Infrastructure;*
3. *Climate Change and Natural Resource Management;*
4. *Economic and Corporate Governance; and*
5. *Human Development and Capacity Building.*

NBF provides critical public and private sector linkages for the acceleration of Africa's development projects from inception to implementation. The NBF also offer country entry advisory services, which help businesses to understand Africa's:

- Public sector and the geo-political environment;
- Regulatory overviews; and
- Social dynamics.

The NBF's mission is to mobilise private sector support to accelerate the implementation of NEPAD programmes. The contributions by the NBF members support the organisation's activities in NEPAD related developmental programmes, projects and initiatives across the continent.

Some of these programmes include:

- The **Africa Infrastructure Desk (Afri-ID)**, works to accelerate the identification, development and implementation of regional infrastructure projects, which translate into concrete business opportunities for the desk's members.
- The **Removing the Barriers in Agriculture (RtB)** programme, is a private sector-led initiative aimed at identifying and removing barriers to agricultural development, trade and investments along the Beira Corridor.
- The **Southern African Agriculture Development Partnership Platform (SAADPP)**, is a private sector-led platform that brings together mutli-stakeholders that work and partner together to find innovative solutions to address the challenges of successful investments in the agriculture sector.

- The **Strategic Water Partners Network of South Africa (SWPN)**, is a private sector-led multi-stakeholder water leadership group in partnership with the Department of Water & Sanitation of South Africa, that jointly designs, implements and finances innovative water interventions which will help ensure South Africa's water security to 2030.
- The **African Corporate Governance Network (ACGN)** whose mission is to develop the institutional capacity of its members (17 Institutes of Directors across Africa) in order to enhance effective corporate governance practices, and build better organisations and corporate citizens in Africa.
- **The Africa Investment and Integration Desk (AvID)** whose mission is to coordinate finance and investment communities to work together to develop joint and innovative financing options for various strategic African projects across all industry sectors.

The NBF is also a leader in the design and execution of high-level Networking Forums, Public-Private Dialogue Platforms; Trade and Investment Missions; Information Sessions and thematic events focused on deliberations and brainstorming to unlock real business opportunities in Africa.

ABOUT THE NBF AFRICA INFRASTRUCTURE DESK (AFRI-ID)

The Africa Infrastructure Desk (Afri-ID) is a multi-stakeholder platform which brings together the public and private sectors, multilateral finance/development agencies and other stakeholders with the common purpose of accelerating regional infrastructure development in Africa.

Driven by the NBF, the function of the Afri-ID is to expedite identification, development and implementation of regional infrastructure projects which translate into concrete business opportunities for the Afri-ID members. This is achieved through the desk's ability to:

- Proactively identify infrastructure projects with a regional integration impact in Africa
- Accumulate and share information on regional integration infrastructure projects
- Coordinate stakeholders to identify barriers and find solutions to unlock business opportunities
- Provide advisory services to members to develop complete infrastructure packaged solutions (project feasibility, preparation, coordination, funding, operations and implementation)

The Afri-ID does this by undertaking a series of critical activities during the crucial early planning period of the project cycle. This Afri-ID facilitation assists to unlock the infrastructure projects and allows the Afri-ID members to engage in well prepared commercial transactions with the relevant project owners.

The core competencies of the Afri-ID lie in its ability to analyse and gain a deeper understanding at the early stage of the infrastructure project life cycle. Its interventions, help create an enabling environment for targeted infrastructure projects. During the planning phase of the project life cycle, the Afri-ID provides the following services to members: research on opportunities, advisory services on project finance structuring and business case development, project preparation and investment funds mobilisation as well as facilitation for policy and regulatory alignment. The Afri-ID also comes in during the implementation and maintenance phases to measure the (social, economic and political) impact, successes and failures of the projects.

PROJECT 1:
ESTABLISHMENT OF A REGIONAL ROLLING STOCK LEASING POOL

Implemented in (country or border)	SADC Member States (Phase 1)
Project Sponsor (s)	Rolling Stock Manufacturers and Leasing Companies
Sector/Subsector	Transportation/Rail
Lead Agency	NEPAD Business Foundation (NBF) – Africa Infrastructure Desk (Afri ID)
Project Title	ESTABLISHMENT OF A REGIONAL ROLLING STOCK LEASING POOL
Project Objective/s	The rolling stock leasing pool project seeks to address rolling stock shortages in the region by establishing a regional railway locomotive and wagons leasing pool.
Project Description	Summary • Africa has been making regular headlines with double digit growth economies but the benefits of this significant growth is marred by persistent structural issues, among them the poor level of infrastructure. Road, rail and port networks are still ill adapted to the continent's expansion and its economic development. Rail in particular has suffered from decades of low direct investment, poor infrastructure management and inefficient train operations. African railways need to be revived not only by the rehabilitation and expansion of the network and signalling systems but also in the renewal and development of ageing locomotives and wagons. • Currently most of the State owned rail companies do not have capital funds to inject into procuring rail equipment or investing in rail network rehabilitation. The Southern African Development Community (SADC) region requires rail equipment (locomotives and wagons) as well as effective signalling and communications systems in order to support the transportation of freight traffic in the region. This will also promote and support the African Union's (AU) objectives and the SADC-EAC-COMESA Master Plans of regional integration in support of the Free Market Agreement. • This project thus seeks to address equipment shortages by establishing a regional railway locomotive and wagons leasing pool.

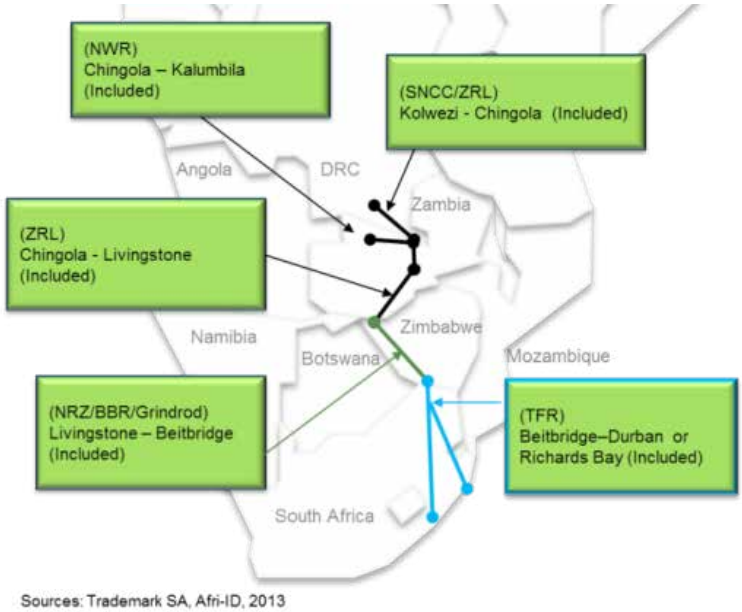
	Technical Features *Infrastructure* • Rail infrastructure that in an acceptable/good condition will be required in order to achieve the desired operational performance. • Rail infrastructure that is in a poor state will raise maintenance costs and ultimately impact the residual value risk of the assets. *Enabling environment* • Ensuring alignment of rail safety regulations, regional regulatory frameworks, tax, import duties, temporary import permits and other enabling environment conditions will be required. *Operating efficiencies* • Predictability and reliability that ensures customer retention and attraction is fundamental to success of the leasing pool.

