SADC Regional Infrastructure Development

Short Term Action Plan Assessment 2019

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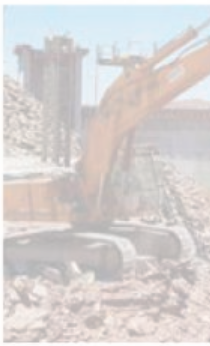

Short Term Action Plan Assessment 2019

Southern African Development Community
Infrastructure Directorate, SADC Secretariat,
SADC House, Private Bag 0095, Gaborone, Botswana
Tel (+267) 3951863
Email: registry@sadc.int Website www.sadc.int

Southern African Research and Documentation Centre (SARDC)
Julius K. Nyerere House, 15 Downie Avenue, Belgravia, Box 5690, Harare, Zimbabwe
Tel (+263 242) 791 141
E-mail sardc@sardc.net Website www.sardc.net Knowledge for Development

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FOREWORD

The Southern African Development Community (SADC) embarked on a journey in 2012 to transform infrastructure in the region, when the 32nd Summit of SADC Heads of State and Government adopted the Regional Infrastructure Development Master Plan (RIDMP) 2012-2017.

SADC Member States recognised that a modern and reliable infrastructure provides the appropriate foundation for economic development and growth in the region.

In addition, the SADC Revised Regional Indicative Strategic Development Plan (RISDP) 2015-2020 places emphasis on the significance that infrastructure has in improving the standard and quality of life of the people of southern Africa and supporting socially disadvantaged regions through regional integration.

Southern Africa's population is growing, with projections indicating that by 2027 the number of people living in the SADC region will surpass 400 million.

This places a greater demand on the need for robust and modern regional infrastructure that meets the developmental aspirations of SADC citizens.

These aspirations include the need to improve access to energy, information technology products and services, safe water and sanitation services, and transport infrastructure and services.

The Regional Infrastructure Development Master Plan is therefore SADC's strategic framework to guide the development of seamless, cost-effective, transboundary infrastructure.

The Plan identifies priority projects for implementation across six development clusters, which are energy, water, transport, meteorology, tourism and Information Communication Technology (ICT).

This infrastructure development plan is being implemented in three phases: the Short Term Action Plan (STAP) 2012 –2017; the Medium Term Action Plan running up to 2022; and the Long Term Action Plan that is expected to conclude by 2027.

The STAP period has come to an end, with the SADC now preparing to implement the Medium Term Action Plan known as STAP II.

In order to better inform this next phase, as well as subsequent infrastructure development initiatives, it is important to review status of the implementation of regional infrastructure projects identified under STAP I.

The SADC Secretariat, with the support of the Austrian Development Agency (ADA) and the Development Bank of Southern Africa (DBSA) has engaged the Southern African Research and Documentation Centre (SARDC) to carry out this independent assessment of results achieved by the RIDMP Short Term Action Plan (STAP) 2012-2017.

The findings of this report therefore form an important part of the region's strategy to improve the implementation of the infrastructure master plan.

This will involve learning from the weaknesses of STAP I and taking the remedial actions required to accelerate the pace of infrastructure development in southern Africa.

This report on SADC Regional Infrastructure Development provides a call for action to all stakeholders in the region's infrastructure development value chain, as it indicates the very slow pace, and even stagnation, of some infrastructure projects.

It is disheartening to note that while 98 projects were planned for completion under STAP I, the assessment report indicates that only five percent of the projects have been completed.

The others are yet to be completed, with the majority, or 51 percent of the total, still at the early stages of pre-feasibility or feasibility, an indication of the necessary work needed to move from this untenable situation in order to complete targeted projects.

I wish to acknowledge the efforts that are underway within the region, to overcome the impediments to the pace at which infrastructure projects are being implemented.

This includes the work being done through the SADC Secretariat in partnership with the African Development Bank (AfDB) and the DBSA to prioritise regional infrastructure projects that will be implemented in the subsequent phases of the RIDMP.

As of 30 June 2019, I am aware that 62 priority projects have been identified to enable categorizing the projects in terms of their readiness for investment.

The assessment report on the first phase of the RIDMP clearly indicates the challenges that Member States are facing in raising the required funding for infrastructure projects.

To address this challenge, SADC is working with the AfDB and the DBSA to operationalize the SADC Regional Development Fund (RDF) and develop other innovative financial instruments for resource mobilization to ensure adequate funding for regional infrastructure projects.

Another finding of this assessment is the limited capacity within Member States to develop bankable project proposals that can attract investors or funding partners.

This is a challenge that SADC is working to rectify, with training programmes having commenced in respective Member States to provide strategic human resources with the requisite skills to produce detailed project fiches and bankable project proposals.

Finally, the assessment report contains recommendations to inform the way forward in achieving the region's infrastructure vision.

There are recommendations specific to the various stakeholders within the region, including the Member States, the Secretariat, and SADC Subsidiary Organizations as well as the Project Preparation and Development Facility (PPDF).

As the Secretariat, we commit to fully scrutinise this report and its recommendations, with the ultimate goal of taking the corrective measures required to ensure that the region's infrastructure vision is fully realised.

I urge all other stakeholders within SADC's regional infrastructure development domain to actively engage with this document with a view to achieving our goals. Together we can overcome the current challenges and achieve the SADC Infrastructure Vision by 2027.

Dr. Stergomena Lawrence Tax
Executive Secretary of SADC
Southern African Development Community

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EXECUTIVE SUMMARY

SADC adopted the Regional Infrastructure Development Master Plan (RIDMP) in 2012 with the purpose of guiding the region's infrastructural development and rehabilitation programme up to 2027. Member States recognise that a robust infrastructure network will create the requisite capacity for sustained economic growth and development.

The SADC region has a huge infrastructure deficit characterised by insufficient energy supply; inadequate water supply, reticulation and sanitation systems; inadequate and expensive broadband networks; and an unreliable transport network, among other deficiencies.

Recent estimates by the African Development Bank (AfDB) published in its *African Economic Outlook 2018* reveal that Africa's annual infrastructure requirements amount to US$130 billion–US$170 billion with a financing gap in the range of US$68 billion-US$108 billion. The continental gap also speaks to the prevailing infrastructure gap in southern Africa.

The RIDMP programme seeks to address this infrastructure deficit within targeted development sectors – energy, transport, water, ICT, meteorology and tourism. Access to infrastructure directly affects the capability of states to meet the aspirations of the African Union's Agenda 2063 for The Africa We Want, and to address the Sustainable Development Goals (SDGs), in particular SDG 1 on poverty, SDG 6 on water and sanitation, and SDG 7 on energy, with crosscutting impact on all other SDG targets.

This infrastructure development plan is being implemented in three phases. The first phase is known as the Short Term Action Plan (STAP) 2012 – 2017. The second phase continues from 2018 to 2022 while the last phase runs from 2023 to 2027.

The period covering STAP has come to an end, with SADC commissioning a study to assess progress made to date. With the support of the Austrian Development Agency (ADA) and the Development Bank of Southern Africa (DBSA), SADC engaged the Southern African Research and Documentation Centre (SARDC) to carry out this independent assessment of results achieved by the RIDMP Short Term Action Plan (STAP) 2012-2017.

The study used various approaches in gathering data. This involved administering a questionnaire among SADC Member States and Subsidiary Organizations. In addition, the study reviewed records of SADC policy meetings, engaged with the SADC Secretariat staff as well as communicating directly with key officials, development finance officials, stakeholders and project owners in Member States.

Purpose and Objective

The purpose of this study was to determine the extent of progress in implementation of SADC infrastructure projects since the adoption of the Regional Infrastructure Development Master Plan in 2012, and to analyse the existing institutional and legal environment for infrastructure development in the SADC region, as well as assessing the potential and appetite of the private sector and financial institutions to support regional infrastructure projects.

The study was tasked to provide recommendations on how SADC Member States can accelerate implementation of RIMDP milestones for optimal benefits; to offer concrete strategies to SADC Member States, project owners and other infrastructure stakeholders; and to draw conclusions and lessons that can inform future interventions in the development of SADC infrastructure, e.g. STAP II.

