SADC Enabling Infrastructure Initiative

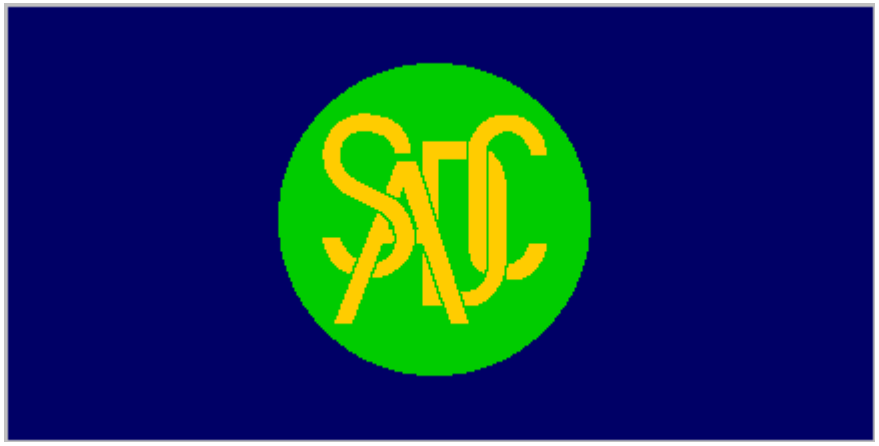
MASTER PLAN TICAD V SIDE EVENT MASTER PLAN PRESENTATION, YOKOHAMA, JAPAN, 31 MAY 2013

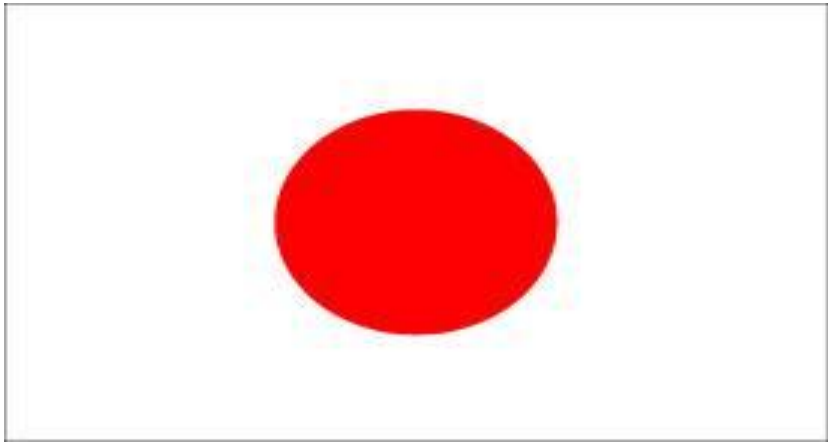
BY

JOAO SAMUEL CAHOLO AND REMMY MAKUMBE

Infrastructure Support for Deepening Regional Integration and Poverty Reduction in the SADC Region

SADC - JAPAN COOPERATION IN INFRASTRUCTURE DEVELOPMENT

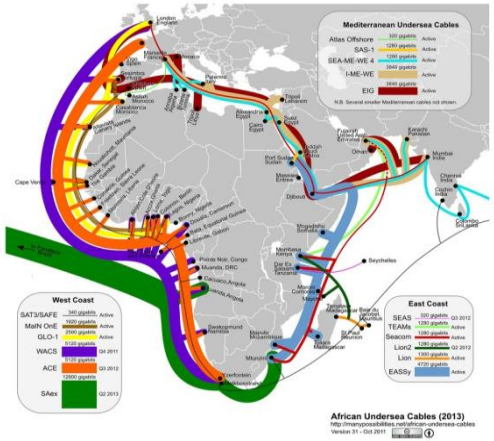


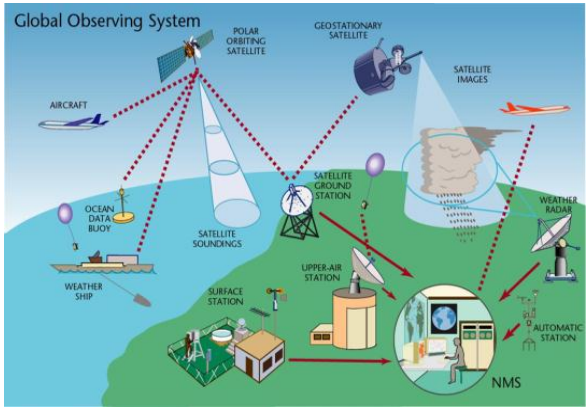


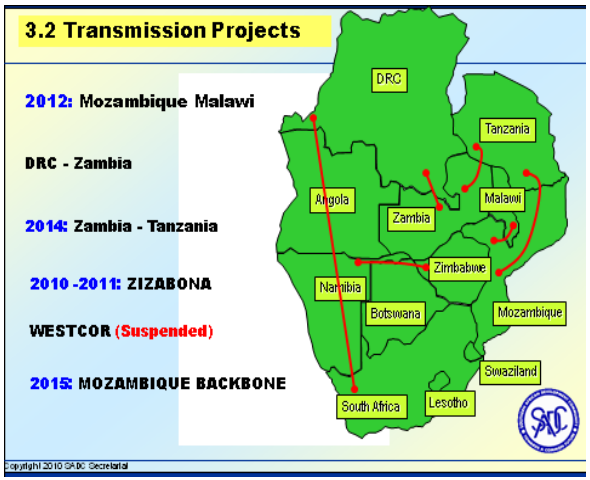
Together We Can Move Forward

A People to People Partnership

SADC INFRASTRUCTURE MASTER PLAN SECTORS







STATUS OF THE MASTER PLAN

MASTER PLAN DEVELOPED THROUGH LARGELY FUNDING FROM DFID, AND PARTLY EU AND DBSA

PLAN WAS BASED ON BROADBASED CONSULTATIVE PROCESS WITH KEY STAKEHOLDERS AND THE STATES

SADC INFRASTRUCTURE DEVELOPMENT MASTER PLAN WAS ADOPTED BY SUMMIT OF HEADS OF STATE IN AUGUST 2012 IN MAPUTO, MOZAMBIQUE – THERE IS REGIONAL CONSENSUS AROUND IT

SADC INFRASTRUCTURE VISION 2027
(TIMEFRAME DISAGGREGATION OF THE SADC MASTER PLAN PROJECTS)

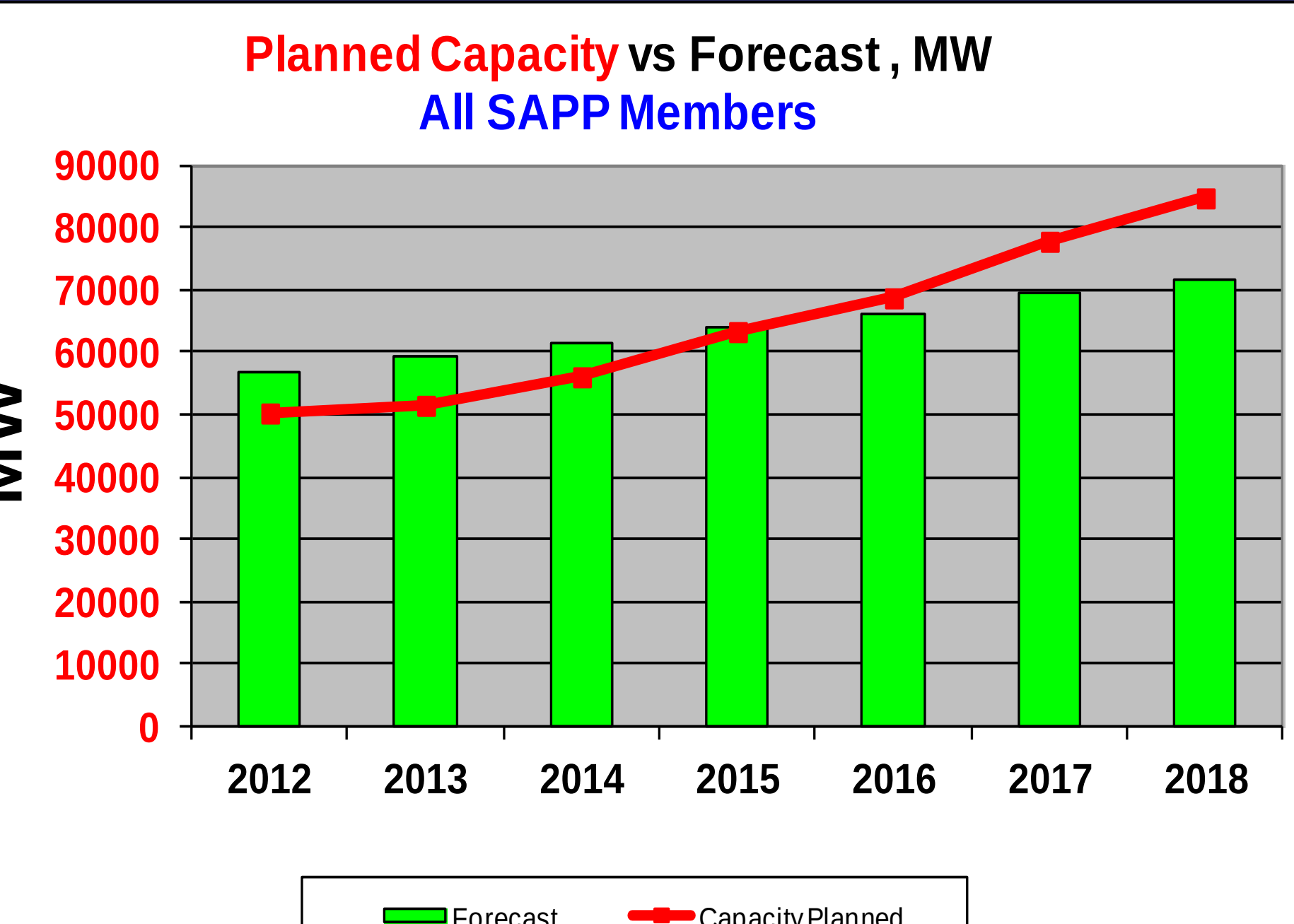
Short Term Projects For Implementation (2013 – 2017 Period) (Home of the SADC and PIDA PAP)