	Economic Features *Unlocking volumes* • One of the core objectives of the leasing pool is to allow rail users to start moving more freight and thereby secure more off-taker agreements by running a reliable efficient rail service. This will be achieved by injecting rolling stock assets on a lease basis into the region. • The leasing pool will allow deployment of rolling stock to rail users in the shortest possible time without long drawn-out negotiations typically associated with lack of finance and low credit worthiness of rail users. *Enabling long term sustainability* • The leasing pool aims to enable rail users to end up in stronger financial positions which will result from the haulage of more freight on a reliable basis. (Coupled with a series of other operational and financial improvement strategies). • The leasing pool also aims to enable rail users to be able to acquire their own rolling stock or enter into longer term lease deals for larger fleets of rolling stock. *Unlocking greater long term rolling stock demand* • In the long term, the objective of the leasing pool is to use the short term leasing model to unlock accessible long term demand for rolling stock for locomotive manufactures.
	Maintenance • Well capacitated maintenance depots will be required (Includes mobile teams and spare parts supply). • Maintenance will be critical in order to ensure locomotive availability. Existing maintenance depots within each target country will be used. • Re-capacitation of these depots might be required. Such capital requirements will be assessed by the rolling stock manufacturer and relayed back to the lessor.
	Environmental Issues • Rail could potentially be more environmentally friendly. From research for the US Senate, fuel consumption for rail is between 20% and 40% less than for road per ton km and offers a lesser carbon footprint than road.
	Financial Features • The value and number of assets to be deployed in the leasing pool is yet to be determined.
Estimated Project Cost	Project preparation Funds – TBD Capital Funds – TBD

Status of Funding/ financing negotiations	• The terms of reference for the detailed market, legal and regulatory studies required for the successful establishment of the leasing pool have been drafted. • The Afri-ID is now in the process of securing project preparation funds required to execute the aforementioned studies. Proposals will be sent to the relevant DFI's requesting access to the required project preparation funds. • Preliminary market assessments have also been conducted for Tanzania & Zambia by the Afri-ID.		
Implementation Progress and Status	• Potential manufacturers for the wagons and locomotives have expressed their interest and have indicated that they are ready and have the capacity to commence manufacture of the wagons and locomotives as soon as the project has been advanced to bankability. • Countries along the corridor that will make use of the leasing pool are being engaged through SARA.		
Project Risks	*Funding & Buy-in* • Challenges in securing project preparation funds. • Low/Limited buy in to the leasing pool project concept from countries along the corridor.		
Projected Commencement Date	TBD	**Projected Completion Date**	TBD
Reference reports and studies	• Revamping the regional railway systems in Eastern and Southern Africa (Trademark South Africa) • Road and Rail demand side analysis (World Bank) • State of Rail Infrastructure report –Zimbabwe (DBSA) • State of Rail Infrastructure report –Mozambique (DBSA)		
Project Contact	• Kudzanayi Bangure, Project Manager (Rail) -Afri-ID (NEPAD Business Foundation)		

PROJECT 2:
INCREASING CARGO TO RAIL ON THE ZAMBIA– SOUTH AFRICA CORRIDOR

Implemented in (country or border)	DRC/Zambia/Zimbabwe/South Africa
Project Sponsor (s)	Grindrod and Transnet
Sector/Subsector	Transportation/Rail
Lead Agency	NEPAD Business Foundation (NBF) – Africa Infrastructure Desk (Afri ID)
Project Title	INCREASING CARGO TO RAIL ON THE ZAMBIA– SOUTH AFRICA CORRIDOR
Project Objective/s	• Alignment of strategic intent for an efficient integrated corridor development plan by all rail operators on the corridor to be implemented on a phased basis. • Development of a seamless rail logistics corridor that will promote the migration of appropriate traffic from road to rail and offer a competitive, complete and integrated rail logistics solution. • Development of an investment plan that will be used by all rail operators to plan and implement required infrastructure development along the corridor and cater for growing freight volumes. • Development of an operational strategy which will determine how rolling stock will be designed, acquired, funded and operated across the corridor.

Project Description	• The North-South Corridor (NSC) project is one of the Afri-IDs strategic rail infrastructure projects. It was selected through a process that involved extensive public/private sector participation. Consideration was given to the (PICI) Presidential Infrastructure Champion Initiative led by President Jacob Zuma, which is aimed at development of the North-South Corridor (NSC) as a priority project. All these factors combined with other political, economic and social considerations resulted in selection of this project as a priority project for acceleration through the Afri-ID. • The aim of the project is to facilitate/accelerate the determination of what specific action plan needs to be executed to implement an economically viable and financially profitable railway service on the NSC corridor in the short, medium and long term. • The current rail share of NSC freight traffic is less than 10% (0.5 mtpa) with estimated transit time of up to 30 days. Adequate collaborative planning and implementation between all rail operators on the corridor is thus required in order to establish a rail service that can complete with road services with turnaround times as low as 10 days. • One of the key tools that has been identified as critical in achieving the project objectives is development of a NSC rail infrastructure investment & operating study. • The purpose of the NSC study is to develop a blueprint to grow the freight volumes hauled on the corridor and to ultimately reduce the cost of rail transportation through better price and service strategies. These strategies should ultimately increase the rail/port market share of freight moving between DRC, Zambia, Zimbabwe and South Africa.  Sources: Trademark SA, Afri-ID, 2013

Technical Features

The technical requirements of the NSC study include the following:

Infrastructure

- Assess the condition of existing physical rail infrastructure (Rail track, OHTE/power supply and signalling systems).
- Assess current investment plans by each rail operator on the corridor and align investment plans to a common growth vision.

Freight demand & customers

- Determine demand and cargo growth projections for the next 10-15 years informed by the work currently being done by the JOC on a volumes and road to rail intermodal strategy.
- Assess positioning of the NSC relative to competing transport alternatives (e.g Dar es Salaam road/rail corridor, Walvis Bay road/rail corridor and Durban road corridors).
- Develop a customer and road to rail strategy.

Operating model

- Conduct a full operational performance improvement diagnostic of the corridor to identify bottlenecks.
- Determine the optimal operational performance that can be extracted from existing infrastructure.
- Determine the haulage capacity that can be achieved with the existing infrastructure through optimal operational performance.
- Investigate the current and planned capacity of the ports of Richards Bay and Durban.
- Develop an operating model to provide an integrated rail service between DRC and Richards bay or Durban.

Rolling stock

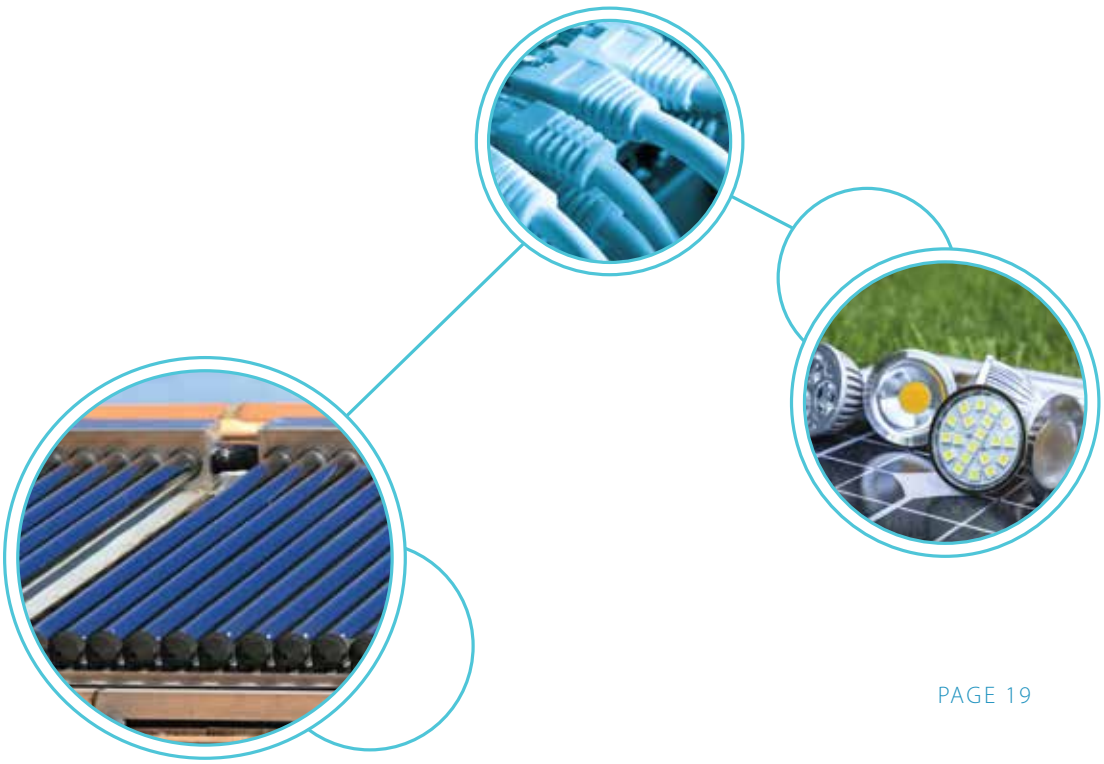
- Assess the condition of existing rolling stock (locomotives and wagons).
- Determine new rolling stock requirements to accommodate projected growth forecasts, taking into consideration the proposed operating model.
- Determine the various types of rolling stock solutions required such as containerised solutions, open wagons and the required infrastructure and standards to support roll out of these solutions.

Implementation

- Develop a robust implementation plan with timeframes that can be implemented on a phased basis, with specific outcomes for the short, medium and long term.
- Develop an execution strategy for the funding of the implementation plan taking into account the ability of the various parties to support the required investments.