Research Limitations

Most of the projects submitted by Member States for review are not on the STAP original list and some of them are not listed as RIDMP projects in the medium to long term. This meant that not all information was obtained for each of the 98 original STAP projects. However, the study was able to obtain information for 62 STAP projects. The study also assessed 29 RIDMP projects that are not part of STAP and an additional 43 projects that are neither listed under the original STAP or RIDMP projects.

These non-RIDMP projects are relevant in that they indicate a shift in priority by Member States in terms of infrastructure projects that they are implementing. Therefore, a total of projects make up the sample in terms of the RIDMP STAP review under this study. In addition, the budget for this study did not provide for country visits to Member States to carry out interviews with project owners. However, this limitation was addressed by using alternative primary and secondary sources of information.

KEY FINDINGS
CHALLENGES AND OPPORTUNITIES

SADC faces a number of challenges with regard to the provision of adequate regional infrastructure, as noted in preceding sections. A sense of urgency must now permeate the region, to expedite the implementation of strategies required to bridge the identified gaps and eliminate barriers hindering the region's full potential. This study seeks to articulate some of the challenges faced by SADC with implementation of infrastructure, and to identify a number of opportunities which if implemented could scale up infrastructure deployment, resource mobilization, and project preparation and implementation. The following key findings emerged from the RIDMP STAP study.

1. **Stagnation of regional infrastructure projects**
   Member States are lagging behind in implementation of identified projects. Of the 134 projects reviewed in terms of this study, 51percent are either at the pre-feasibility or feasibility stages. Only seven of the projects reviewed have been completed. This indicates that projects identified under STAP are falling behind schedule given that most of these were targeted for completion by 2017.

2. **Insufficient spending in infrastructure**
   There is insufficient investment in infrastructure. Infrastructure spending in Africa is about 3.8 percent of Gross Domestic Product (GDP), whereas India and China spend 4.7 percent and 8.5 percent of GDP respectively. The average for developing countries is 5.6 percent (ICA, 2014).

3. **Funding mismatch between Member States and funding partners**
   There is a funding mismatch between Member States and funding partners. Member States cite the lack of funding for infrastructure projects whether national or regional. For example, 70 percent of projects assessed noted that they are facing resource mobilisation constraints. Yet funding institutions are looking for viable projects to invest in. This can be explained by the lack of bankable projects.

4. **SADC Project Preparation and Development Facility inadequately resourced**
   Related to this is the fact that most Member States have not accessed funds from the SADC Project Preparation and Development Facility (PPDF). This fund was established to capacitate the region with resources to develop bankable project proposals that can attract funding for implementation. Though the PPDF has been in existence since 2008, findings show that only six percent of the projects have accessed support from this facility. Indications are that the PPDF is not adequately resourced, a situation that is compromising fundraising efforts for the region's infrastructure projects.

5. **Limited private sector participation**
   The study confirmed the limited involvement of the private sector in regional infrastructure projects. For example, only six percent of projects assessed in terms of this study have private sector support. This challenge has been attributed to the lack of a conducive and enabling environment, the absence of cost-reflective tariffs, and the challenges of structuring Public-Private Partnerships (PPPs).

6. **Capacity limitations**
   SADC national governments face a skills and capacity shortage where preparation and implementation of RIDMP STAP projects is concerned. Poorly prepared RIDMP STAP projects reflect the capacity limitations being faced by project owners. Limited competencies, low transparency, bureaucracy and inefficient spending results in projects prepared to low quality standards. This lack of properly structured, bankable projects is a critical issue slowing the flow of private capital to RIDMP STAP infrastructure projects.

7. **Unclear delineation of roles between Member States and the Secretariat**
   For RIDMP STAP projects where SADC Secretariat is playing a facilitating and oversight role, some Member States are expecting SADC Secretariat to act as the project sponsor.

8. **Regional versus national priorities and interests**
The study shows that some Member States may find more value in implementing certain national projects as opposed to regional projects. National priority list is not always a reflection of regional priority list. Regional priority projects are not always being provided for in national budgets.

9. **Complex policy and regulatory frameworks**
The preparation of regional projects is much more arduous in comparison with national projects due to the involvement of more than one jurisdiction. Policy and regulatory frameworks may vary from country to country. Countries involved in the same project may have different "ease of doing business" indices and credit ratings.

10. **Lack of political will**
This explains in part why projects are taking longer than scheduled. Shifting priorities, e.g. due to changes in administrations. For example, some projects have gone through numerous feasibility studies.

11. **Institutional challenges**
Regional projects are also being retarded by institutional challenges, which manifest at the following levels:
- Member States. The disharmony of the legal and regulatory regimes among Member States, particularly for inter-territorial projects is affecting the implementation of such regional projects, since this has a bearing on the management and control of such projects.
- SADC Secretariat, e.g. for oversight and coordination.
- Subsidiary Organizations. SADC has established subsidiary organizations in all the key infrastructure development sectors. Most of these Subsidiary Organizations lack the capacity to discharge their functions as far as project implementation, monitoring and evaluation is concerned – such as to the level of, for example, SATA and SAPP, which are pacesetters.
- PPDF. The reliance of the PPDF on grant funding is not sustainable. With infrastructure projects stalling, the region's infrastructure deficit is also widening as the population grows, against a backdrop of increasing economic activity, which demands additional infrastructure stock. Urgent steps need to be taken therefore to put RIDMP projects back on course.

12. **The effects of climate change and variability on regional infrastructure**
The study observed how climate change and variability may in some instances exert adverse pressure on the region's infrastructure. The lower than average rainfall in the 2018-2019 season had the adverse effect of reducing the hydro-electricity power generation capacity of some SADC Member States such as Zimbabwe and Zambia. In addition, the destruction of infrastructure following Cyclone Idai in March 2019 and Cyclone Kenneth in April 2019 highlight the significance of climate resilience in infrastructure, as SADC continues to implement its developmental programmes.

RECOMMENDATIONS

SADC Member States need to find ways to accelerate infrastructure projects in line with the RIDMP and in particular the short term and medium term programmes, to fulfil the regional development vision by 2027. Furthermore, while adopting the SADC Industrialisation Strategy and Road Map in 2015, Summit identified infrastructure as a key enabler that would catalyse SADC industrial development. Equally, Summit has recognised the development of regional and national infrastructure as a means to fulfil SDGs within the framework of the United Nations (UN) Post-2015 Agenda. The following are some of the recommendations needed to mitigate the current challenges in infrastructure development.

1. Recommendations for Governments of Member States

National Ownership. The project owners for RIDMP STAP (Line Ministries and Government Agencies) often seem to wait for the SADC Secretariat to raise funds to prepare their projects. State Parties sometimes fail to understand that political and bureaucratic support from national governments, in their capacity as projects owners, is a necessary condition for undertaking project preparation. Further, because grant funding is being provided by donors or PPFs, and where governments make no contribution, there is reduced urgency to reach milestones (moral hazard). National-level ownership and accountability should be accompanied by the institutionalising of project preparation within government departments to ensure a clear delineation of roles between stakeholders. Thus it is recommended that the project preparation process be anchored by the relevant line ministry or agency within any given Member State. National ownership is strengthened where the project sponsor contributes to preparation costs (as in the case of Bulawayo-Beitbridge road), as the sponsor becomes directly accountable for the project outcomes. Further, this serves as a strong signal from the private sector's perspective, of the National Government's commitment to the implementation of the project. Hence, a financial and/or in-kind contribution by national governments is preferable.

Strengthen Private-Public Partnerships. SADC Member States should be willing to strengthen their public-private sector frameworks. This principally entails creating an enabling environment through which the private sector can thrive.

Adopt Cost Reflective Tariffs and the "User Pays" Principle. To ensure sustainability, it is important that Member States adopt the "user pays" principle and/or cost-reflective tariffs for infrastructure development projects. Success in this regard has been achieved in the road sector by some countries, with the adoption of tolling systems. Examples include Zimbabwe, Zambia and South Africa. The concept can be expanded to other sectors such as water, energy and ICT.