PPDF Operational Zone

Medium Term Projects (2017 – 2022 Period) – Project Planning and Updating of Information Profiles in Progress

Long Term Projects (2022 – 2027) – Home of Projects within the Long Term Horizon on Which there is Scanty Information and Consultations With Other States and Parties is in Progress

SAPP Planned & Required Capacity



Transmission Projects

Angola - Namibia

2012: Mozambique - Malawi

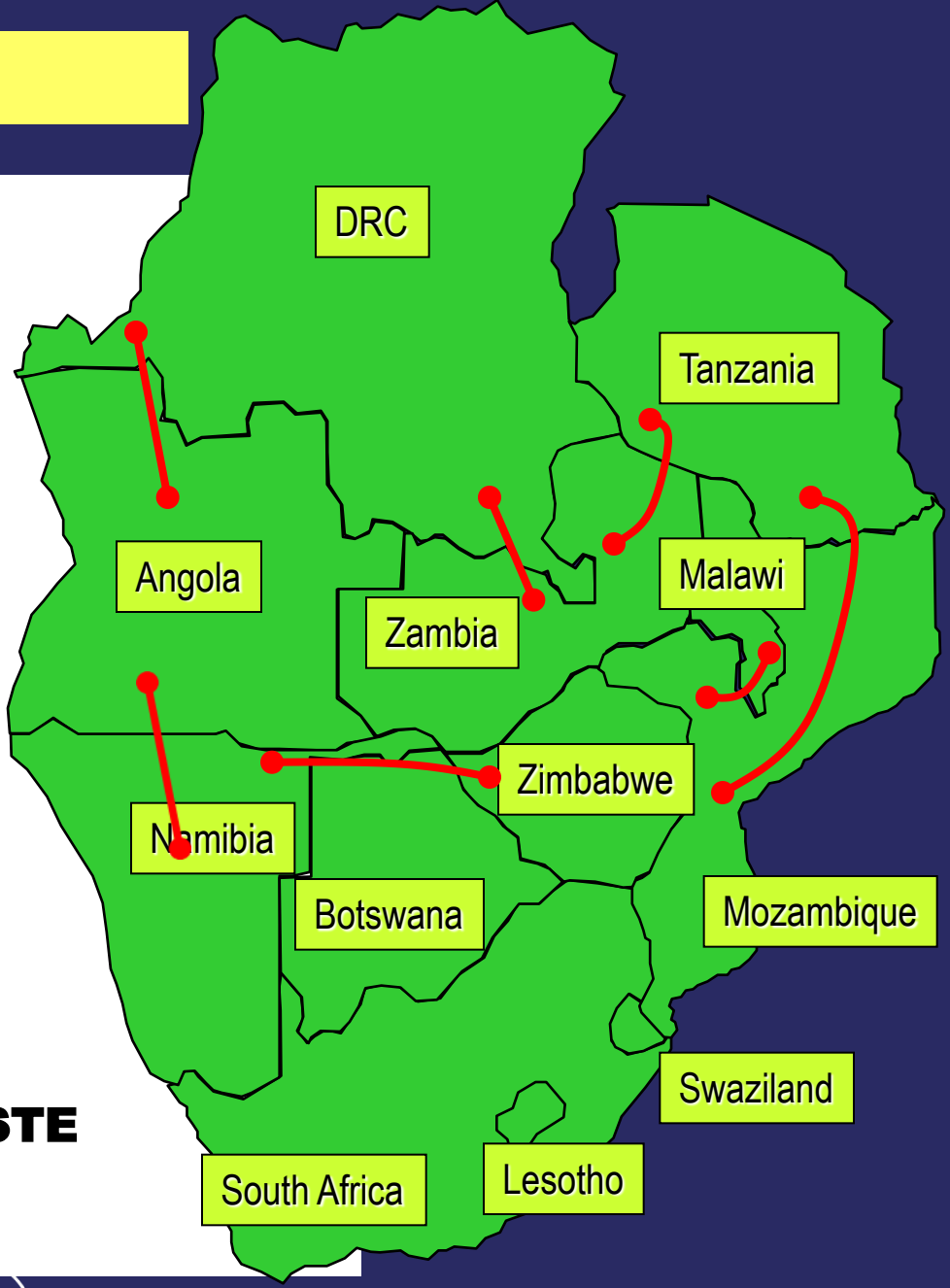
DRC - Zambia

2014: Zambia - Tanzania

2010 -2014: ZIZABONA

Angola - DRC

2015: Mozambique Backbone STE



TRANSMISSION PROJECTS STATUS

DRC - Zambia 220 KV Interc9nnector

- Construction work on-going in DRC
- CEC re-tendering on fast track basis due to increase in cost by current contractor
- Construction starts 2nd quarter 2013
- Completion expected in June 2013 on DRC side

Kafue – Livingstone Upgrade

- ✓ Change of conductor and insulators from 220 kV to 330 kV operation
- ✓ Completion target was set for June 2013

TRANSMISSION PROJECTS STATUS

Zambia - Tanzania – Kenya

- ✓ TANESCO secured funding for phase 1 and tender documents are being prepared.
- ✓ Feasibility studies have been concluded for Singida portion.
- ✓ Iringa- Mbeya: feasibility studies are on-going
- ✓ Conceptual design to ready by Oct 2013
- ✓ On the Zambian side, construction of the line up to Chipata has started

Mozambique - Malawi

- ✓ Project is priority for the 2 Governments
- ✓ An MOU has been signed by the two governments.
- ✓ The MOU was signed on 3rd April 2013.

Angola-Namibia

- ✓ The project has been identified as a priority project.
- ✓ It will result in the connection of Angola, which is a non-operating Member of SAPP, to interconnect to the overall SAPP electricity grid.

ZIZABONA Interconnector Project Status

- ✓ Project launched on 12 July 2012 and Officially opened by the Prime Minister of Namibia.
- ✓ Market studies, Technical, Transmission charge methodology, Financial modelling, Project Packaging, SPV structure and PIM were presented
- ✓ Responses from potential investors in the form of debt contributions were pledged
- ✓ IGMOU signed by Botswana, Namibia, Zambia and Zimbabwe

ZIZABONA Interconnector Project Status

- ✓ ZESA, ZESCO and NamPower have signed the Joint Development Agreement, BPC is yet to sign
- ✓ Eskom and CEC have shown interest in the project and will be informed of shareholding in the ZIZABONA SPV
- ✓ Project financial close by end of 2013
- ✓ Commercial Operation - 2016

CTC Project Status

- ✓ Marvel – Insukamini : Designs done and tendering is in progress
- ✓ New SVC at Sherwood: Tender Process completed
- ✓ Alaska – Sherwood line: Revisiting EIA for tendering
- ✓ Orange Grove – Triangle: Awaiting Minister of Finance for go ahead

ZESA and Eskom has formed Technical Committees to work on the Project

Mozambique Backbone – STE

- ✓ EIAs done and approved by Government
- ✓ Shareholder structure done

KEY GENERATION PROJECTS

Objective is to increase generation from current 56 000 MW to 96 000 MW by 2027

- *Cahora Bassa North Bank, Mpanda Nkuwa Hydro and Batoka Godge Power Generation Stations;*
- *Hwange Power Station Units 7 and 8 Expansion Project;*
- *Gokwe North Thermal Power Station;*
- *Inga III Hydro Power Project;*
- *Kudu Gas Power Station;*
- *Kafue Lower Power Generation Project;*

Investment costs of USD 62 32 billion (2013 – 2017), USD 39 billion (2017 – 2022) and USD 72 billion for power generation and USD 3 billion for priority interconnector projects;

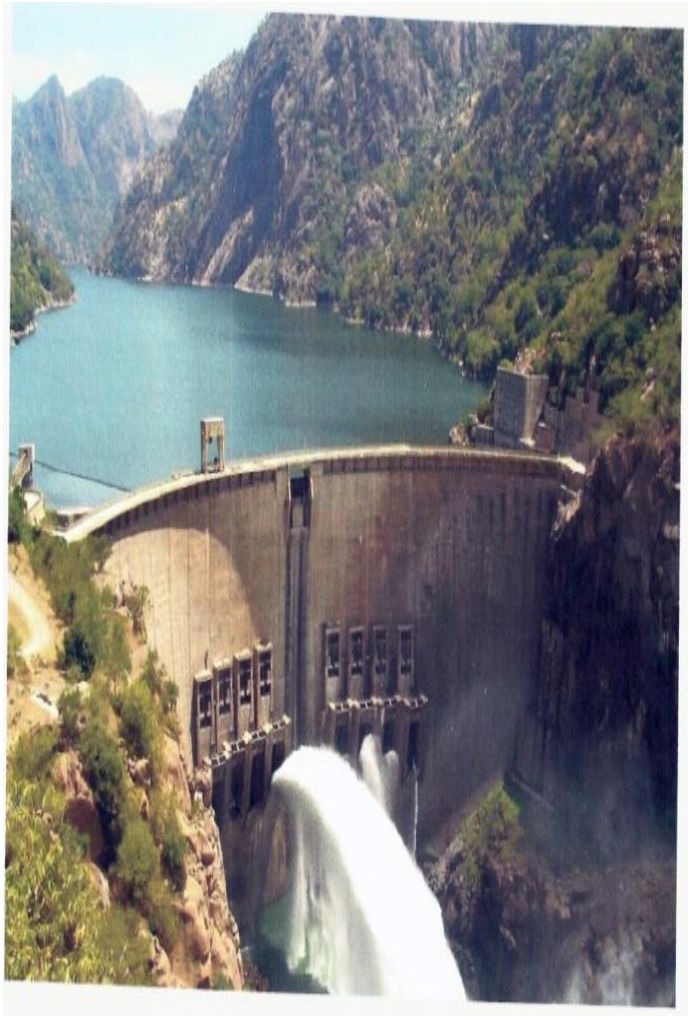
MOZAMBIQUE ; CAHORA BASSA NORTH BANK & MPANDA NKUWA POWER GENERATION PROJECTS

CAHORA BASSA

- Pre feasibility complete, feasibility in progress
- Transaction advisers appointed
- EPC and O&M Contractor appointed
- Estimated Cost: USD 800