	Economic and Social • The North South Corridor is one of the key import and export routes for trade moving into and out of Southern Africa and parts of East, West and Central Africa. • Key north and south bound commodity traffic includes: Bulk cargo, liquid bulk and general freight. • Ensuring that this corridor operates at optimal efficiency is of significant importance for economic reasons such as increasing intra-Africa trade, upliftment of local economic, export of mineral resources and overall lowering the cost of trade by providing an efficient cost effective rail logistics solution. • The NSC Study is thus a key pillar in the process of sustainably increasing the cargo moving on the rail network on the DRC – South Africa corridor in complement to the on-going efforts of the Joint operating center (JOC) for the NSC based in Bulawayo.
	Environmental Issues • Stakeholders impacted by any developments on the NSC will be consulted to ensure alignment of a common vision. • This will include public forum engagements and environmental consultations if required.
	Financial Features Financial requirements of the NSC Study include the following: • Development of a funding execution strategy taking into account funding constraints of rail operators on the corridor. • Determination of the ability of various stakeholders of each component of the corridor to fund their investment requirements. • Development of alternative funding scenarios where investment requirements cannot be met from available funding sources. • Investigate the institutional set-up in relation to funding and make recommendations. • Provide details of interventions and capital projects for the short, medium and long term with clear implementation timelines.
Estimated Project Cost	TBD
Status of Funding/ financing negotiations:	• The Afri-ID is in the process of securing funding for the project.
Implementation Progress and Status	• A tender was published in November 2014 aimed at procuring an external consultant to execute parts of the NSC study. • The procurement process was executed by the NEPAD Business Foundation at the request of the project sponsors, being Grindrod and Transnet. • Internal resources were also mobilised by rail operators on the corridor (NRZ, ZRL & SNCC) in October 2014 to execute key workstreams of the NSC study • The study is anticipated to be complete in 2015.

Project Risks	• Coordination of work streams being done internally by the rail operators and the work being done by the external consultant • Scope creep • Time overruns on the project cause a delay in implementation of the Investment Plan • Time overruns on the project cause a delay in implementation of the Investment Plan • Consultant's recommendations are not capable of practical implementation due to actual funding or resource constrains in certain jurisdictions		
Projected Commencement Date	2014	Projected Completion Date	2015
Reference reports and studies	• Should the Zambian government invest in rail (ZIPAR) • "What would it take for the Zambia copper mining industry to achieve its full potential?" (World Bank) • The Impact of Regional Liberalization and Harmonization in Road Transport Services (World Bank) • Review of Selected Railway – Concessions in Sub-Saharan Africa (ESW) • Framework for Improving Railway Sector Performance in Sub-Saharan Africa (SSATP) • Zambia: Termination of RSZ Railway Concession – Long Awaited Revival of Rail System (Press release)		
NEPAD Business Foundation Role	• The NBF has been responsible for development and finalisation of the terms of reference of the NSC Study in consultation with rail operators of the corridor • The NBF has also executed the procurement process for appointment of the external consultant for the study • The role of the NBF going forward will be to facilitate smooth execution of the study by providing key linkages between all stakeholders on behalf of the project sponsors		
Project Contact	• Kudzanayi Bangure, Project Manager (Rail) - Afri-ID (NEPAD Business Foundation)		



PROJECT 3:
REVITALISATION OF THE CENTRAL RAIL CORRIDOR

Implemented in (country or border)	Tanzania, Rwanda, Burundi
Project Sponsor (s)	Railway Assets Holding Company (RAHCO), TRL
Sector/Subsector	Transportation/Rail
Lead Agency	NEPAD Business Foundation (NBF) – Africa Infrastructure Desk (Afri ID)
Project Title	REVITALISATION OF THE CENTRAL RAIL CORRIDOR
Project Objective/s	Revitalisation of the central railway line in order to increase cargo moving on the rail network
Project Description	Summary • Over the past decade rail transportation has assisted in movement of goods and passengers in and out of the central parts of Tanzania. • Gains from the establishment of these networks have however slowly began to get eroded due to low levels of investment, inadequate maintenance and repair, declining market share in the transportation of goods and continuous dilapidation of infrastructure and rolling stock. • There is a significant need to increase the level of inland connectivity with the port of Dar es Salaam through rail. • Dwell times of traffic idle in the Dar es Salaam container terminals is estimated at 19 days, but this needs to be reduced to 3-4 days – Complete linkages between the hinterland and the ports is key to reducing these dwell times. Information Technology systems designed to assess cargo going through the port are also critical to increasing efficiencies. • Part of the solution to improving traffic flow is revitalising the rail network that links the port to the hinterland. • This project thus focuses on revitalising the central railway line in order to increase the volumes and efficiency of cargo moving on the corridor.

Technical Features

Below are the technical features of the project:

Infrastructure

Rehabilitation of the railway line will be required for the following section:

- Dar es Salaam – Isaka

Establishment of a new railway line will be required for the following sections:

- Isaka –Kigali; and
- Keza – Musongati.

Key technical elements that relate to rehabilitation and establishment of the railway lines will include the following:

- Alignment & Earthworks;
- Track;
- Turnouts, yards and sidings;
- Bridges & culverts;
- Signalling & telecommunications; and
- Buildings.

Rolling stock

Key technical elements that relate to rolling stock requirements include:

- Wagon requirements; and
- Locomotive requirements.

	Economic and Social • The Tanzania railway network currently consists of five key lines. These key lines include: the Central Corridor to Lakes Tanganyika and Victoria; Tazara; the Dodomo Link; and northwards. from Dar es Salaam to the Port of Tanga (cement production) and on to Arusha (tourism)) • There are additional railway lines that are currently being proposed to argument the five already in existence. • One of the potential links is between the Mtwara corridor and the Mozambican Niassa line. This line will primarily be for the movement of coal and bulk agricultural produce to the sea, however, it is estimated this will come at a considerable cost which will not be affordable to either the Tanzanian government or to the private sector alone. • There is also a fundamental need to link Tanzania's three sea ports of Mtwara, Dar es Salaam and Tanga (hence up to Mombasa) by rail augmenting the existing line between Dar es Salaam and Mtwara. • This leaves moving northwards from the Tazara line on the east side of Lake Tanganyika to join the Central Corridor line and on to Lake Victoria, so fulfilling the AU desire for north south linkage through East Africa. This will need to be explored further and in parallel with the same transport pattern and model that surrounds Lake Niassa/Malawi.
	Environmental Issues • TBD
	Financial Features • The World Bank has approved $ 300 million for the central line. • The government of Tanzania is currently seeking additional funds for rehabilitation/ upgrade of the central line. The project is estimated to cost between $ 4 - 5 bil
Status of Funding/ financing negotiations	• Requests for expressions of interest (Individual Consultants) have also been released by RAHCO for the following: - Environmental and Social Specialist – submission date 27 February 2015 - Monitoring and Evaluation Expert– submission date 27 February 2015 - Senior Rolling Stock Specialist– submission date 27 February 2015 - Senior Train Operations Specialist– submission date 27 February 2015
Implementation Progress and Status	• The CCTTFA has scheduled an Investor conference for March 2015 in Kampala Uganda • The Afri-ID to actively work with the CCTTFA to develop the business case for a select number of projects on the central corridor that will be showcased at the investor conference. • Tenders for development of the central line are expected to be released by RAHCO in 2015.
Project Risks	• Challenges in securing additional funds to complete the upgrade/rehabilitation of the central line. • Recently failed concessions impacting commitment levels from the Tanzania government.