Increase National Budget Allocations to RIDMP. An observation from this study is that few Member States are allocating resources to regional infrastructure projects from their respective national budgets. It is recommended that SADC Member States must give higher priority to regional infrastructure development through national budget allocations.

Reduce Bureaucracy and Strengthen High Political Commitment. SADC Member States acknowledge that political commitment is required to implement regional infrastructure projects. This has to be reflected in greater accountability, more efficient and effective planning, coordinating, executing, and monitoring of projects. Member State governments have the opportunity to ensure that they expedite regulatory processes such as licenses and permits, in order to accelerate the implementation of regional projects.

Strengthen Competencies. The region needs to strengthen skills and competencies in the preparation as well as implementation of infrastructure projects. This includes specialized skills ranging from technical and engineering to environmental, legal, financial, and negotiation. These skills barriers appear in the form of delayed decision-making and approvals, lengthy negotiations, inappropriate decisions, and inadequacies in contract and performance management (which can also result in the public sector getting locked into fiscally unsustainable contracts that are subsequently cancelled). Assisted by the SADC Secretariat, SADC PPDF and SADC PPP, Member States should aim at creating a pool of technical experts through the development of a human capacity within the region for project identification, preparation, evaluation and marketing of infrastructure projects.

Ensure Higher Levels of Transparency. Whether real or perceived, RIDMP STAP project sponsors face transparency challenges. These may be partly because of limited competencies on the part of project owners or simply because of negative perceptions due to lack of a track record of transparency. Reports of Auditors General in Member States paint a bleak picture when highlighting lack of transparency on

contract awards and flouting of extant national guidelines and rules. Transparency in tendering is the hallmark of a fair and competitive process. The tender process must be seen to meet international standards for transparency and provide a level playing field for bidders. Tender processes also determine the credibility of contractors engaged for the execution of the projects. Member States should strive to establish documented procedures that guarantee transparency in the tender process for infrastructure.

Stabilize Legal and Regulatory Environment. The economic cycle for infrastructure investments is long-term. However, the political cycle where stable legal and regulatory frameworks to support infrastructure development are derived, is often short-term in nature. This means that the stability of environment is one of high political risk for RIDMP STAP projects, especially as it relates to ensuring subsidies on user fees or feed-in tariffs are not abruptly altered or removed. Prior to presenting a project to potential investors including PPFs, Development Finance Institutions (DFIs) and Multilateral Development Banks (MDBs), project sponsors must seek to improve the legal and regulatory environment to which the project belongs.

More Efficient Spending. With projects that are prepared to low quality standards, money spent during preparation is not attracting the much-needed private investment and these poorly prepared projects are not implemented. Under such circumstances the preparation costs become sunk costs. Member States need to circumvent this challenge by ensuring more efficient spending.

Bankable RIDMP STAP Projects. Funding sources and mechanisms are largely responsive to the depth and quality of the project pipeline. Project owners must therefore strengthen their capacity and competencies to produce bankable project proposals that attract the much-needed investment.

2. Recommendations for SADC

Oversight. It is recommended that the SADC Secretariat be involved in providing oversight and coordination of the project preparation to implementation process. Similarly, Member States should be responsible for resource mobilisation for their respective projects as well as the technical aspects of the implementation of such projects. The Secretariat, assisted by key participating DFIs, should produce standardised templates, and guidance documents, such as standardised procurement documents (EOI, RFP, RFQ) for PPP projects, and guidelines for feasibility studies, among others. These can be used by national governments and PPFs across the region and contribute to establishing uniform SADC-level standards for project documentation across Member States.

Coordination. SADC Secretariat should strive to build consensus between all stakeholders around priority regional infrastructure projects, which can form part of the regional pipeline of priority projects that can move into preparation with the full political support of the Member States involved. SADC has been playing this role already. However, it is recommended for SADC to strengthen this role through stronger consensus-building.

Operationalize the SADC Regional Development Fund. Access to adequate funding is one of the major drawbacks to the implementation of regional infrastructure projects. SADC recognises this challenge, hence efforts to establish and operationalize the Regional Development Fund (RDF), whose purpose, among others, is to mobilise funds for key infrastructure and industrialization projects, as well as implementation of the Regional Agricultural Investment Programme (RAIP) in southern Africa. Article 26A of the agreement amending the Treaty of the Southern African Development Community provides for the establishment of the RDF. Unfortunately, there have been delays by Member States in signing and ratifying the agreement required to operationalize the RDF. SADC countries are therefore urged to expedite the processes required to make the RDF a resource mobilisation reality for the region.

Project Information Gathering, Monitoring and Evaluation. One of the key contributing factors to the failure by RIDMP STAP projects to secure financing for preparation, is the lack of information for financiers to make decisions. Given the challenges associated with obtaining accurate project information, the SADC Secretariat should lead data and information collection efforts for gathering key details on regional priority projects including project sponsors, stakeholders involved, project components, estimated costs, potential risks, etc. The SADC Secretariat is in the process of developing a web portal for project information monitoring and evaluation. This information is intended to be disseminated online through a knowledge-sharing platform based on the Africa Infrastructure Database (AID) and the NEPAD Agency's Virtual PIDA Information System, for use by Member States and PPFs. The recommendation here is for the project information gathering to be a biannual event, perhaps preceding Ministerial Meetings, so that Member States are ready with the information without having to be prompted. The progress can be reported to the Committee of SADC Ministers responsible for Infrastructure.

Promote use of the Virtual Information System for real-time reporting of regional projects. A Virtual Information System was put in place by SADC with an objective to strengthen the monitoring and evaluation process for infrastructure projects. This system is currently not being utilised. It is recommended that Member States begin to use this platform to periodically report on and communicate issues relating to regional projects that they are undertaking.

Develop a Human Capacity within the region for the identification, project preparation, evaluation and marketing of economic infrastructure projects. Training of infrastructure experts from Member States has been taking place through the PPDF Capacity Building Programme. The following weaknesses in the programme have been identified: (i) not enough effort to target relevant candidates for training; (ii) post-training follow-up has not been undertaken to verify effectiveness of training; and (iii) during training, focus on RIDMP Projects in preparation or implementation, to use as case studies, has not been factored in. It is recommended that a wider strategic and management reflection from SADC and DBSA (the host of PPDF) on how to best achieve results under this work area, in particular with a view to creating strategic and systemic change and momentum in capacity-building and in building a human ecosystem, rather than delivery of once-off courses (PPDF Mid-term Review, SADC-EU, 2018).

Accelerate the Spatial Corridor Development Strategy. In 2008, SADC adopted the Spatial Corridor Development Strategy to create avenues through which the region's infrastructure can be consolidated. In terms of this strategy, infrastructure development projects will be focused mainly on routes that connect areas of industry with areas of trade, and in the process facilitate transport and trade facilitation, as a contribution towards the much-needed elimination of non-tariff barriers across the region. Examples include the Maputo Development Corridor, which links South Africa's landlocked provinces of Gauteng and Mpumalanga with the port of Maputo. The Beira Corridor links landlocked Zimbabwe to the Indian Ocean. The North-South Corridor seeks to develop transport infrastructure to interconnect SADC Member States with each other. The implementation of the Spatial Corridor Development Strategy needs to be accelerated as a vehicle to cover the infrastructure deficit in the region.

3. Recommendations for Subsidiary Organisations

Subsidiary organisations are effective pillars for policy implementation and for coordination of implementation of regional infrastructure projects. The Southern African Power Pool (SAPP), for example, continues to play a pivotal role in the development, project packaging and coordination of implementation of key regional power projects through the entire value chain, and hence offers a viable model. In addition, they are repositories of knowledge and capacity, and can be neutral brokers for the various state infrastructure agencies as well as providing key platform to address political and technical blockages to regional project implementation as a collectively owned interlocutor. To this end, the recommendations for Subsidiary Organisations are as follows:

- Strengthen the capacity of subsidiary organisations to track project implementation. SADC has established subsidiary organisations in all of the key infrastructure development sectors.
- The capacity of these subsidiary organisations must be strengthened in order to make the tracking of RIDMP STAP projects more effective.

4. Recommendations for the SADC PPDF

Special focus should be applied to SADC PPDF and hence there are specific recommendations commensurate with it being a direct product of the observed need to increase and improve the quantity and quality of projects prepared to bankability.