MPANDA NKUWA

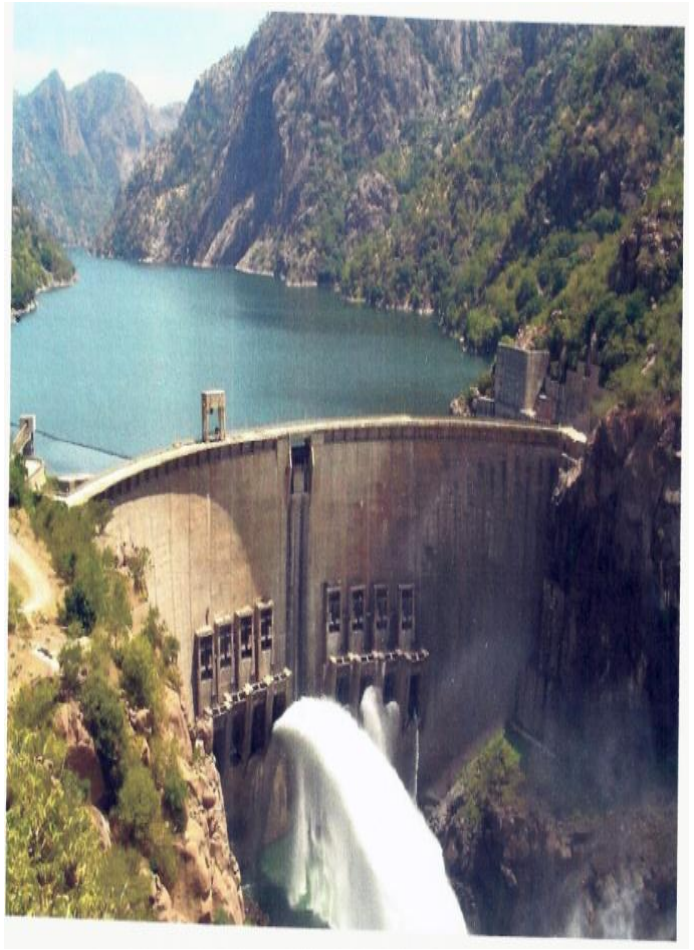
- Pre-feasibility complete;
- Transaction advisers appointed
- EPC /O&M Contractor appointed
- Estimated Cost USD 3 bn



KUDU GAS POWER STATION

(NAMIBIA)

- Pre feasibility complete, feasibility in progress
- Transaction advisers appointed
- EPC and O&M Contractor appointed;
- Engineering/desin in progress
- Estim Cost: USD 1386 mil



GOKWE NORTH THERMAL

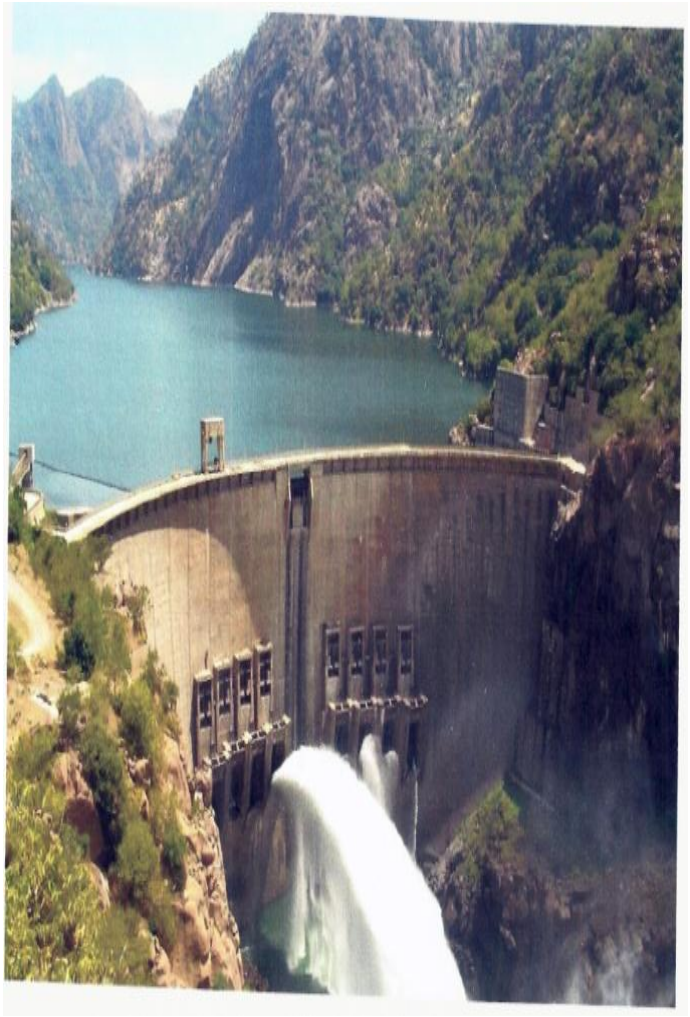
(ZIMBABWE)

- Pre-feasibility complete (updating in progress);
- EPC /O&M Contractor appointed
- Estimated Cost USD 3 billion;
- Engineering/design study in prog

ZIMBABWE AND ZAMBIA

BATOKA GORGE POWER STATION

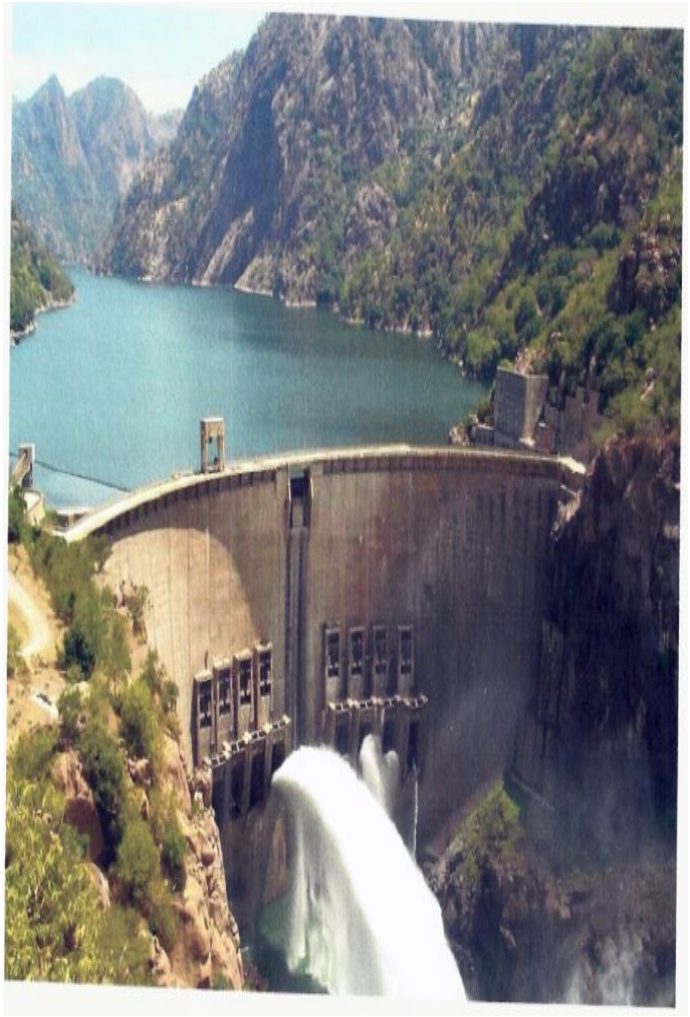
- Pre feasibility and EIA completed in 1993 needs reviewing,
- MOU signed between the States
- Capacity is 1600 MW (2 X 800 MW)
- Estimated Cost: USD 2.8 billion
- Implementing Authority is the Zambezi River Authority. EPC /O&M Contractor appointed
- Estimated Cost USD 3 bn



DEMOCRATIC REPUBLIC OF CONGO (DRC)