Projected Commencement Date	TBD	Projected Completion Date	TBD
Reference reports and studies	• East Africa Rail Masterplan • World Bank analysis on rail gauge in Africa (World Bank) • Trademark East Africa business plan for Tazara (Trademark East Africa) • Work by northern corridor secretariat (North Corridor secretariat) • A detailed feasibility has been done on the Isaka – Kigali section of the central corridor, for standard gauge. (Africa development fund) • Freight and port traffic (Trademark RSA) • Concession termination in a railways project in Tanzania (Press release) • East Africa regional integration strategy paper (AFDB)		
Project Contact	• Kudzanayi Bangure, Project Manager (Rail) - Afri-ID (NEPAD Business Foundation)		

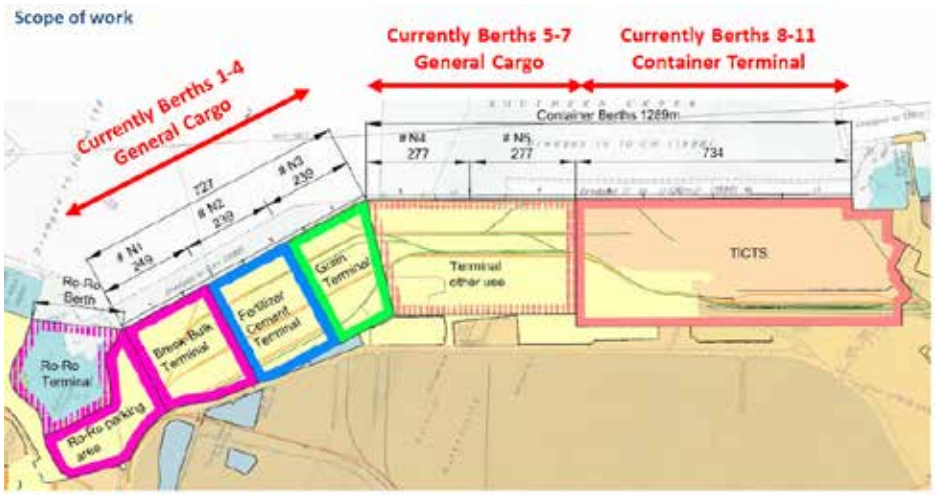
PROJECT 4:
DAR ES SALAAM PORT PROJECT (BERTHS 1-7)

Implemented in (country or border)	Tanzania
Project Sponsor (s)	Tanzania Port Authority
Sector/Subsector	Transportation / Ports
Lead Agency	World Bank
Project Title	DAR ES SALAAM PORT PROJECT (BERTHS 1-7)
Project Objective(s)	The Development of the Port of Dar Es Salaam to increase capacity from 12.1 to 18.0 mtpa by 2015 and 28.0 mtpa by 2018.
Project Description	Summary • The port of Dar es Salaam is the largest of a series of ports developed along the mainland coast of Tanzania and is constructed along a narrow strip of land on the western side of Dar es Salaam harbour. • It consists of eleven berths, seven of which are currently dedicated to general cargo (including container, dry bulk, break bulk and RoRo operations) and four to dedicated container operations. • Other facilities include the Malindi and lighter wharves (for coastal trades), the Kurasini Oil Jetties (KOJ), and the Single Point Mooring (SPM). • Currently, it is designed to handle panamax size vessels although length is restricted to 230m LOA (Length Over All). KOJ is designed for tankers up-to 45,000 Deadweight Tons (DWT) and the SPM, developed outside the port at Mjimwema Bay, for tankers up-to 120,000 DWT. • The channel was deepened and straightened in 1997 to a minimum depth of 10.1 metres relative to Chart Datum (CD). The depth within the southern creek (fronting the deep water berths) has been dredged to 10.0m CD. • In order to cater for increasing ship size and proper port zoning allowing larger and quicker cargo exchanges, the existing Berths need to be deepened and the port operations optimised through the development of: - A combined RoRo/Break-bulk Terminal - Dry Bulk Terminals - A new Container Terminal

Technical Features

The Berths 1-7 Upgrade includes the following:

Phase	Activities
1	- Demolition and removal/ relocation of sheds and other redundant or un-derutilised facilities - Construction of new gates and improved traffic flow arrangements - Grain silo upgrade works
2	- Construction of a new RoRo Terminal (to be used for general cargo operations until Berths 1-7 are modernised)
3	- Deepening and Strengthening of Berths 5-7 (± 554m long)
3A	- Berths 5-7 onshore container terminal yard paving works
3B	- Berths 5-7 onshore container terminal superstructure works (including perim-eter fencing, gates, vehicle holding areas, custom inspection areas, workshop, sheds and offices)
4	- Deepening and strengthening of Berths 1- 4 (± 727m long)
4A	- Berths 1-4 onshore terminal works
5	- Port Access Channel Works



Economic and Social

- The results of the Economic Analysis demonstrate that the project is highly beneficial for the national economy of Tanzania.
- The social benefits that will be derived from the development will go far beyond Dar es Salaam, but the will indeed benefit the entire country. These benefits will range from job creation, to increased trade and development of other infrastructure in and around Dar es Salaam.

<table>
<tr><td></td><td colspan="3">Environmental Issues

• Potential environmental and social impacts have been identified and a preliminary environmental and social mitigation plan was developed.
• A full environmental and social impact assessment will be carried out during the next project stage.</td></tr>
<tr><td>Status of Funding/ financing negotiations</td><td colspan="3">A summary of the financing is as follows:

<table><tr><th>Item</th><th>Amount</th></tr><tr><td>World Bank (IBRD)</td><td>$ 350-million</td></tr><tr><td>DFID</td><td>$ 100-million</td></tr><tr><td>TPA</td><td>$ 15-million</td></tr><tr><td>TOTAL</td><td>$ 465-million</td></tr></table></td></tr>
<tr><td>Implementation Progress and Status</td><td colspan="3">• The Berths 1-7 RfP was issued in September 2014
• Bidders have been shortlisted to develop Financial proposals</td></tr>
<tr><td>Project Risks</td><td colspan="3">• Competition from other Tanzanian Port projects (e.g. Bagamoyo, Berths 13-14, Mtwara, Tanga)
• Competition from the port of Mombasa and Durban</td></tr>
<tr><td>Projected Commencement Date</td><td>2015</td><td>Projected Completion Date</td><td>2019</td></tr>
<tr><td>Reference reports and studies</td><td colspan="3"><table><tr><th>Title</th><th>By</th><th>Date</th></tr><tr><td>Tanzania Ports Master Plan (Final Report)</td><td>Royal Haskoning</td><td>Feb 2009</td></tr><tr><td>Project Information Memorandum. Modernization of Berth 1-7: LOT No. 1 – Strengthening and Deepening of Berth 1-7 and Construction of Ro-Ro Berth</td><td>TPA</td><td>Apr 2013</td></tr><tr><td>Port of Dar es Salaam. Modernising of Berths 1 – 7. Part A – Deepening and Strengthening (Final Report)</td><td>Inros Lackner</td><td>Jul 2013</td></tr><tr><td>Port of Dar es Salaam. Modernising of Berth 1 – 7.

Part B – Improvement of Cargo Handling and Port Layout, Phase 1 (Final Report)</td><td>Inros Lackner</td><td>Jul 2013</td></tr><tr><td>Tanzania Development. Vision 2025. Big Results Now. National Key Result Area (NKRA) – Transport Lab</td><td></td><td></td></tr><tr><td>Invitation For Bids - IFB No: TPA/W/19 – WB of 2014-15 for Design & Build of Ro-Ro Terminal; Deepening and Strengthening Berths 1-7; and Terminals</td><td>TPA</td><td>Sep 2014</td></tr></table></td></tr>
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Procurement Plan

Work Package	High Level Scope	Contract Type
1	• Demolition and removal/ relocation of sheds and other redundant or underutilised facilities; construction of new gates and improved traffic flow arrangements, and grain silo upgrade works	
2	• Construction of a new RoRo Terminal • Deepening and Strengthening of Berths 5-7 • Berths 5-7 onshore container terminal yard paving • Berths 5-7 onshore container terminal superstructure works (design only) • Deepening and strengthening of Berths 1- 4	Design & build
3	• Berths 5-7 container terminal	PPP
4	• Berths 1-4 onshore terminal works	To be confirmed
5	• Port Access Channel Works	To be confirmed

Project Challenges

- Ensuring employer's requirements are delivered
- Challenging programme
- Construction activities within an active port
- Optimising local content contributions

NEPAD Business Foundation Role

- Providing an opinion on the RfP documents
- Communicating the private sector's position on the project to the TPA
- Assisting to source project preparation funding (where required)
- Understanding the Tanzania PPP requirements
- Assessing local content contributions

Project Contact

- Peter Varndell, Technical Specialist – Afri-ID (NEPAD Business Foundation)

PROJECT 5:
MTWARA PORT & EDZ DEVELOPMENT

Implemented in (country or border)	Tanzania
Project Sponsor (s)	Tanzania Port Authority
Sector/Subsector	Transportation / Ports
Lead Agency	Development Bank of Southern Africa
Project Title	MTWARA PORT & EDZ DEVELOPMENT
Project Objective(s)	Development of the Mtwara Port and EDZ due to: • Abundant gas, coal, iron ore and cement resources on the Mtwara corridor • the economic potential of Mtwara • in order to ease container traffic congestion at Dar es Salaam Port The goal is to grow the port capacity from 0.4mtpa to 28.0mtpa by 2030
Project Description	Summary • Mtwara is located in the southern most area of Tanzania, immediately north of the Mozambique/Tanzania Border. • The existing port was completed in 1954 and was accompanied by the construction of a railway line from Mtwara and Nachingwea (Lindi Region). • With the failure of the groundnut scheme, the railway line fell into disuse and is now defunct and removed. • The existing Port has a single quay approximately 380m long, with a depth alongside of minimum 9.8m. This equates to a notional 2 berths of 190m length or 3 berths each of notional 126m length. • The current capacity of the port is as follows:

Component	Capacity	Actual (2010/11)
General Containerised Cargo Berth	10,800 TEU	12,208 TEU
Offshore Support Base: Cargo Vessels	172,000 tonnes	42,000 tonnes

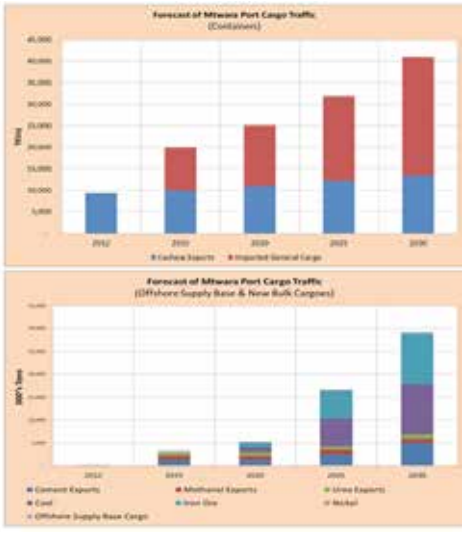
- The 2012 Feasibility Study projects the freight flows as shown in the figure below:

Freight Demand Projections

Summary Forecast of Mtwara Port Cargo Traffic

	2015	2020	2025	2030
Containers (TEUs)				
Cashew nuts Export	9,938	10,972	12,114	13,375
Imported General Cargo	10,000	14,026	19,672	27,590
Total Containers (TEUs)	**19,938**	**24,998**	**31,786**	**40,966**
Offshore Supply Base (000's Tons)	**240**	**240**	**240**	**240**
New Bulk Cargoes (000's Tons)				
Cement Export	1,250	1,250	2,500	5,000
Methanol Export	1,000	1,000	1,000	1,000
Urea Export	800	800	800	800
Coal		1,000	6,000	11,000
Iron Ore		1,000	6,000	11,000
Nickel		45	45	
Total	**3,050**	**5,095**	**16,345**	**28,800**

Source: URS analysis

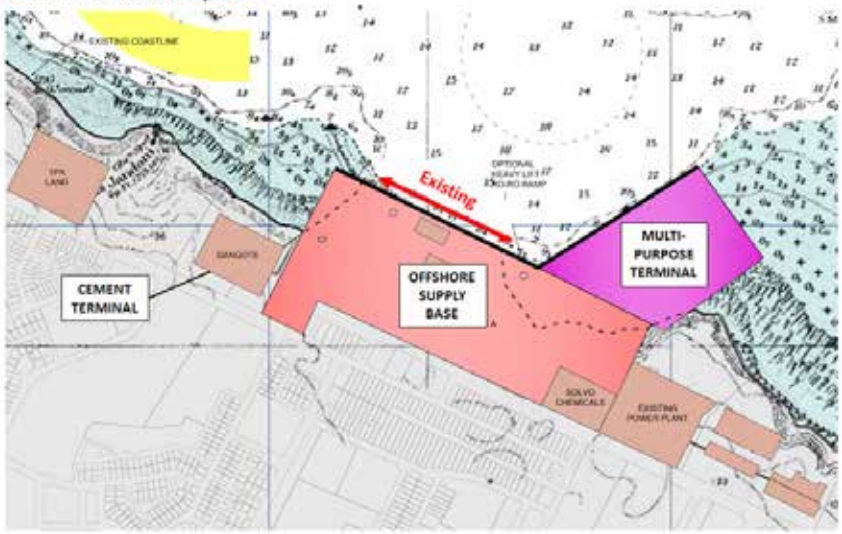


Technical Features

The short term expansion of the port will include:

- A new multi-purpose terminal (including dredging/ reclamation, expansion of quay wall, terminal buildings, equipment)
- A new offshore Supply Base terminal (including dredging/ reclamation, expansion of quay wall)
- Preparation for the cement, urea/methanol, coal iron ore terminals (including dredging/ reclamation)

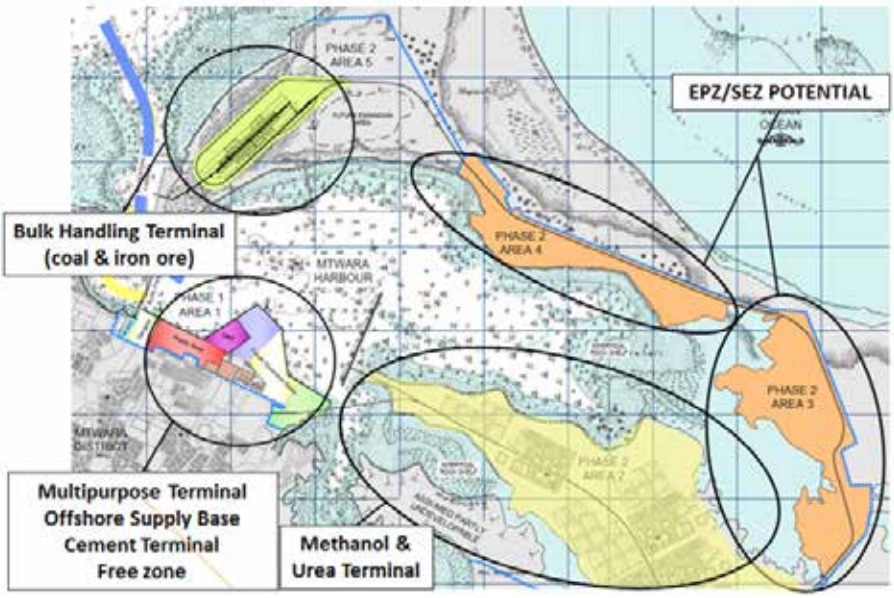
Short Term Port Development



The longer term expansion of the port will include:

- A bulk handling terminal for coal and iron ore
- A methanol and urea terminal
- An Export Processing Zone (EPZA) which can be developed under the auspices of Special Economic Zone (SEZ) status

Preferred Port Development Option



Economic and Social

- Development of the port will undoubtedly result in direct social benefits to the existing community through job creation, infrastructure development as well as increased trade through the port
- The true potential will only be realised if the inland transport connections are implemented
- Further visibility is required on the reserves and development plans for exporting oil & gas, coal and iron ore
- At present, less than 5% of Tanzanian marine trade moves through Mtwara and the development needs to be consider in terms of the development of the network of ports (i.e. Mtwara, Dar Es Salaam and Tanga)
- The competitive threat of the Nacala corridor in Mozambique needs to be better understood

	Environmental Issues • A scoping review of the environmental issues at Mtwara port has been completed to informoption choice and to guide the recommendations in the Feasibility Study • The site is predominantly Greenfield (undeveloped) and most of the proposed developments require extensive site clearance and native habitat removal including the development of industrial sites adjacent to existing centres of population around the harbour • An Environmental Impact assessment is required during Phase 2 prior to the implementation of any developments • Mtwara harbour is located in the vicinity of a special marine reserve and there are many other sensitive receptors around the harbour and in the vicinity of Mtwara • In particular, the proposed gas processing facility could have wide ranging environmental impacts which will need to be carefully assessed and mitigated		
Status of Funding/ financing negotiations	• TPA advertised a tender for a design, build and finance project which implies that no funding has been secured at this stage but it is intended to be sourced via the contract • DBSA (via the SDI Unit) are funding an update to the Feasibility Study to produce a bankable business case • Project preparation funds are required for the site investigations (geotechnical, aerial survey and bathymetric surveys)		
Implementation Progress and Status	• An RfP for the design, build and finance of the short term expansion works closed in late 2014 • An updated Project Information Memorandum is being prepared by the DBSA (via the SDI Unit) for completion in February 2015		
Project Risks	• Low financial and economic sustainability of the project • The full potential of the port can only be realized once the inland transport links are provided • Competition from Nacala corridor • The project is a PPP and needs to follow the PPP regulations of Tanzania		
Projected Commencement Date	Mid to late 2015	Projected Completion Date	2018

Reference reports and studies

Title	By	Date
Feasibility Study, Preliminary Design & Prepare Tender Document for Development of Port & Economic Zone Mtwara Port (Final Report)	URS	Oct 2012
Invitation for Tenders for Design, Build, and Financing for Construction of four additional Berths at Mtwara Port	TPA	Mar 2014
Tanzania Ports Master Plan (Final Report)	Royal Haskoning	Feb 2009
Regional Spatial Development Initiative (SDI) Programme; Mtwara Development Corridor; Final Interim Business Plan	DTI (SA)	Jun 2003
Regional Spatial Development Initiative (SDI) Programme; Mtwara Development Corridor; Final Report; Transport Strategy	DTI (SA)	Feb 2006
Mtwara Port; Project information Memorandum; Status Quo Report (rev 0 - Draft)	Aurecon	Nov 2014