Sustainability. SADC PPDF is predominantly providing grant funding for project preparation. When grant funding is provided for project preparation, it results in a moral hazard problem due to the misalignment of incentives between the counter-party, i.e. the fund seeker and the grantor. At present the sustainability prospects for the SADC PPDF appear highly uncertain, and this is a further constraint on creating a significant impact on increasing investor interest and appetite, while building an institutional and financing ecosystem. To date neither SADC nor PPDF Secretariat has initiated any substantive steps to start a reflection process on the future of the PPDF, and if and how it might be continued beyond the current donor-financed contracting windows.

Regarding financing sustainability, the current prospects for the PPDF do not appear very strong, beyond the possibility of continuing with further donor funding. This would seem at best a low-ambition strategy, and it might also prove challenging to secure further donor financing based on the relatively limited results and momentum achieved to date (PPDF Midterm Review SADC-EU, 2018). The recommendation here is for SADC Secretariat and PPDF Secretariat to agree on SADC PPDF exploring the use of innovative models of cost recovery, such as success fees and redeemable grants in order to improve sustainability and avoid constantly drawing down on their donor financing.

Private Sector Participation in RIDMP Projects. The projects being prepared under the SADC PPDF Funding need to be marketed to investors including private sector. Even though most of the projects being prepared using SADC PPDF funding are still in the early to mid-stages of their preparation, beyond the beneficiary projects' own marketing efforts, there seems to be significant lack of a dedicated investment contact, promotion and outreach activity at the overall PPDF level, with no overall investment approach and investor outreach plan has to date having been made available from PPDF Fund (PPDF Midterm Review SADC-EU, 2018).

Asymmetric Information. The private sector's perception of SADC RIDMP STAP is that national government project owners lack the technical capacity to prepare projects to bankability, including planning and execution. The private sector believes that government bureaucracy causes delays in project approvals and in drafting the supporting regulations. The national government project sponsors know more about their projects than the private sector potential investors, who are sceptical about the bankability of the RIDMP STAP projects. Hence urgency in communicating the needs and opportunities in project preparation to the private sector is as important as providing incentives for leveraging financing from the private sector. Producing appropriate marketing materials which provide clear information about the project would greatly assist private sector financiers in making investment decisions.

SADC PPDF with the coordination role of SADC Secretariat should assist and advise project sponsors in their communication efforts with large private sector financiers, PPFs, DFIs and MDBs. The SADC Secretariat has done this before, when project pre-market sounding and high-level roundtable meetings were convened where interaction between private sector and project sponsors (Senior Officials and Ministers) took place for five projects – the Francistown-Nata road, Dondo Dry Port, Beitbridge Border Post, Zambia-Tanzania-Kenya interconnector, and the Rail Wagon Rolling Stock. *This needs not to be ad hoc but a deliberate strategy formulated by the SADC Secretariat and PPDF.*

Flexibility in Funding of the PPDF. Member States can adopt flexile funding of the PPDF by Member States, allowing the states to resource the fund outside of an agreed formula, moreso if the intention is to fund the projects relating to that Member State (PPDF Midterm Review SADC-KFW, 2019).

Transfer of Responsibility for PPDF Tier 1 Prioritisation to PPDF Secretariat. There is a thinking that while the current practice is for the SADC Secretariat to undertake a Tier 1 exercise on Prioritisation, this responsibility could be transferred to the PPDF Secretariat as part of the due diligence exercise or possibly allow both the SADC Secretariat and PPDF Secretariat to collectively undertake this exercise (PPDF Midterm Review SADC-KfW, 2019).

Hosting of the PPDF. Another school of thought is that, given its political clout, the fund could be hosted in-house by the SADC Secretariat. The challenge however, is that highly specialised skills would be required to undertake this exercise in-house, and if the fund is not big enough, the SADC Secretariat may not achieve economies of scale in terms of human resource utilisation (PPDF Midterm Review SADC-KfW, 2019).

5. Recommendations for Other PPFS

The Table summarises the recommendations for other PPFs in addition to the SADC PPDF, for example the AfDB-NEPAD Infrastructure Project Preparation Facility.

Challenges and Recommendations for PPFs

Challenges Faced by PPFs	Suggested Solutions
Unsustainable funding models	Innovative and leveraged financing based on cost recovery for (i) success fees, (ii) redeemable grants and (iii) revolving funds.
Bureaucratic administration of PPF Funds	Streamlining procedures at facility level to make them (i) easily available to project sponsors and (ii) easy to understand and comply with.
Lack of involvement in early stage project preparation	Increased grant for early stage project preparation to catalyse investments at later stages.
Lack of project appraisal and managerial capacity	Increasing capacity of PPFs in order to be able to effectively oversee project preparation activities.
Lack of transparency	SADC Secretariat to coordinate standardization of the PPFs funding criteria and make the information available on the SADC Infrastructure Monitoring and Evaluation Web Portal.

PPF Sustainability. The financing model of the Project Preparation Facilities in the SADC region is predominantly non-redeemable grants. The following recommendations are made to improve the sustainability of PPFs: (*i) Returns to Private Sector. (ii) PPFs Financial Sustainability. (iii) Success Fees. (iv) Redeemable Grants. (v) Revolving Fund. (vi) Equity. (vii) Public Private Partnerships*.

6. Recommendations on Private Sector Investment in Infrastructure

Private sector participation in RIDMP STAP project preparation is mostly concentrated in the mid-to-late stages, in specific functions such as consulting on feasibility studies and transaction advisory. In the implementation phase, private sector participation has been in the form of EPC contracts and PPPs. In order to broaden private sector participation in RIDMP projects, there is a need for meaningful engagement with the private sector, through a *Risk/Return Profile Orientation* or a *Partnership Approach.* It is feasible to involve the private sector in RIDMP STAP project preparation and that this can occur only in the late stages of the project life cycle, and early stage preparation would largely fall on the national governments due to concentration of political risk in the early stages.

7. Recommendations on Climate Resilient Infrastructure

In order to mitigate the challenges posed by climate change and variability in the region, SADC Member States are encouraged to develop climate resilient infrastructure projects. The AfDB defines climate resilient investments as those that are "climate proof" because they take into account predicted changes in climate during planning, design and implementation.

8. Recommendations for Financing Options and Models

The following recommendations are aimed at the Member State Governments, SADC Secretariat and the PPFs active within the region. The three institutional structures must work together to match the sources or forms of financing to the level of each project risks/return profile. Given the risk-return profile of infrastructure projects, the appropriate source and form of financing should be matched at the project preparation stage to realise efficiencies by matching the most suitable type of funding to the appropriate risk-return profile. The recommendations are presented in several categories: *(i) Guarantees and Risk Mitigation Instruments; (ii)Public Financing; (iii)Domestic Resource Mobilisation; (iv)Private Sector Financing; (v)Public Private Partnerships; (vi)Grant funding;(vii)Debt Financing; (viii)Equity; (ix) Pension Funds and Insurance Reserves; (x)Climate Finance; (xi)Sovereign Wealth Funds; (xii) Diaspora Bonds; (xiii)PIDA Funding.*

Conclusion

The overall picture drawn from the assessment of the Regional Infrastructure Development Master Plan (RIDMP) Short Term Action Plan (STAP) is that SADC Member States are lagging behind in the implementation of identified projects. The study attributes this unfavourable position to various factors. A number of lessons have been derived from the review of the implementation of the SADC RIDMP Short Term Action Plan. The region has made some concerted efforts towards the implementation of STAP projects, but has faced some constraints in the process. These constraints entailed, among others, a limited pipeline of bankable projects coupled with limited resources and capacity for project preparation; limited investment funding; a complex and weak institutional framework at national, regional and continental levels sometimes with limited clarity of the mandates for the key role players; changing priorities over the duration of the STAP phase largely at national levels; differences in priority by different states on cross-border projects; donor fatigue in respect of support to infrastructure projects. There is therefore an expectation that the lessons learnt can inform the next phase of priority projects.

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The findings contained in this report provide invaluable insights in terms of the status of implementation of RIDMP.