INGA III POWER GENEARTION STATION

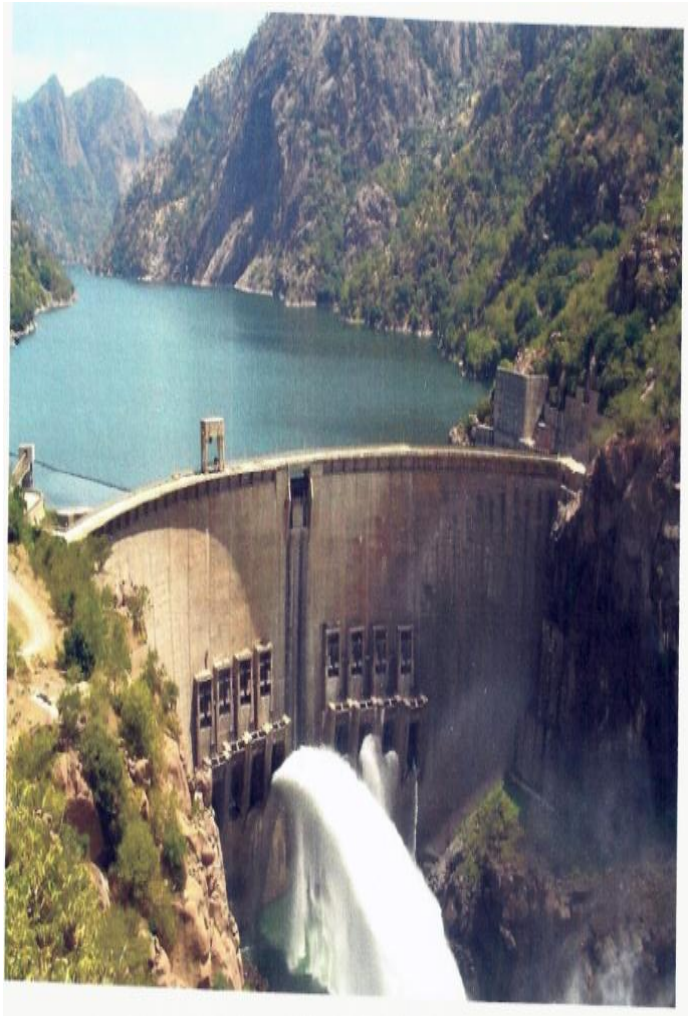
- Pre feasibility and EIA completed in 1997 recently reviewed,
- Capacity is 3500 MW;
- In project design phase;
- Estimated Cost USD 5.6 billion



ANGOLA AND NAMIBIA

BAYNES HYDRO-POWER PROJECT

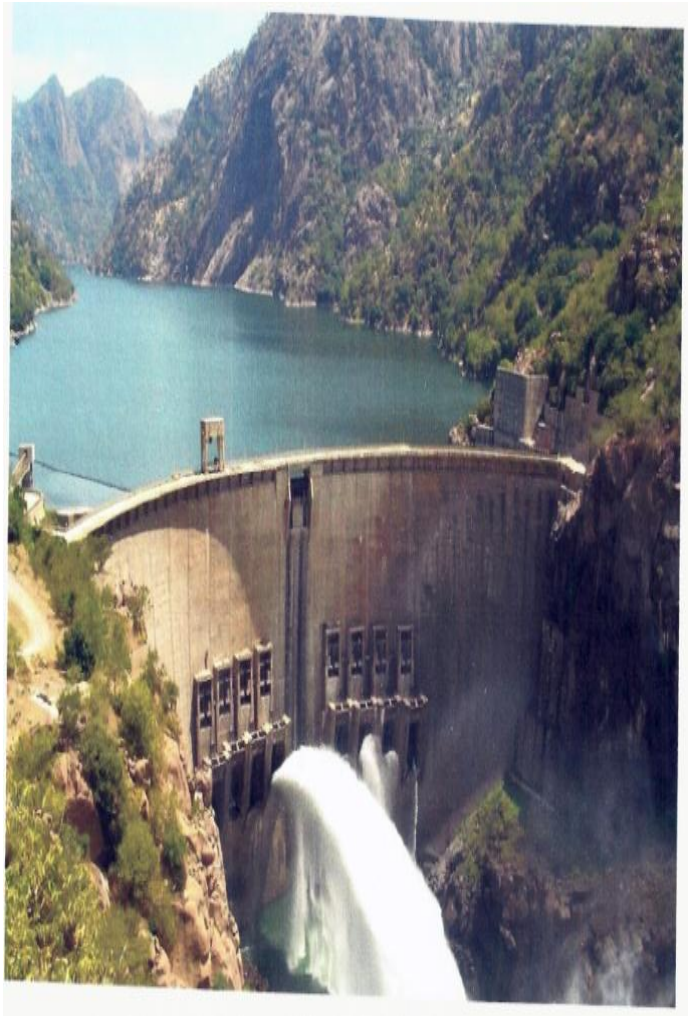
- Full Feasibility Study and EIA completed;
- Capacity is 400 MW;
- MOU in place – Project Joint Technical Committee in place
- Estimated Cost USD 1.3 billion



ZAMBIA

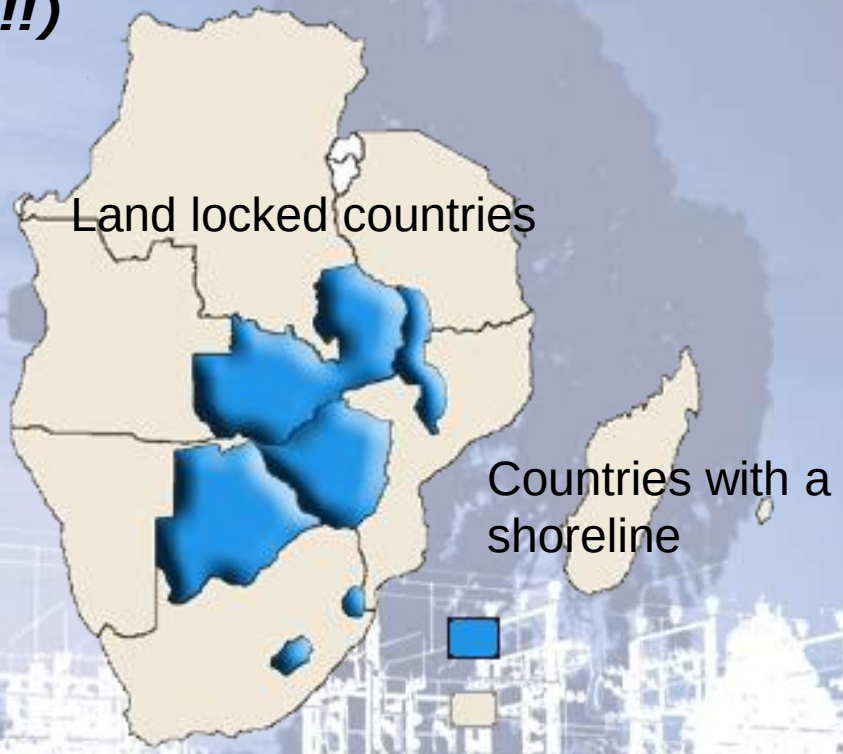
KAFUE GORGE POWER GENERATION

- Full Feasibility Study Review to be completed in August 2013;
- Capacity is 600 MW;
- Secured PPA with ZESCO;
- Debt-Equity funding envisaged
- Estimated Cost USD 2 billion