Procurement Plan

Work Package	High Level Scope	Contract Type
SHORT TERM		
Construction of four additional Berths	• New multi-purpose terminal • New offshore Supply Base terminal • Preparation for the cement, urea/methanol, coal iron ore terminal	Design, Build, and Finance
LONG TERM		
To be confirmed		

Project Challenges

- The Feasibility Study is actually a master planning study and lacks the information required to support bankability
- The short term project has suffered from not having a Transaction Advisor to prepare the project documents
- The reality and timing of development of major freight projects is unsure
- Freight forecasts appear to be very optimistic
- Competing with Dar Es Salaam and Nacala traffic will be difficult

NEPAD Business Foundation Role

- Providing an opinion on the economic viability of the project
- Providing an opinion on the RfP documents
- Communicating the private sector's position on the project to the TPA
- Assisting to source project preparation funding (where required)
- Understanding the Tanzania PPP requirements

Project Contact

- Peter Varndell, Technical Specialist – Afri-ID (NEPAD Business Foundation)

PROJECT 6:
LESOTHO HIGHLANDS PHASE II PROJECT

Background and Description of Project

Phase I of the four-phase Lesotho Highlands Water Project (LHWP) included amongst others the construction of Katse and Mohale Dams and the 'Muela Hydropower Station. Lesotho earmarked royalty and hydropower revenue from the project, while South Africa needed water to augment into the Vaal system for use mainly in the Gauteng province.

The aim of the second phase is to generate additional hydropower for Lesotho and deliver more water by gravity into the Vaal River system in South Africa, to supply the economic heartland in Gauteng Province and also supply water to electricity stations in Mpumalanga. In parallel with water conservation measures in the Vaal River, it will also influence the improvement of water quality amongst many benefits.

Phase II involves the construction of the Polihali Dam in the Mokhotlong District and the Kobong pumped storage hydro-electricity project. The Lesotho Highlands Development Authority (LHDA) is mandated to implement the project in Lesotho and the Trans Caledon Tunnel Authority (TCTA) will undertake any component of the project that may be required in South Africa.

The Lesotho Highlands Water Project (LHWP) was identified more than 50 years ago as the least cost effective water resource development to benefit both the peoples of the Kingdom of Lesotho and the Republic of South Africa.

The Specific Objectives of the Project are:

- To provide revenue to Lesotho by transferring water from the catchment of the Senqu/Orange river in Lesotho to meet the growing demand for water in the RSA's major industrial and population centres.
- To ensure an increased assurance of water supply for the regional economic hub in South Africa; the Gauteng Province.
- To generate hydro-electric power for Lesotho in conjunction with the water transfer.
- To promote the general development of the remote and underdeveloped mountain regions of Lesotho, while ensuring that comprehensive measures are taken to counteract any adverse effects which the Project might have on the local population and their environment.
- To provide the opportunity to undertake ancillary developments such as the provision of water for irrigation, tourism and potable water supply.

General Project Information

PROJECT SPONSOR

In each country the project has a Ministry as the sponsor. The contact details are as follows:

Lesotho:

Ministry of Energy, Meteorology and Water Affairs: Principal Secretary

Lesotho Highlands Development Authority (LHDA), Chief Executive, Mrs Refiloe Tlali

South Africa:

Department of Water and Sanitation : Director General

Trans-Caledon Tunnel Authority, Chief Executive Officer: Mr James Ndlovu

LEAD AGENCY

Phase II of the LHWP is being implemented within the borders of the Kingdom of Lesotho. In line with the Treaty provisions, the Lesotho Highlands Development Authority (LHDA) is the implementer and lead agency for the project. It will work hand in hand with the TCTA to ensure a smooth implementation.

TECHNICAL FEATURES

The project involves construction of: 165 m high, Polihali dam (about 2km downstream of the confluence of the Orange-Senqu and Khubelu rivers), a 38 km long tunnel from Polihali discharging into the Katse reservoir, Kobong Pump Storage estimated to generate about 1200MW, a 100m high Kobong Dam (upper dam), and as well as advance infrastructure including access roads, project sites and camps, power transmission lines and administration centres. There will also be a number of environmental and social development programs undertaken within Lesotho to mitigate any negative impacts and enhance benefits for the people and the country in general. According to the latest implementation programme Phase II water delivery is expected to come on line to deliver 465 million cubic metres a year to South Africa by 2024. South Africa currently receives on average 24.6m^3 of water per second from the LHWP. An additional average of 15m^3 per second will flow as a result of the expansion (Phase II).

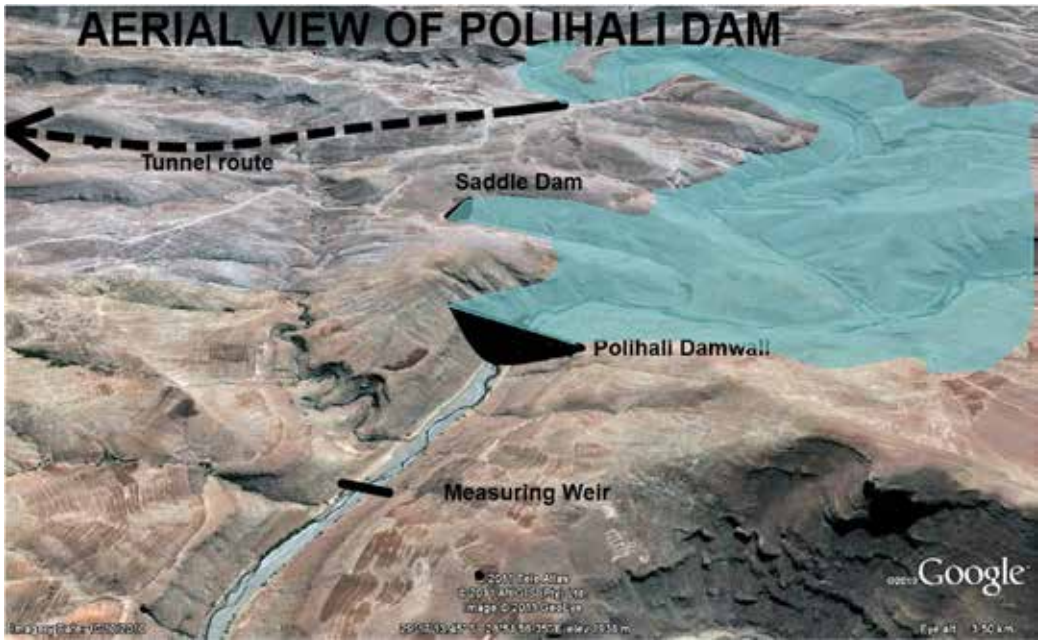


Figure 1: Aerial view of Polihali Dam (Source: Infrastructure News)

The Kobong pump-storage scheme is still subject to the outcome of the Joint Feasibility Study by Lesotho and South Africa. The Technical and the Economic components are complete. However, further studies are required. The Government of Lesotho has secured funding from the World Bank for the purposes of completing the following remaining studies:

- Market and Integration Study;
- Development of financial model;
- Geotechnical investigation (Baseline); and
- Legal and commercial aspects.

ESTIMATED INVESTMENT COST

The estimated capital expenditure for the project is +/- $ 1.50 billion for the water transfer component and about $ 0.9 - 1.1 billion (2013 estimate) for hydropower component in Lesotho. The project will be implemented in partnership between the government and the private sector thereby increasing the participation of the private sector in economic development.

ECONOMIC AND SOCIAL ISSUES

From the social and environmental impact perspective, the project will affect over 500 households (an estimate of 2600 people) from 72 villages. These have to be compensated accordingly and associated development projects implemented to improve the livelihoods of the affected people. The benefits include employment of thousands of Basotho during the construction period. The project implementation philosophy promotes employment of local Basotho. Local Basotho will also receive priority for semi-skilled and skilled work; importation of skill will largely happen if that skill is not available in Lesotho.

ENVIRONMENTAL ISSUES

Baseline studies for Water Transfer, including Socio-Economic, In-stream Flow Requirements (IFR), Biological and Heritage and Public Health are nearing completion. These will feed into the EIA studies.

A number of EIA studies will be undertaken for the various infrastructure components, to guide the development and to mitigate any negative environmental impacts that may arise.