The region will undoubtedly draw conclusions that will inform future interventions in the development of SADC infrastructure.

SADC Secretariat
Gaborone, Botswana

ACRONYMS

ADA/ADC	Austrian Development Agency/ Austrian Development Corporation
ADF	Africa Development Fund
AfDB	African Development Bank
AGC	Africa GreenCo
AID	Africa Infrastructure Database
AMESD	African Monitoring of the Environment for Sustainable Development
ANNA	Angola-Namibia Interconnector
ASANRA	Association of Southern African National Road Agencies.
AU	African Union
AWS	Automatic Weather Stations
BOO	Build Own and Operate
BOSA	Botswana-South Africa Interconnector
CoE	Centre of Excellence
COMESA	Common Market for East and Southern Africa
COP	Child Online Protection
CRASA	Communicators Regulators Association of Southern Africa
CRIDF	Climate Resilient Infrastructure Development Facility
CRT	Cost Reflective Tariffs
CSC	Climate Services Centre
DAA	Dakar Agenda for Action
DBSA	Development Bank of Southern Africa
DFID	Department for International Development
DFIs	Development Finance Institutions
DFS	Dakar Financing Summit
DTT	Digital Terrestrial Television
EAC	East African Community
EDM	*Electricidade de Moçambique*
ERB	Energy Regulation Board
ESIA	Environmental and Social Impact Assessment
ESKOM	Electricity Supply Commission
EU	European Union
EWS	Early Warning System
FESARTA	Federation of East, Southern African Road Transport Agency.
GDP	Gross Domestic Product
GEF	Global Environment Facility
GIZ	*Deutsche Gesellschaft für Internationale Zusammenarbeit*
GMS	Global Monitoring System
HIPC	Heavily Indebted Poor Countries
ICA	Infrastructure Consortium for Africa
ICPs	International Cooperating Partners
ICT	Information Communication Technology
IGMOU	Intergovernmental Memorandum of Understanding
IMF	International Monetary Fund
IPP	Independent Power Producer
IPPF	Infrastructure Project Preparation Fund
ISACIP	Institutional Support to African Climate Institutions
ITU	International Telecommunications Union
IUMOU	Inter-Utility Memorandum of Understanding
JPCC	Joint Permanent Commission for Cooperation
KFW	*Kreditanstalt für Wiederaufbau (German Development Bank)*
kv	KiloVolt
LHDH	Lesotho Highlands Development Authority
LIMCOM	Limpopo Watercourse Commission
LLWSS	Lesotho Lowlands Water Supply Scheme Unit
M&E	Monitoring and Evaluation
MASA	Meteorological Association of Southern Africa
MDBs	Multi-Lateral Development Banks
MESA	Monitoring of Environment for Security in Africa
MOU	Memorandum of Understanding
MOZISA	Mozambique – Zimbabwe – South Africa Interconnector

MRGP	Mozambique Regional Gateway Programme
NEPAD	New Partnership for Africa's Development
NFP	National Focal Point
NHCC	National Heritage Conservation Commission
NHMS	National Hydro-Meteorological Services
NIXP	National Internet Exchange Point
NORAD	Norwegian Agency for Development Cooperation
NRENs	National Research and Education Networks
NSC	North South Corridor
ODA	Official Development Assistance
OECD	Organisation for Economic Co-operation and Development
ORE	Operational Readiness for E-commerce
OSBP	One Stop Border Post
PAPU	Pan African Postal Union
PAU	Project Advisory Unit
PIDA	Programme for Infrastructure Development in Africa Priority Action
PKI	Public Key Infrastructure
PPAs	Power Purchase Agreements
PPDFs	Project Preparation Development Facilities
PPFs	Project Preparation Facilities.
PPPs	Public-Private Sector Partnerships
PRASA	Passenger Rail Agency of South Africa
QOS	Quality of Service
RCC	Regional Climate Centre
RDF	Regional Development Fund
REC	Regional Economic Community
RERA	Regional Electricity Regulators Association
RIDMP	Regional Infrastructure Development Master Plan
RIO	Reference Interconnection Offer
RISDP	Regional Indicative Strategic Development Plan
RNIBIS	Regional and National Integrated Broadband Infrastructure Study
SAATM	Single African Air Transport Market
SACREEE	Southern Centre for Renewable Energy and Energy Efficiency
SADC PPDF	SADC Project Preparation and Development Facility
SADC	Southern African Development Community
SAHRA	South African Heritage Resources Authority
SAPP	Southern African Power Pool
SARA	Southern African Railways Association.
SARCIS-DR	Southern African Regional Climate Information Services for Disaster Resilience Development
SARDC	Southern African Research and Documentation Centre
SASO	SADC Aviation Safety Organisation
SATA	Southern African Telecommunications Association
SAWIDRA	Satellite and Weather. Information for Disaster Resilience in Africa
SDGs	Sustainable Development Goals
SIDA	Swedish International Development Cooperation Agency
SOEs	State-Owned Enterprises
SRBDC	Songwe River Basin Development Commission
SRII	SADC Regional Information Infrastructure
STAP	Short-Term Action Plan
STI	Science, Technology and Innovation
TANESCO	Tanzania Electric Supply Company
ToR	Terms of Reference
UNECA	United Nations Economic Commission for Africa
UPU	Universal Postal Union
USTDA	United States Trade and Development Agency
WASH	Water, Sanitation and Hygiene
WMO	World Meteorological Organization
ZEMA	Zambia Environmental Management Agency
ZESA	Zimbabwe Electricity Supply Authority
ZESCO	Zambia Electricity Supply Corporation
ZPC	Zimbabwe Power Company
ZRA	Zambezi River Authority
ZTK	Zambia-Tanzania-Kenya Interconnector

INTRODUCTION

There is a broad consensus that infrastructure is the bedrock of development, as it facilitates access to basic services, such as safe drinking water, basic sanitation, energy, transportation and access to ICT services among others.

Infrastructure is central to growth and poverty reduction. The seven percent economic growth rate per annum that is needed to stimulate economic development and meet the continent's aspirations and goals cannot be achieved without considerable acceleration of infrastructure projects on the continent. This is informed by the first 10-year plan of the African Union's Agenda 2063, running to 2023, and the United Nations Sustainable Development Goals (SDGs) to be achieved by 2030.

The critical importance of infrastructure as an enabler of industrialization and trade is acknowledged in various regional and international policy pronouncements. For example, the Doha Development Agenda and the UN Almaty Programme of Action and its successor Programme, the Vienna Plan of Action (VPoA) targeted at addressing the special needs of landlocked developing countries, identifies infrastructure development and maintenance as one of its six priority areas.

Within Africa, programmes such as the Tripartite Infrastructure Development Programme; Tripartite Trade and Transport Facilitation Programme; the Protocol on Trade; the NEPAD Short-Term Action Plan; the Programme for Infrastructure Development in Africa (PIDA); and SADC's Revised Regional Indicative Strategic Development Plan (RISDP) 2015-2020, all endeavour to improve infrastructure as an anchor for socio-economic transformation, through enhanced trade competitiveness. The region adopted the SADC Industrialisation Strategy and Roadmap in 2015, and in the process prioritised infrastructure as a key enabler that catalyses industrialisation. The African Union's Agenda 2063, under Aspiration 2 for an Integrated Continent, aspires to the necessary infrastructure to support Africa's accelerated integration, technological transformation, growth and development.

Africa's rapid economic growth has placed a greater demand on infrastructure development on the continent. Growing consumer demand, expanding economies, urbanisation and surging trade levels have intensified the need for new infrastructure. The African Development Bank (AfDB) estimates that the continent's infrastructure needs are between US$130-US$170 billion a year, with an annual financing gap of US$68-US$108 billion.

The continent needs to reduce its infrastructure deficit to achieve the desired structural transformation as well as to accelerate the pace of integration. According to the Infrastructure Consortium for Africa, the high infrastructure deficit means that services on the African continent cost more than almost any other place in the world. Africa's rural communities pay 60 to 80 times more per unit for energy than urban populations in the industrialised North. Poor quality infrastructure services can increase the input material costs of consumer goods by up to 200 percent in certain African countries. In Madagascar for example, supply chain barriers can account for as much as four percent of the total revenues of a textile producer (through higher freight costs and increased inventories), thus eroding the benefits of duty-free access to export markets. Small and Medium Enterprises (SMEs) tend to face proportionally higher supply chain barriers and costs.