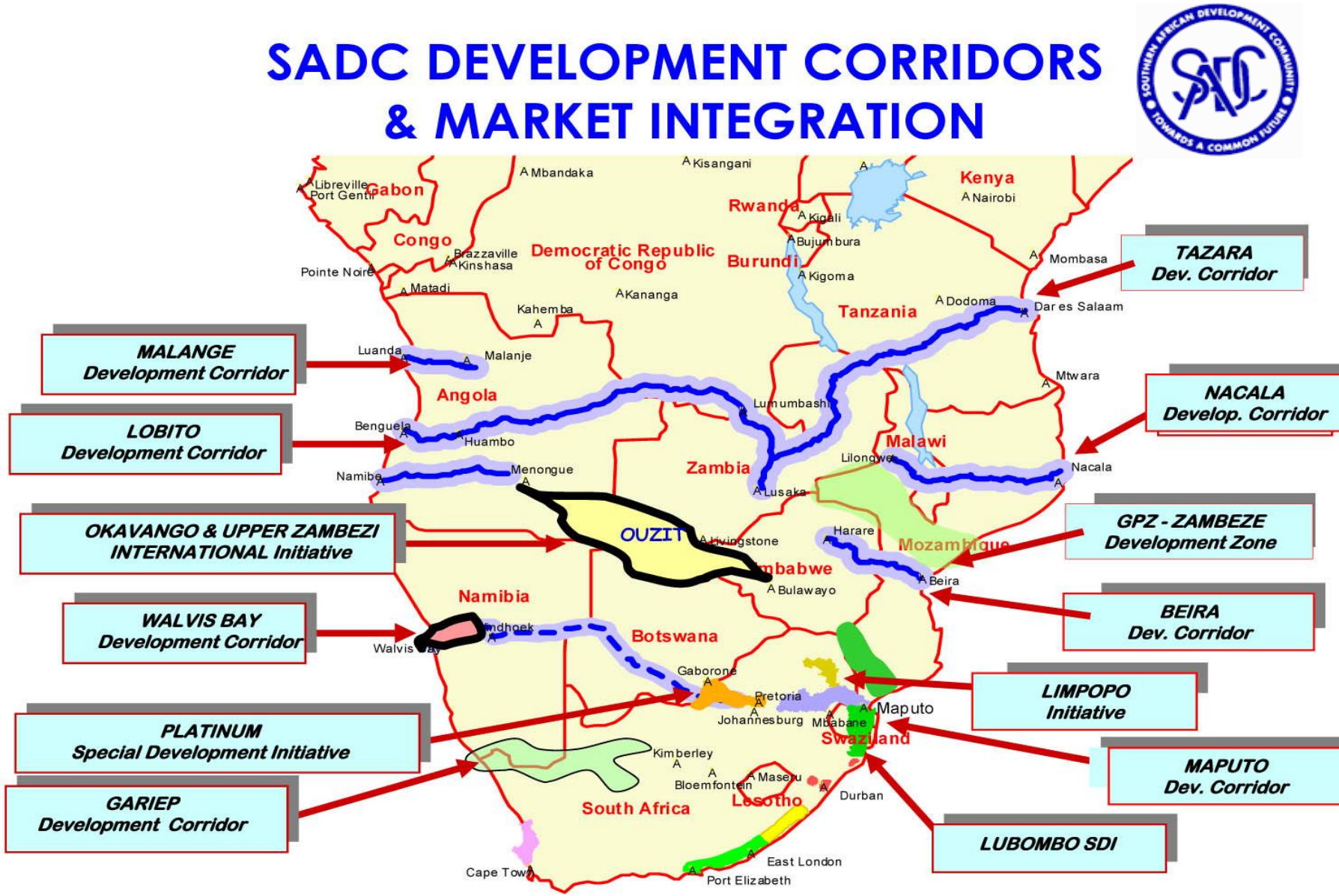


The Plight of Landlocked SADC Countries

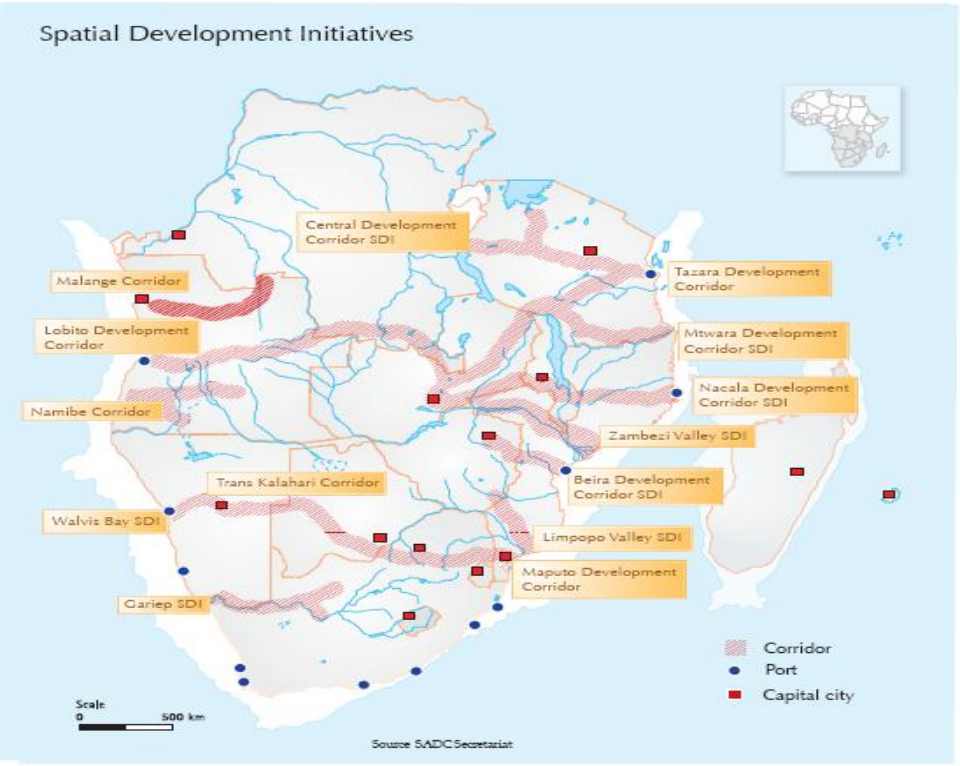
- **Seamless cross border corridors to speed up movement of goods and persons;**
- **Harmonised customs documents and procedures, and One-Stop-Border-Posts to fast track cross border movement (*e.g for Malawi transport 55% of landing value!!!!*)**



SADC Corridor Schematic



SADC Corridors Development Programme and the North-South Corridor Project



TALKING TRANSPORT

Main Anchor Projects - SADC Member State Transport Corridors

Angola .	**1.** Lobito ,**2.** Namibe,**3.** Trans-Cunene, **4**. Walvis Bay-Ndola-Lubumbashi,(Trans-Caprivi), **5.** Malange, 6 Bas Congo
Botswana	1. Trans-Kalahari Corridor (TKC), 2. North-South Corridor (NSC)
DRC	**1.** NSC, **2.** Malange, **3.** Walvis Bay-Ndola-Lubumbashi, (Trans-Caprivi), **4**. Dar es Salaam, **5.** Central Transport Corridor, 6 Bas Congo
Lesotho	**1.** Maseru-Durban.
Malawi	**1.** Nacala, **2.** Beira, **3.** Mtwara, **4.** Dar es Salaam,**5.** NSC
Mozambique	**1**.Maputo, **2.** Beira, **3.** Nacala, **4.** Mtwara,**5.** NSC, 6 Limpopo
Namibia	**1.** TKC,**2.** Trans-Orange, **3.** Trans-Cunene, **4.** Walvis Bay-Ndola-Lubumbashi, (Trans-Caprivi),**5.** Namib
South Africa	**1**. NSC**, 2.** Maputo**, 3.** TKC, **4.** Trans-Orange, **5.** Maseru-Bloemfontein-Durban., **6.** Lebomb
Swaziland	1. Maputo, **2.** Lebombo
Tanzania	**1.** Dar es Salaam, **2.** Mtwara,**3**. Central
Zambia	**1.** NSC, **2.** Dar es Salaam, **3.** Mtwara, **4.** Beira, **5.** Walvis Bay-Ndola-Lubumbashi, (Trans-Caprivi), **6**. Lobito (Benguela)
Zimbabwe	**1.** Beira, **2.** Maputo, **3**. NSC, 4 Limpopo

Key message – the need to meet SADC Highway Standards in RIDMP

KEY TRANSPORT PROJECTS

Key Priority Transport Projects for SADC

- Ports expansion, rehabilitation and modernisation;
- New rail projects and rehabilitation;
- New road links, and rehabilitations;
- One Stop Border post introductions and Border Efficiency projects;
- Development of new Air transport hubs and gateways;
- Airports expansion, modernisation and rehabilitations;
- Investment Costs USD 100 bn l/term

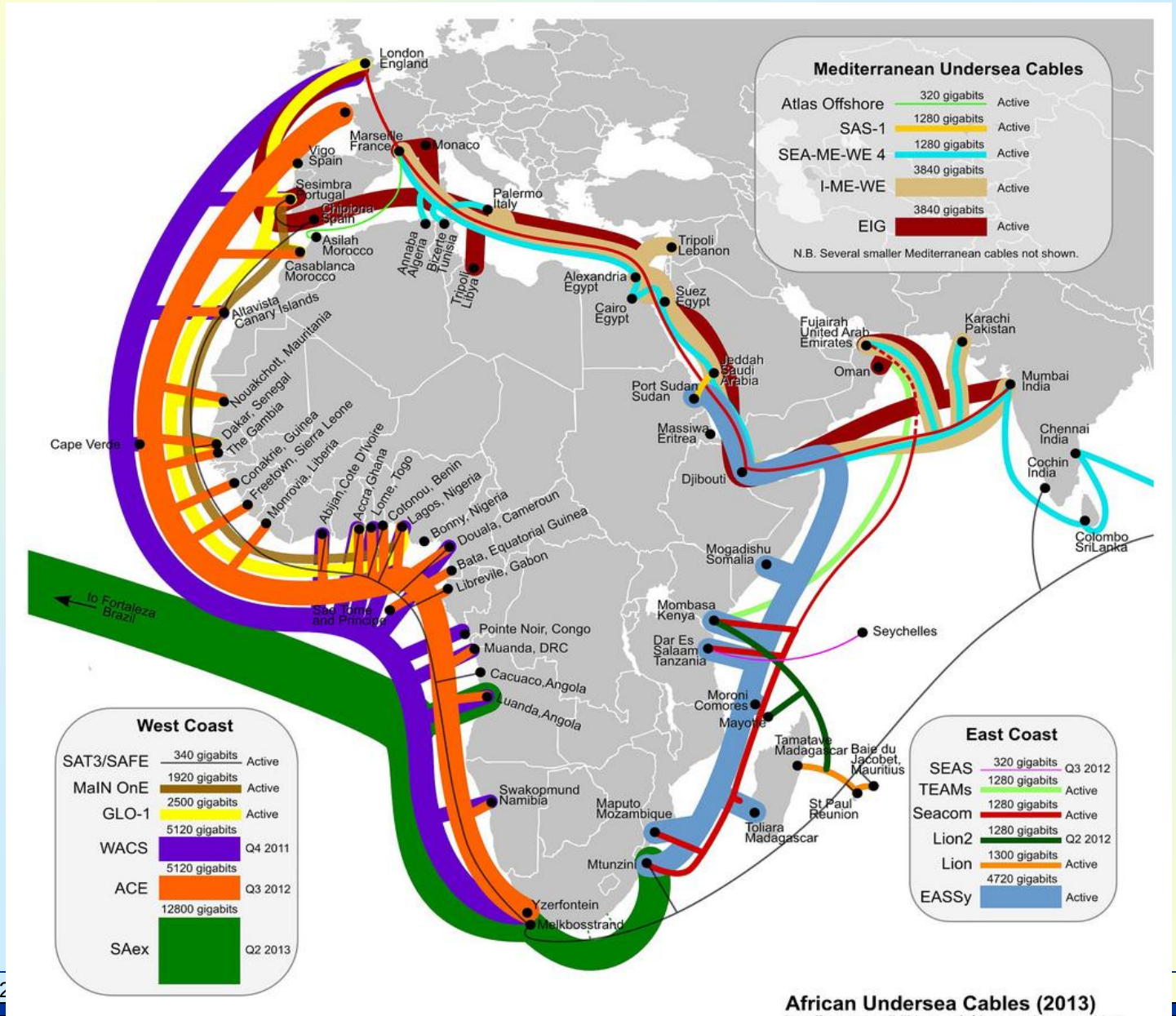
SADC Regional Information Infrastructure