FUNDING OPTIONS

Discussions related to various funding options for these large infrastructure investment requirements have been going on since 2011. The financial contribution of South Africa under Phase II is largely to fund the construction of the Polihali Dam, the transfer tunnel from Polihali Dam to the Katse Dam, advance infrastructure, and environmental and social development programmes in Lesotho. Lesotho's contribution will be for funding the hydropower infrastructure component of the project. The Trans-Caledon Tunnel Authority (TCTA) is responsible for securing funding for the water transfer component of the project and will borrow funding from various financial institutions. Meanwhile bridging Finance for Advanced Infrastructure for the water transfer component has already been secured from the TCTA.

CURRENT STATUS

The feasibility study for the water transfer scheme was completed in 2009. Implementation commenced with the procurement of a Project Management Unit (PMU) in 2013. Procurement of consultants to undertake design of the advance infrastructure, EIAs and other related preparatory works is now underway, having commenced during the last quarter of 2014. Procurement for additional feasibility studies related to the hydropower component will commence during the course of 2015. For more details refer to the LHWP website at *(http://www.lhda.org.ls/phase2/tenderbulletin)*.

The financing arrangements for Phase II of the LHWP are articulated in Article 13 of the Phase II Agreement. According to the Agreement, the LHDA, in consultation with TCTA, is responsible for preparing a financing strategy for Phase II, to be approved by the Lesotho Highlands Water Commission (LHWC). In this regard A Funding and Resource Mobilisation Strategy for the water transfer component is being developed. The Strategy will guide the process of engaging with potential funders for the long term funding of the project.

According to the Treaty all loans, credit facilities and other borrowings relating to delivery of water to South Africa should be approved by South Africa. Similarly loans, credit facilities and other borrowings that are related to hydro-power generation and ancillary developments in Lesotho have to be approved by the Government of Lesotho.

ESTIMATED TIMEFRAME FOR IMPLEMENTATION

The construction of the dam and tunnel is scheduled to begin during the last quarter of 2017 and is expected to run until 2024. The hydropower component is expected to start a year later but both components will be commissioned together by 2024.

Challenges

Two countries are involved, and therefore coordination and collaboration is required by both countries. A conducive political environment to enable smooth flow of decisions from the various levels is an essential element for the success of such a large project. Political risk insurance, if deemed required, could add a cost to the project as well.

The increase in interest rates due to changing market conditions could result in additional funding cost to the project.

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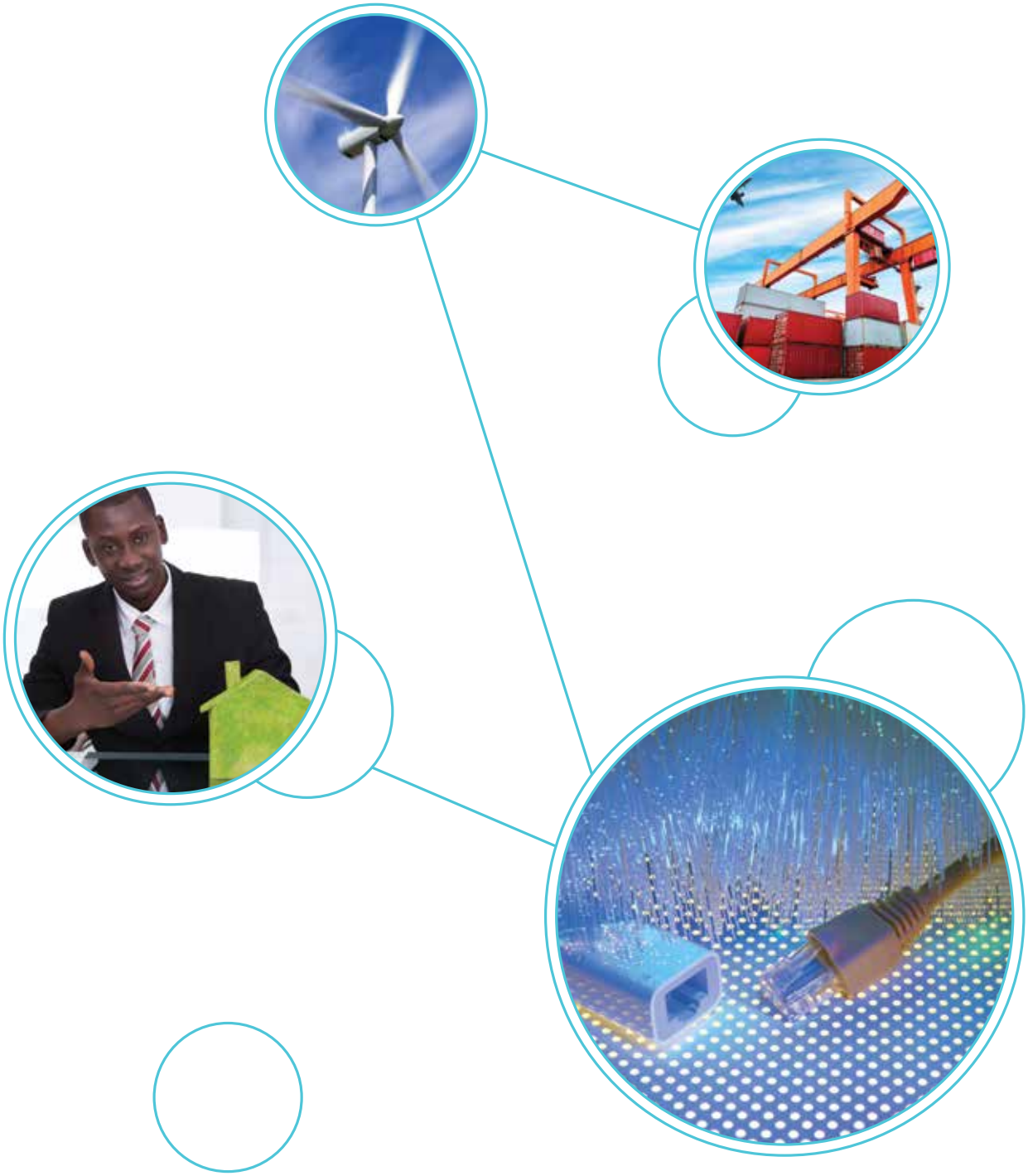

PROJECT 7:
SERENJE NAKONDE ROAD PROJECT

Background and description of project

The Serenje – Nakonde road is ranked as a number one priority road project on the North South Corridor NSC (one of the prioritised projects under Programme for Infrastructure Development in Africa). The road is a section of the Great North Road (T2), is also part of the Regional Trunk Road Network (RTRN Link 15) as well as the Trans-African Highway Nr 4. The project road runs in a north eastern direction from Serenje in Zambia's Central Province to Nakonde in the Muchinga Province covering a total distance of 614.71km.

The road was constructed as a bitumen surfaced road on its current alignment in the late 1970s. Thereafter it received minimal maintenance until 1995 by which time significant deterioration had taken place. Between 1995 and 1998 various emergency maintenance programmes were carried out and between 1998 and 2000 a World Bank funded periodic maintenance intervention was implemented. The most seriously deteriorated sections were then partially reconstructed and the rest of the road, by far the longest portion, received patch and double seal treatment. The design life of this kind of intervention was estimated at 6 years only.

Unfortunately, follow – up maintenance and rehabilitations have been deferred due to lack of funds and, as a result, the Serenje – Mpika section road has again deteriorated significantly.

The Government of Zambia is currently undertaking emergency maintenance works in order to improve safety on the road. The scope of works being undertaken includes pothole patching, resealing and spot reconstruction of the road sectors between Serenje, Mpika and Chinsali.

However, a more fundamental rehabilitation intervention is needed to secure a sustainable long term maintenance condition for the entire road. This is particularly so for the northern section between Chinsali and Nakonde which is now experiencing severe deterioration. The Project Preparation and Implementation Unit (PPIU) for the COMESA-EAC-SADC Tripartite PPIU has prepared designs and tender documents for the rehabilitation of the road under the 3 design sectors listed below;

- Link 1: Serenje to Mpika (238.89 km)
- Link 2: Mpika to Chinsali (165.65 km)
- Link 3: Chinsali to Nakonde (210.17 km)

General Project Information

PROJECT SPONSOR

The project is sponsored by the Government of Zambia, and supported by the Zambian Road Development Agency (RDA), the Zambian Road Fund Agency (NRFA), Ministry of Transport, Works, Supply and Communication as well as by the COMESA – EAC – SADC Tripartite Task Force.