It is clear that access to adequate infrastructure has a bearing on livelihoods and overall economic output. Accelerating the infrastructure development projects will therefore reduce the cost that Africans pay in accessing basic goods and services, a condition that should contribute to poverty eradication and employment creation for youth. Delayed implementation of infrastructure projects comes with a cost, as this results in the escalation of project costs, against a backdrop of financing constraints that continue to harass Member States.

1.1 SADC Infrastructure Development Initiatives

Despite an abundance of natural resources and positive economic growth in recent years, most SADC Member States remain underdeveloped, as a result of the low level of industrialization in the region and the peripheral position in global manufacturing. The existing infrastructure is insufficient to address the desired growth in economic development, with innovative action required in response to the current and future needs and opportunities. Projections indicate that the population of the SADC will grow at an average rate of about 1.7 percent per year to reach above 400 million by 2027.

In order to facilitate trade and economic liberalisation, as well as to address regional supply-side constraints, it has been found necessary to remove the key barriers to trade and industrialisation which exist in the form of non-trade barriers. One such barrier is a lack of adequate infrastructure. The region is therefore implementing programmes designed to provide seamless transboundary infrastructure in the areas of transport, power generation and transmission, regional telecommunication and ICTs, transboundary water cooperation, as well as water supply and sanitation.

1.2 Regional Infrastructure Development Master Plan

In recognition of the positive impact that infrastructure development will have on the region, SADC Heads of State and Government approved, in 2012, the Regional Infrastructure Development Master Plan (RIDMP) 2012-2027.This policy document is the action plan for the SADC Infrastructure Vision 2027 and is anchored on six pillars — energy, transport, ICT, meteorology, transboundary water resources and tourism (Trans Frontier Conservation Areas). RIDMP is an integral part of the COMESA-EAC-SADC Tripartite Infrastructure Development Programme as well as the continental Programme of Infrastructure Development in Africa (PIDA). The SADC region through the RIDMP continues to build synergies with the two infrastructure development blueprints to leverage support and its comparative advantage is underpinned by collective implementation at continental level.

Figure 1.1. The SADC Infrastructure Vision 2027

Source: RIDMP, 2012

This infrastructure development plan is designed to improve access to basic services and strengthen economic activity for sustainable livelihoods in the SADC region.

Some challenges that RIDMP seeks to address include the following:

- Insufficient energy supply to serve increased production, and limited access to energy by the population;
- Highly priced, unpredictable transport and logistics services, especially for landlocked states that continue to face transit facilitation across other nations and borders;
- Lack of low-cost access to ICTs;
- Inadequate meteorological services for effective and efficient planning and management of water resources, energy production, transport services and other climate-sensitive sectors;
- Unacceptably high number of citizens without access to safe drinking water, adequate sanitation and water for irrigation to improve systems for agricultural production which will contribute to food security; and,
- Slow response to new tourism trends and opportunities.

The implementation of Regional Infrastructure Development Master Plan is conducted in three phases:

- The Short Term Action Plan – STAP (2012-2017)
- The Medium Term Action Plan (2018 - 2022)
- The Long Term Action Plan (2023-2027).

1.3 The Short Term Action Plan – STAP (2012 -2017)

The Short-Term Action Plan (STAP) was developed to guide the implementation of Phase 1 of the infrastructure projects under the RIDMP. The Directorate of Infrastructure at the SADC Secretariat has the responsibility to lead and coordinate, while Member States and Subsidiary Organizations remain responsible for implementation.

Projects contained in the STAP are those that were considered ready for implementation during the period 2012 to 2017. During this short-term phase, other projects were to be prepared according to the level of bankability, and readiness for financing and implementation. The project pipelines will be continuously updated as additional projects go through the project preparation process, and it should be noted that the STAP was a reflection of the priorities of Member States at the time of adoption. Such priorities are subject to change over time.

Following the five years of implementation, the STAP initiative has to undergo review, in order to assess the status of projects that had been targeted under this programme. This process is critical, to enable SADC to identify challenges of implementation and formulate strategies aimed at accelerating the deployment of infrastructure in the region. As part of the Mid Term Review, the SADC Council of Ministers directed the Secretariat to identify high-priority and high-impact infrastructure projects for implementation. This exercise was also designed to guide the allocation of the region's scarce financial resources to projects deemed of high priority within the first phase of RIDMP implementation.

A total of 98 projects were originally identified under STAP within the six sectors constituting the SADC RIDMP. The full scope of projects that were intended for implementation within the timeframe of 2012-2017 are depicted in Table 1.1.

Table 1.1. **Projects Originally Targeted for STAP Implementation**

Sector	Number of Projects	Estimated Cost (US$)
Energy	16	12.27 billion
Transport	32	16.65 billion
ICT	18	21.40 billion
Meteorology	9	192 million
Water	8	13.48 billion
Tourism	15	324 million
Total	**98**	**64.32 billion**

Source: RIDMP, 2012

SADC acknowledges that the projects identified under STAP are not rigid, with Member States having some flexibility to identify and establish their own priority projects that fall within the broad guidelines of the RIDMP. Such projects are to be monitored and evaluated accordingly, to effectively track the progress of the infrastructure development initiatives. By so doing, SADC Member States would have created mechanisms for the early identification of impediments and the adoption of corrective measures required to ensure the success of RIDMP by 2027. In this context, the SADC Secretariat engaged the Southern African Research and Documentation Centre (SARDC) to conduct a study for the purpose of assessing progress on implementation of the first phase of RIDMP, known as STAP.

1.4 Objectives of STAP Assessment

The specific objectives of the current STAP review are as follows:

1) Determine the extent of progress in implementation of SADC infrastructure projects since RIDMP adoption in 2012;
2) Analyse the potential opportunities and related threats with respect to the RIDMP implementation in Southern Africa;
3) Provide recommendations on how Southern African Member States can accelerate implementation of RIMDP milestones for optimal benefits;
4) Provide an assessment of how the experience in the RIDMP STAP could provide lessons in the overall implementation of the Infrastructure Vision 2027;
5) Proffer concrete information that can be valuable to development finance institutions such as DBSA and other investors;
6) Draw conclusions that can inform future interventions in the development of SADC infrastructure.

RESEARCH METHODOLOGY

Primary data collection was the main methodological approach for this study, using questionnaires, combined with a review of secondary sources.

2.1 Purpose of the Study

The purpose of this study was to determine the extent of progress in implementation of SADC infrastructure projects since the adoption of the Regional Infrastructure Development Master Plan in 2012, and to analyse the existing institutional and legal environment for infrastructure development in the SADC region, as well as assessing the potential and appetite of the private sector and financial institutions to support regional infrastructure projects.

The study was tasked to provide recommendations on how SADC Member States can accelerate implementation of RIMDP milestones for optimal benefits; to offer concrete strategies to SADC Member States, project owners and other infrastructure stakeholders; and to draw conclusions and lessons that can inform future interventions in the development of SADC infrastructure, e.g. STAP II.

2.2 Defining the Scope of the Study

The focus of the study was to assess the extent to which projects identified under STAP have been implemented, based on the targets of the original action plan. The scope of the study as originally envisaged would be an impact assessment of the RIDMP projects identified under STAP.

2.2.1 The study is focused on specific RIDMP projects

The study is the first review of the broad RIDMP programme, which has been designed to accelerate southern Africa's infrastructure development agenda. Based on the RIDMP strategy document, it is envisaged that all identified projects should be completed by 2027. The RIDMP has three implementation phases, with the first phase described as the Short-Term Action Plan or STAP, whose projects have been planned for implementation from 2012 to 2017.

2.2.2 Particular emphasis on STAP projects

The specific RIDMP projects that fall under the scope of this study are those that encompass the STAP initiative whose goal was to ensure quick wins in terms of infrastructure development in the region. As indicated above, the original STAP had identified 98 projects falling within this ambit. These projects are derived from the six development clusters identified in the RIDMP, which are energy, transport, water, ICT, tourism and meteorology.