SRII is the "*Minimum Network*": that is if implemented will interconnect all SADC Member States and connect its landlocked countries to the submarine optical fibre cable systems

SRII Phase I: Progress

SRII Routing and Landing Stations

SADC Broadband Inter-connections and Under-Sea Cable Links to Rest of the World

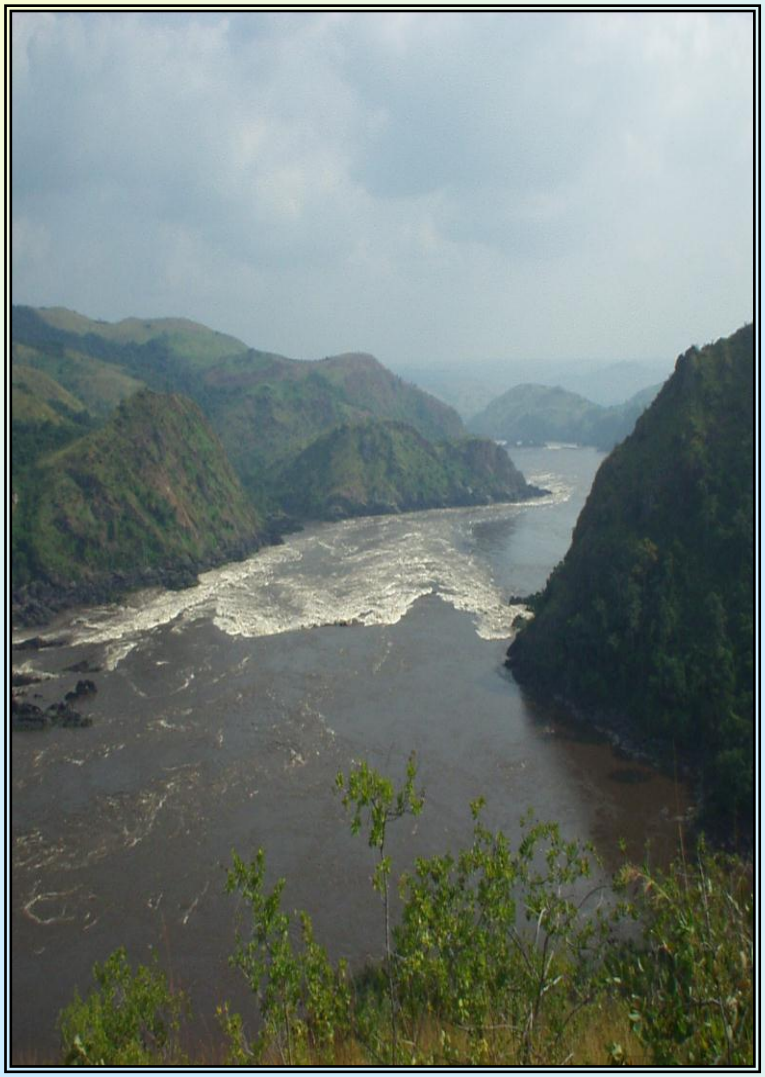


ICT INFRASTRUCTURE PROJECTS

ICT SADC Knowledge Infrastructure

- Provision of Regional and National Internet Exchange Points and Networks;
- Study identified missing links within the SRII ;
- SADC regional and national integrated broadband infrastructure;
- Digital Terrestrial Television (DTT) Migration for Analogue Cut-Over by June 2015 (ITU) and 31 December, 2013 (SADC).
- Estimated cost of missing links and rehabilitation is USD 383.4 million based on broadband connectivity

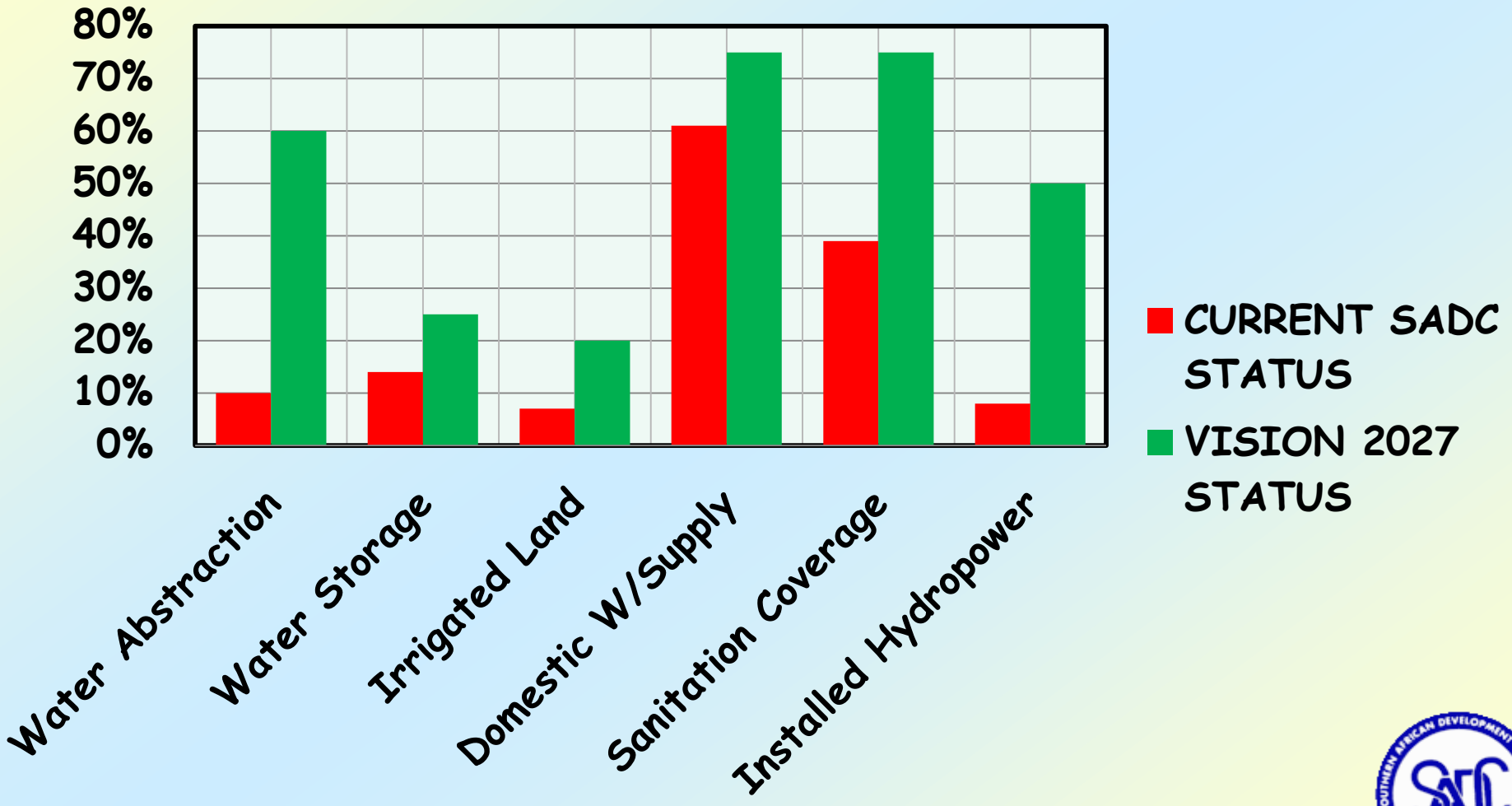
Talking Water Infrastructure – Life Begins With Water



OBJECTIVES OF THE SADC WATER INFRASTRUCTURE PROGRAM

- The objective of the SADC Water Infrastructure Development Program is to facilitated the construction, operation and maintenance of water infrastructure to meet the requirements for:-
  - Irrigation
  - Water supply and sanitation
  - Hydropower generation; and
  - Flood management