LEAD AGENCY

The PPIU was the Client for the three design contracts which culminated in the preparation of tender documents for the three links which have since been handed over to RDA to lead the construction stage. The PPIU is now assisting the Government of Zambia and RDA in the identification of funds for construction and will continue providing technical assistance during construction.

TECHNICAL FEATURES

The three sections of the Serenje-Nakonde Road Project have all been designed to the same SATCC technical specifications. In accordance with NSC trunk road design a standard 11m-wide road section will be provided with 2 x 3.5m carriageways and 2 x 2m-wide shoulders.

The designed pavement layers have been standardised, with the existing cement-stabilised base course to be scarified, widened, re-stabilised and compacted to a depth of 150mm (sub base) to the new road cross-section. This layer will provide the foundation for a 150mm-200mm thick crushed stone base course, that will in turn be surfaced with 75mm of hot mix asphalt (HMA) base course and 50mm of HMA wearing course laid full width including the shoulders. The road has been designed to a pavement life of 20 years.

Drainage has been improved throughout and all 600mm diameter carriageway culverts will be replaced with 900mm diameter or larger culverts and extended from the current 9.1m cross-section to 11m.

The horizontal and vertical alignment has remained largely unchanged for the 120 kilometres per hour (kph) design speed, but some sag curves have been eased and improved safety and advisory signage provided.

Climbing lanes have been included on long inclines to facilitate traffic flow on this road that is characterised by a high proportion of heavy trucks and semi-trailers. Improved road safety has been an underlying basis for the project designs.

ESTIMATED INVESTMENT COST

The estimated costs of construction for the three road sections are as detailed below:

Link	Location	CAPEX (US$ million)
Link 1	Serenje - Mpika	233.199
Link 2	Mpika - Chinsali	160.449
Link 3	Chinsali - Nakonde	254.626
Total		638.27

ECONOMIC AND SOCIAL

Road transport carries over 80% of the cargo on the Dar es Salaam Corridor and directly and indirectly serves beneficiaries in Zambia, Tanzania, Kenya, Democratic Republic of Congo (DRC), Malawi, Zimbabwe, Botswana and Namibia, particularly in the energy, mining, agriculture and retail sectors.

The overall objective of this project is to contribute to the reduction of the cost of transport along the North-South and

Dar es Salaam Corridors so as to improve the competitiveness of business in the 8 countries served by this road corridor in general and producers and consumers in Zambia and DRC especially. The efficient operation of transport along this road also provides further opportunities to deepen regional integration as well as enhance national and regional economic growth and so raise standards of living of their people across the region.

The project has the following subsidiary objectives:

- Improving the competitiveness of business in the 8 countries served by this corridor by reducing road transit times and improving delivery schedules for cargo and passengers.
- Reducing the vehicle operating costs for road transport using the T2.
- Providing more secure (reduced accident loss) transport of import and export goods and passengers for Zambia, Tanzania, and the DRC, through the port of Dar es Salaam.
- Secure and sustained long-distance transport of import and export goods for Zambia, Tanzania and the DRC through the port of Dar es Salaaam In-country transport of energy, mining, agricultural and retail inputs and produce, particularly through the Central, Northern and Muchinga Provinces of Zambia
- Improved road transport services for energy, mining, agricultural and retail inputs and produce through the northern Zambian hinterland served by this section of the T2.
- Enhancing the ability of the Road Development Agency (RDA) to maintain this truck route sector.

Key economic benefits accruing from the road are presented below:

- Secure and sustained long-distance transport of import and export goods for Zambia, Tanzania and the DRC through the port of Dar es Salaaam.
- In-country transport of energy, mining, agricultural and retail inputs and produce, particularly through the Central, Northern and Muchinga Provinces of Zambia.

Economic sustainability: Economic analysis done in 2012/2013 by the University of Birmingham, and the key highlights from the study are presented below.

- Traffic count surveys estimated the average daily traffic on the three sections as follows:

Link	Passenger vehicles, minibuses and taxis	Goods vehicles/trucks
Serenje – Mpika (Link 1)	503	309
Mpika – Chinsali (Link 2)	182	496
Chinsali – Nakonde (Link 3)	195	283

The Economic evaluation estimated the NPV and IRR on the three sections as follows:

Link	NPV – USD m	IRR
Serenje – Mpika	23.54	13.2
Mpika – Chinsali	3.75	12.4
Chinsali – Nakonde	18.32	13.5

ENVIRONMENTAL ISSUES

Environmental and Social Impact Assessment studies were undertaken on the three road sections and the findings were that the positive impacts far outweigh the negative impacts. The proposed Environmental Management Plans and Mitigation Measures and the Environmental Monitoring Plans have since been approved by the Environmental Authorities.

FINANCIAL ANALYSIS

The financial viability of the project was not considered in the design studies. The NPV to Capital cost ratio calculated ranged between 0.36 for link 1 to 0.73 for link 3. Since the Government of Zambia has recently approved the tolling of roads in Zambia, it may be worthwhile also to assess the financial viability of the project based on a financing blend of grant and private funding.

Project development

CURRENT STATUS

The current status of the project with relation to the stage of development is at funding identification for construction. The design reports and tender documents have been completed. The African Development Bank has expressed in interest in funding the rehabilitation of the 100 km section (worst deteriorated section) on the Chinsali to Nakonde link and RDA and PPIU are working with the design consultant to repackage the tender documents into two lots ie for 100km and 95km. The Isoka Chinsali section requires immediate attention to avoid further deterioration which may negatively affect the transportation of essential goods and services in and out of the country.

ROAD CONDITION

REQUESTED SCOPE OF WORK AND REMUNERATION STRUCTURE / RISK ALLOCATION

Should the financial viability be confirmed using a blending of grant and private finance it is requested that the Rehabilitate, Finance, Maintain, Operate financing option be adopted.

ESTIMATED TIMEFRAME FOR IMPLEMENTATION

The three projects can be tendered out immediately since the projects have been prepared to a bankable stage and the tender documents are readily available. The tender documents have been based on the World Bank format. The estimated construction periods are as follows;

Link	Procurement Period Months	Construction Period Months	Maintenance Period Months
Serenje – Mpika	9	36	12
Mpika – Chinsali	9	24	12
Chinsali – Nakonde	9	36	12

Challenges

No major challenges are envisaged and the risk analysis undertaken came up with the following mitigation measures:

Potential Risk	Mitigation Arrangement
Inaccurate estimation of project costs	TMSA/PPIU: • Have provided technical support to the RDA for project preparation and road design; • Have cross-checked unit costs on other recent similar works contracts.
Insufficient funding to finance the works contract	Sub-dividing some of the longer sectors into two or more tender lots may increase interest from some potential funders.
The RDA does not have necessary capacity to implement the project	• A supervision contract has been provided to assist RDA to supervise the works; • PPIU will also deploy necessary expertise to assist the RDA in managing and supervising the works.
Poor response to EOIs and RFPs from contractors and supervision consultants due to buoyant markets	The three road sections are designed to the same specifications, thus offering continuity. EOIs and tenders will be well advertised and if substantial road sectors are tendered interest should exist from contractors already working in Zambia and those with a presence in the region.
Negative environmental and social impacts reduce the expected project benefits	Negative social, environmental and physical impacts are to be expected, but full environmental and social impact assessments, including resettlement action plans have been completed for all three road sections. These include detailed Environmental and Social Management Plans that will mitigate or remove anticipated negative project impacts and help to enhance positive impacts.
Political instability undermines the financing, tendering and/or implementation processes	The region is politically stable, financing is expected to be in place for some of the road sections by 2015, and although a general election is due in Zambia in late 2016 no significant disruption is anticipated and the works will be substantially complete by that date

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Transnet SOC is South Africa's largest freight logistics company that is fully owned by the South African government but operates as a corporate entity aimed at both supporting and contributing to the country's freight (and port and pipeline) logistics network. In 2013, Transnet SOC and the NBF launched the Africa Infrastructure Desk (Afri-ID) for the purposes of expediting the identification, preparation and implementation of port, rail, road and pipe infrastructure projects in the region and the continent. Through the Afri-ID, Transnet SOC is currently involved in port and rail projects along the North-South Corridor.

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Grindrod is an international shipping and freight logistics company based in South Africa with joint venture and associated companies in 37 countries worldwide. Grindrod provides operating and marketing synergies through its four main divisions, which are Freight services, Financial services, Trading and Shipping. As a heavy user of transport infrastructure with a broad range of freight logistics services which are integrated in the group's strategic infrastructure, assets, logistics and ships agency capabilities, Grindrod has a strong focus on Africa's infrastructure development.

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FOOTNOTES

1 Source Afri-ID Analysis

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