2.2.3 Other non-RIDMP STAP infrastructure projects

The study also assessed a number of projects that were originally not designated as RIDMP or STAP, but are given priority by Member States. Such projects provide an overall picture of the challenges and possible solutions associated with regional infrastructure projects.

2.2.4 Engagement with the SADC Secretariat

The SADC Secretariat, assisted by the sub-regional organisations, is responsible for overall coordination of implementation of regional projects and remains the custodian of reports and associated information on projects. As part of the preparation for this report, the Secretariat and its specialised agencies were engaged in order for them to share insights with regard to the challenges confronted during the implementation of the STAP.

2.2.5 Period covered by the review, 2012 to 2018

The review period for this study runs up to 2018, although the STAP period for implementation was 2012 to 2017. This has been done because some of the STAP projects had originally been designed to run beyond the 2012 - 2017 timeframe.

2.3. Profile of Sources of Information

The profile of information sources for the RIDMP STAP study is summarised in Table 2.1

Table 2.1. **Summary of Information Sources**

Sources	Profile of Sources
Primary Sources	• Questionnaires to Member States • Questionnaires to Subsidiary Organisations • Direct communication with stakeholders • Direct information from the SADC Infrastructure Directorate
Secondary Sources (Desk Research)	• Desk study • Reports of SADC Ministerial meetings • Review of Records of SADC Policy meetings • Reports from DFIs and other development partners • Reports from SADC publications • Reports about specific projects • Other relevant publications

2.4. Designing Research Tools

The main research tool for this study was the questionnaire. This was developed to establish from Member States, SADC Subsidiary Organisations and other stakeholders, the extent to which STAP projects where adhering to set targets for implementation. The questionnaire was designed to assess STAP on a project by project basis and focused on the following areas.

2.4.1 The respective country and name of the project under review

STAP projects are listed by name and by country in the original source document. The questionnaire sought to ensure that Member States and Subsidiary Organisations would therefore capture specific projects that are related to the RIDMP STAP so they can easily be identified as such.

2.4.2 Other countries involved in the project and relevant agreements signed

In this instance, the questionnaire sought to establish the commitment by Member States by ascertaining whether any agreements or Memoranda of Understanding (MOUs) have been concluded with other countries involved in the project. This is in recognition of the fact that the RIDMP STAP projects require the full cooperation of participating countries.

2.4.3 Status of implementation

The questionnaire sought to establish whether projects were on course in terms of pre-established timeframes, and an inquiry was made as to the stage of implementation for the project, with regard to the following phases:

- Pre-feasibility
- Feasibility
- Project Design
- Financial Closure
- Project Implementation
- Project Closure.

2.4.4. Priority Status of projects

Questions were also given to respondents to establish the priority status that respective STAP projects have been assigned by Member States. This would include an inquiry into whether the particular project had been factored into the respective country's national development plans, or funding allocations made to the project by each participating country. This would also be an indication of the level of commitment Member States have to regional infrastructure projects.

2.4.5. Financing Framework for STAP projects

A comprehensive section in the questionnaire, focused on collecting information on the financing framework for STAP projects. Key areas of inquiry in terms of this section included the following:

a) Whether a project had been completed with associated costs being established;
b) Amounts raised to date to finance the project;
c) Variance between actual and planned costs for the project;
d) National budget allocations for STAP projects;
e) Accessibility of the SADC Project Preparation and Development Facility (PPDF) ;
f) Other financing facilities accessed and the conditions of those facilities; and,
g) Assessing the sustainability of current funding models, in the context of the "user pays principle".

2.4.6 Policy and Regulatory Framework

It was necessary for the study to ascertain whether the process of implementing infrastructure projects within the region has been underpinned by an appropriate policy, regulatory and institutional framework. Questions to this effect were therefore included in the questionnaire.

2.4.7 Public-Private Partnerships

The questionnaire also explored the extent of private sector involvement in infrastructure development. This is in recognition of the limited capacity of public financing and the recommendation in the RIDMP policy document for the adoption of Public Private Partnerships (PPPs).

2.4.8 Monitoring and Evaluation

Finally, the questionnaire looked at whether Member States and implementing organisations had developed robust monitoring and evaluation systems as envisaged by RIDMP. This aspect is designed to ensure adequate follow-up and reporting on progress relating to infrastructure development, while tracking whether such projects are within set targets.

2.5. Research Indicators

From the questionnaire, researchers were able to develop key indicators to be used to rate the progress of implementation of STAP projects. These indicators are as follows:

1. Number of projects being implemented versus number of projects in the original 2012 to 2017 plan.
2. Number of MOUs/ or agreements signed versus number that was supposed to be already concluded in terms of the 2012 to 2017 plan.
3. Policy, regulatory and institutional frameworks guiding implementation of projects:
   a) Including number of laws passed and institutions created by Member States to ensure the smooth implementation of this project.
4. Stage of project with indicators as follows:
   a) Pre-feasibility;
   b) Feasibility;
   c) Bankable project proposal;
   d) Implementation;
   e) Projection monitoring and evaluation; and,
   f) Project closure.

5. Financing arrangements
   a) Number of bankable projects per Member State compared with projects expected in terms of the original plan;
   b) Amounts raised to finance projects against original plan;
   c) Actual versus planned expenditure;
   d) Percentage allocated to RIDMP projects of overall capital expenditure and national budget between 2012 and 2018; and
   e) Amount of money secured from SADC Project Preparation and Development Fund between 2012 and 2018.
6. Number of projects for which the "user pays principle" has been adopted.
7. Number of projects for which Public Private Partnerships have been adopted.
8. Percentage contribution of the private sector funding to the RIDMP projects between 2012 and 2018.

2.6. Data Collection

In the data collection phase, the SARDC worked with the SADC Secretariat to distribute questionnaires to all the Member States. In addition, questionnaires were also circulated within SADC subsidiary organisations. Below is the full list of Member States and subsidiary organisations to which questionnaires were distributed.

2.6.1 SADC Member States where questionnaires were distributed

The questionnaires were distributed in 15 of the 16 SADC Member States, with the exception of Comoros, as shown; and to the nine SADC subsidiary organisations listed.

Additional information was accessed from the SADC Secretariat through the Infrastructure Directorate as well as from reports on regional, sectoral and ministerial meetings. Information was also sourced through direct communication with key officials of Member State, as well as project owners, development finance institutions and other stakeholders.

SADC Member States where questionnaires were distributed

Angola, Botswana, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia, Zimbabwe

SADC Subsidiary Organisations where Questionnaires were Distributed

SAPP - Southern African Power Pool
SASO - SADC Aviation Safety Organisation
SARA - Southern African Railways Association
SATA - Southern African Telecommunications Association
CRASA - Communications Regulators Association of Southern Africa
RERA - Regional Electricity Regulators Association
ASANRA - Association of Southern African National Road Agencies
FESARTA - Federation of East, Southern African Road Transport Agency
MASA - Meteorological Association of Southern Africa

2.7. Compiling the Report

A preliminary report was compiled based mainly on primary data collected. Having identified the limitations in terms of scope of the preliminary report, a second round of information gathering was conducted. This included the collection of additional primary data and also reviewed secondary sources to complement the research effort. Having analyzed the data, the study went on to develop the draft report which was subjected to a validation workshop of Member State officials and other stakeholders. A final report was then compiled as presented here.

2.8. Research Limitations

The research into the status of implementation of RIDMP STAP projects faced limitations in the following areas:

a) Most of the projects submitted by Member States for review are not part of STAP and some of them are not listed as RIDMP projects. This meant that not all information was obtained for each of the 98 original STAP projects. The study was able to obtain information for 62 STAP projects. The study also assessed 29 RIDMP projects that are not part of STAP and an additional 43 projects that are not listed under the original STAP or RIDMP projects. These non-RIDMP projects are relevant in that they indicate a shift

in priority by Member States in terms of infrastructure projects that they are implementing. The collective number of projects make up the sample size of the study as indicated in Table 2.2.

b) In addition, the budget for the project did not provide for country visits to Member States to conduct interviews with project owners. However, this limitation was addressed by using alternative primary and secondary sources of information.