CURRENT SADC STATUS vs. VISION 2027 STATUS



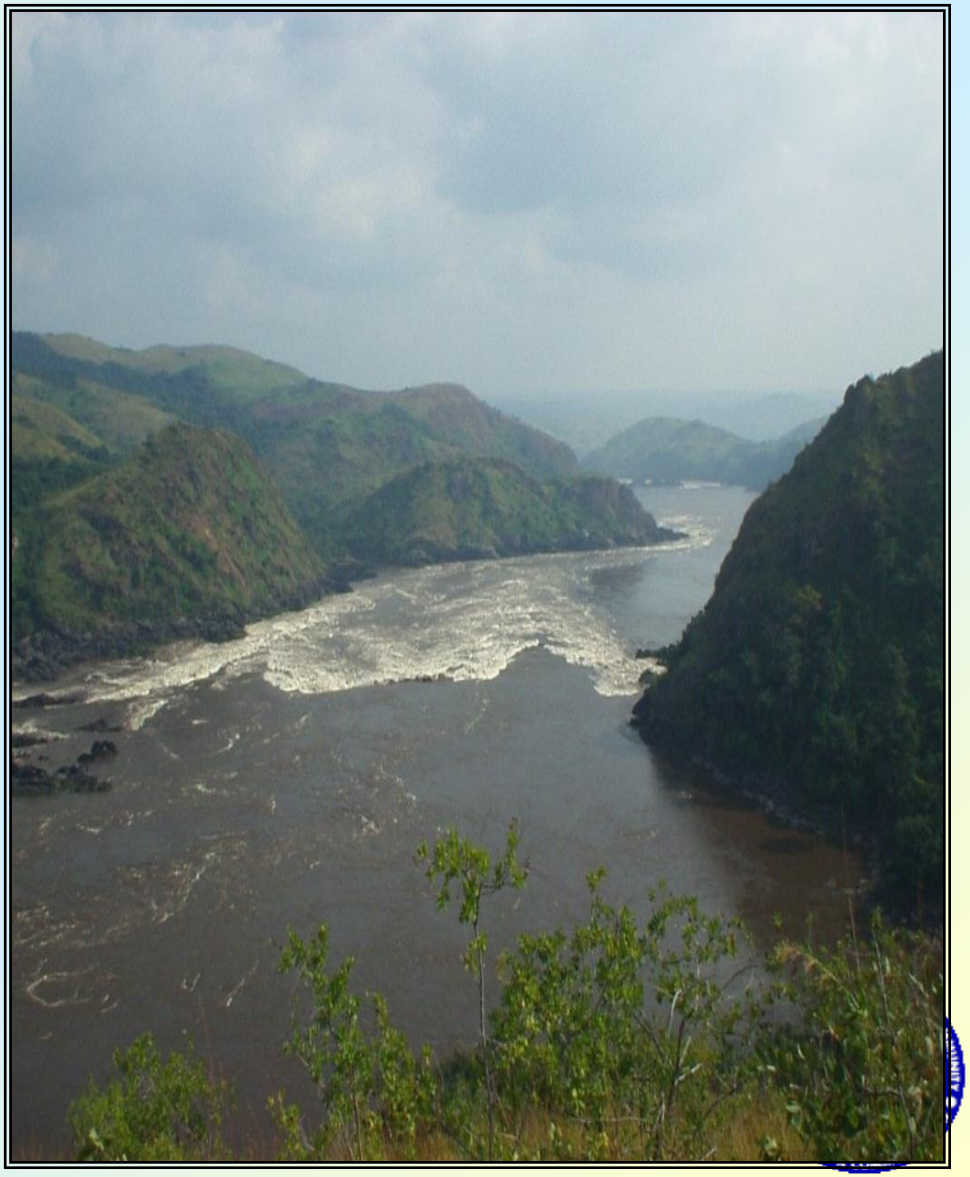
WATER CHAPTER PROJECTS

No Water, no life – Water Infrastructure a Climate Change Adaptation Measure

- Inga Hydro-Power (Shared Regional Electricity)
- Lesotho Highlands Phase II (RSA/Lesotho)
- Batoka Godge Hydro-Power Project (Zambia/Zim)
- Songwe River Basin Water Infrastructure Project (Malawi/United Rep of Tanzania)
- Lomahasha-Namaacha Water Supply and sanitation Project;
- 34 water infrastructure projects identified - cost 16 billion.

LESOTHO HIGHLANDS WATER PROJECT PHASE II

- **Objective is to supply water to South Africa and Hydro power to Lesotho**
- **Feasibility Study for Phase II completed;**
- **PIM Document available;**
- **Project Cost: USD 1.0 bn**



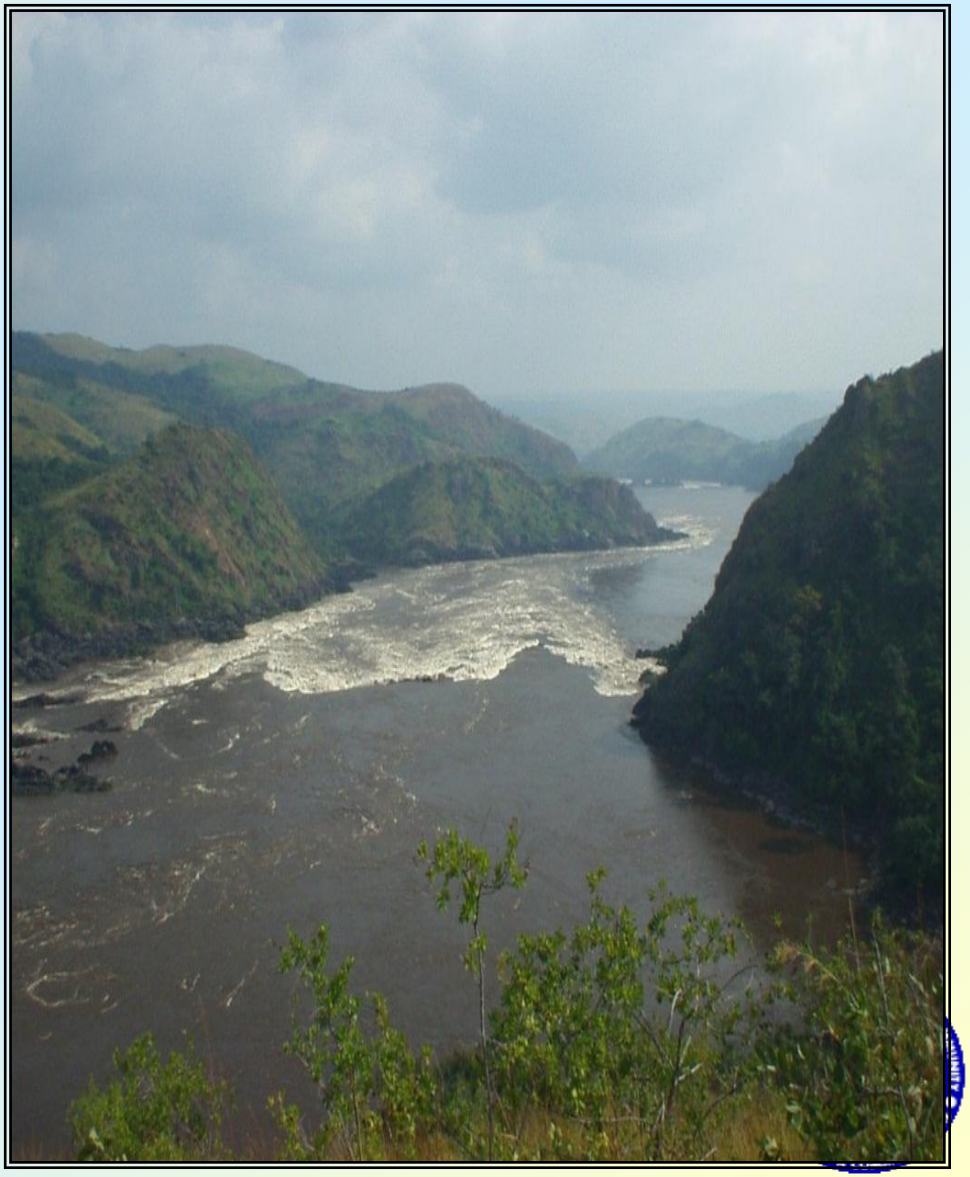
MOZAMBIQUE AND SWAZILAND

LOMAHASHA – NAMAACHA WATER SUPPLY PROJECT

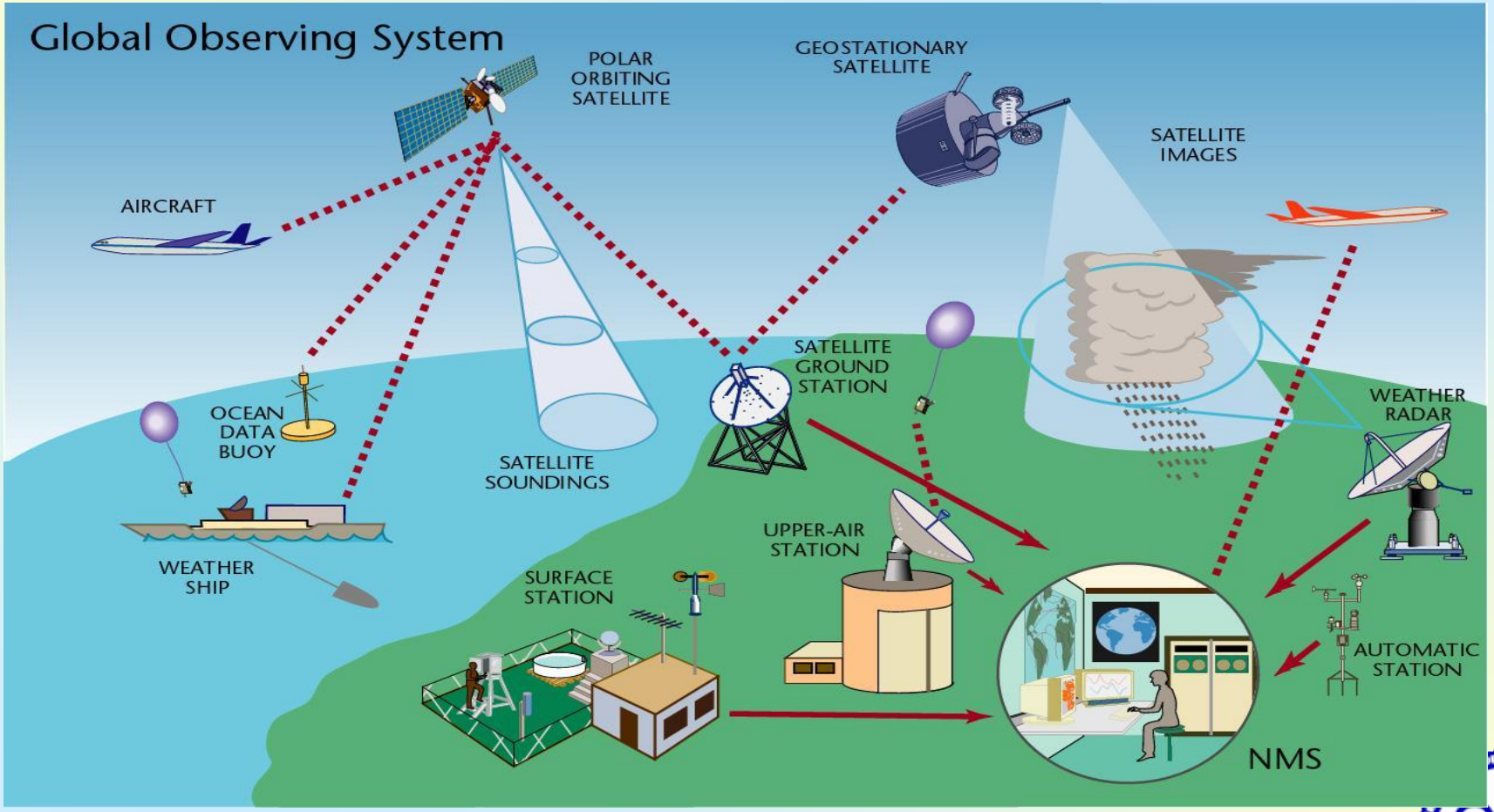
- Objective is to supply water to the two border towns of Namaacha (Mozambique) and Lomahasha (Swaziland)
- Still to finalise concept study, cost sharing modalities, evaluation of economic value of water and Joint Commission;
- Project Cost:USD 250 million

SONGWE RIVER BASIN

- Objective is an integrated water supply and hydro-power in the Songwe River Basin for Malawi and Tanzania;
- Pre-feasibility complete, feasibility update in progress;
- To finalise EIA, Songwe River Basin Authority, PIM Document available;
- Project Cost: USD 450 mil and PPP envisaged;



METEOROLOGY AND EARLY WARNING MECHANISM



PROJECT FOCUS AREA

Phase 1: 2010 Focus

- /Ai /Ais-Richtersveld
- Kgalagadi
- Greater Mapungubwe
- GLTP
- Lubombo
- Maloti - Drakensberg
- Kavango - Zambezi

Phase 2: Beyond 2010

- Iona-Skeleton Coast
- Liuwa Plain-Kamela
- Lower Zambezi – Mana Pools
- Malawi - Zambia
- Niassa - Selous
- Mnazi Bay - Quirimbas
- Chimanimani

OCEANIC STATES PROJECTS PORTFOLIO

Key Oceanic States projects include:

- Establishment of a Maritime Corridor for Oceanic States;
- Airports rehabilitation and expansion;
- Adequately equipped meteorological observation stations to provide adequate weather early warning mechanisms;
- Develop and promote under sea connectivity cables;
- Develop ICT to levels of regional hubs and switching centres .

Proposed Financing Mechanisms for Infrastructure Projects

- Funding as public sector projects through fiscal mechanisms and sovereign loans;
- Funding entirely by the private sector as part of the state policy options;
- Funding through joint effort or equity by state and private sector as a Public Private Partnership (PPP) and SPVs;
- SADC set up a Project Preparation and Development Facility (PPDF) for packaging projects to bankability;
- SADC Development Fund set up to fund, among others, infrastructure development projects;
- Development Finance Institutions play a pivotal role in financing infrastructure based on bilateral agreements:

Regional PPP initiatives

- SADC PPP Network moving from capacity building to project development Regional PPP Advisory Services;
- Engaged KPMG for PPP scan of the regional infrastructure plan;
- Will identify at least two (2) projects to proceed to procurement ;
- Will use PPDF to fund complete feasibility studies
- Private Sector welcome to fund Project Preparation and Development;
- Enhanced role for regional DFIs AfDB, DBSA, IDC etc

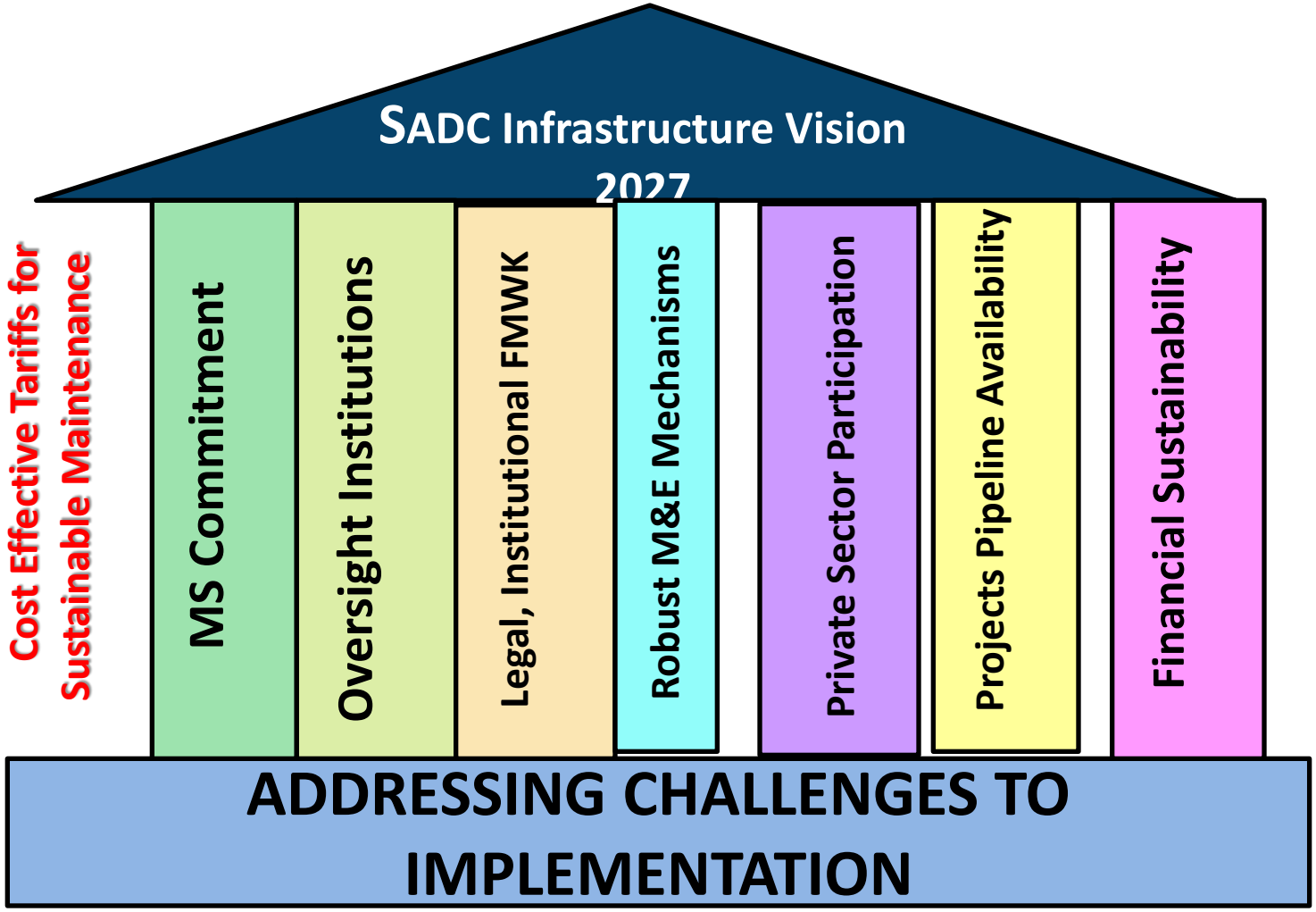
Regional PPP initiatives

- Regional Framework for PPP Harmonization for Policy Framework and Institutional Arrangements was approved by Ministers of Finance in May 2013;
- Private Public Dialogue Process has been initiated for the region;
- Working Group on Health-Trip to Germany for Healthcare PPPs;
- International DFIs, KFW, EIB, etc invited to support SADC 3P Network

Critical Success Factors for Projects Implementation

- Member States Commitment to support regional initiatives by allocating resources for that purpose
- Regional Initiatives takes precedence to national projects
- Capacity for project preparation and implementation at utility and Member States level,
- Availability of pipeline of bankable projects
- Financial sustainability for continued sector development ,
- Strength of SADC institutions to coordinate the energy sector activities in the region,
- Periodic Updating of the Plans to ensure that the RIDMP remains relevant to the circumstances of the time
- Appropriate Policy, Institutional and Regulatory Framework
- Partnership with Private Sector in Infrastructure Development

Critical Success Factors for Master Plan Implementation



Summary of Infrastructure Projects Costs

Sector	STAP Projects (5 years)	Vision 2027 (15 Years);
Energy	USD 12.27 bn	USD 143.0 bn
Transport	USD 16.65 bn	USD 100.00 bn
ICT	USD 21.40	USD 50.00 bn
Water	USD 13.48 bn	USD 16.00 bn
Meteorology	USD .192 bn	USD .40 bn
Tourism	USD .324 bn	USD .74 bn
Total	USD 64.32 bn	USD 310.00 bn

CONCLUSIONS

- SADC has achieved consensus on agreed infrastructure projects;
- All projects identified enable SADC to achieve its strategic objectives;
- Implementation will focus on the Short Term Action Plan;
- Private sector participation in infrastructure investment is the password;
- SADC region is open for business and we invite you to come and engage with the project owners, the Member States;

A 15 Nations SADC Presentation

Colleagues and Friends

Questions & Answers?

Thank you

For Listening