2.9. Sample Size

The number of infrastructure projects assessed in terms of this study, are 134 which is the sample size in terms of this study. Table 2.2 summarises the number of projects that make the sample size for this RIDMP STAP study.

Table 2.2. **Sample Size for the RIDMP STAP Assessment**

Sector	STAP Projects	Non-STAP RIDMP Projects	Other Infrastructure Projects Assessed	Total Projects
Transport	15	14	23	52
Energy	10	6	14	30
Water	5	8	6	19
ICT	17	0	0	17
Meteorology	6	1	0	7
Tourism	9	0	0	9
TOTAL	**62**	**29**	**43**	**134**

2.10. Justification of the approach

The main focus was on securing as much primary data as possible due to the greater evidential weight of first-hand information. The questionnaires to Member States and SADC Subsidiary Organisations as well as the direct communication with stakeholders in the infrastructure development value chain were aimed at securing the highly relevant primary data. However, given that such first-hand information was not readily available for all projects, then secondary data was secured. The information coming out of this study is therefore quite comprehensive and relevant to inform decision-makers for future regional infrastructure development programmes.

STATUS OF IMPLEMENTATION OF STAP PROJECTS AND IMPACTS

The majority of projects listed under the Short Term Action Plan (STAP) had been targeted for completion by the end of 2017, in line with the first phase of implementation for the Regional Infrastructure Development Master Plan (RIDMP). The plan was to complete projects from 2013, as shown in Table 3.1. The completion rate would be expected to increase steadily to peak in 2017 when 42 percent of the original STAP projects were targeted for completion. The remaining two projects would then be completed in 2018 and 2019 respectively.

Table 3.1. **Original Completion Targets for STAP Projects**

Sector	2013	2014	2015	2016	2017	2018	2019	Total
Energy	-	-	2	8	5	1	-	16
Tourism	-	5		5	5	-	-	15
Transport	1	5	2	7	16	-	1	32
ICT	-	1	4	6	7	-	-	18
Meteorology	2	-	4	-	3	-	-	9
Water	-	-	1	2	5	-	-	8
Total	**3**	**11**	**13**	**28**	**41**	**1**	**1**	**98**

Source: RIDMP, 2012

3.1 Overview of the Status of Implementation of RIDMP STAP Projects

A key finding from this research is that many of the infrastructure development projects are experiencing high levels of stagnation. An analysis of 134 projects reviewed in terms of this study, indicates that most projects remain at the feasibility stage with very few having been completed, as shown in Table 3.2.

Table 3.2. **Overall Status of Regional Infrastructure Projects**

Sector	Pre-feasibility	Feasibility	Project Design	Financial Closure	Project Implementation	Project Completion	Total
Transport	7	27	7	1	9	1	52
Energy	3	20	3	1	2	1	30
Water	6	3	9	0	1	0	19
ICT	1	0	0	0	14	2	17
Met	0	0	0	0	5	2	7
Tourism	0	1	0	0	7	1	9
Total	17	51	19	2	38	7	134
Percentage	**13**	**38**	**14**	**2**	**28**	**5**	**100**

Source: RIDMP, 2012

As shown in the Table, only five percent of projects assessed in terms of this study had been completed by end of June 2019, with 38 percent of projects at feasibility stage and 13 percent at pre-feasibility. In addition, 14 percent are at project design, two percent at financial closure and 28 percent at the project implementation phase. It is clear from the Table that SADC Member States must act urgently to overcome the stagnation and accelerate the implementation of regional infrastructure projects towards completion.

3.2 Status of Transport Sector Projects

The transport sector is a key pillar for regional economic development, being largely responsible for the movement of people, goods and services. The original RIDMP STAP identified 32 transport sector projects worth US$16.65 billion. The status of 52 projects in the transport sector that were assessed in this study is highlighted below.

1. *Construction of Standard Gauge Railway from Mtwara-Mbamba railway with spurs to Liganga and Mchuchuma*

RIDMP Project: Yes **STAP Project:** Yes. **Status:** Feasibility
Countries involved: Tanzania
Private Sector Involvement: Yes, considering PPP arrangement.

Progress to date: Procurement of transactional advisor to review the Feasibility study for PPP investment is at the final stage towards signing of contract. To secure funds for Transactional advisory service

2. *Construction of standard gauge railway from Isaka-Keza-Kigali-Musongati railway line*

RIDMP Project: Yes **STAP Project:** Yes. **Status:** Implementation
Countries involved: Tanzania, Rwanda and Burundi
Private Sector Involvement: No

Progress to date: Construction for Lot I started on February 2017 and expected to be completed November, 2019. Lot II (422km) started March 2018 and expected to be completed by April 2021. To start construction for Lots III up to IV

3. *Kisarawe Freight Station.*

RIDMP Project: Yes **STAP Project:** Yes. **Status:** Feasibility
Countries involved: Tanzania/ Central Corridors
Private Sector Involvement: No

Progress to date: Procurement of Consultants to undertake consultancy services for the feasibility study including land-use plan, implementation plan, preliminary design, detailed engineering designs and preparation of tender documents for development of dry ports at; Kwala-Ruvu (Lot 1), Ihumwa-Dodoma (Lot 2), Fela-Mwanza (Lot 3), Inyala-Mbeya (Lot 4) and King'ori-Arusha (Lot 5). Complete feasibility studies and proceed to project design.

4. *Upgrading of Zambia Railways Network from Chingola to Livingstone*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Lot I - 2019, Lot II - 2021, others not yet determined. Identification of funding sources for detailed feasibility and design

5. *Luano - Chililabombwe Railway*

*Kasama to Lubumbashi in DRC via Luwingu, Mansa, Matanda Border; total line length - 460km; 340km Zambia, 120km DRC

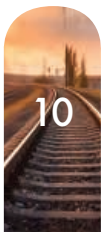
RIDMP Project: No **STAP Project:** No **Status:** Pre-feasibility
Countries involved: Zambia, DRC
Private Sector Involvement: Yes. The intention is for a private developer to implement the project.

Progress to date: Project proposal prepared and submitted to the government by a private developer; Project Proposal approved by the Ministry of Transport and Communications, Zambia. Identification of funding sources for pre-feasibility study and detailed design.

6. *National Railways of Zimbabwe Recapitalization and Rehabilitation*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Feasibility
Countries involved: Zimbabwe
Private Sector Involvement: Yes. The intention is for a private developer to implement the project.

Progress to date: Discussions initiated with potential finance partners and investors. Feasibility study needs to be revised.



7. *Establishment of Regional Locomotive & Wagon Pool Leasing*

RIDMP Project: No **STAP Project:** No **Status:** Pre-feasibility
Countries involved: SADC
Private Sector Involvement: No

Progress to date: The project is yet to gain traction. Feasibility studies are required.

8. *Regional Rolling Stock Manufacture Hub*

RIDMP Project: No **STAP Project:** No **Status:** Pre-feasibility
Countries involved: South Africa
Private Sector Involvement: Yes. The intention is for a private developer to implement the project.

Progress to date: Two RSA State Owned Enterprises (SOEs) – Transnet and Passenger Rail Agency of South Africa (PRASA) are developing a Concept document to be ready by the end of June 2016. Feasibility studies required

9. *Francistown – Nata Road (190kms)*

Line length – 190km
RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Botswana
Private Sector Involvement: No

Progress to date: Feasibility study and detailed design for Sebina-Nata portion (140km) completed. Feasibility study and detailed design for the remaining 50km required.

10. *Kazungula (Kasane) to Pandamatenga to Nata Road*

RIDMP Project: Yes **STAP Project:** No **Status:** Project Design
Countries involved: Botswana
Private Sector Involvement: No

Progress to date: This is a fully prepared project with funding for implementation being mobilised 100 percent from the Government of Botswana. The Botswana Ministry of Finance has confirmed that it will fund the project.

11. *Kazungula Bridge and OSBP*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: Botswana, Zambia and Zimbabwe
Private Sector Involvement: No

Progress to date: Construction of the road and rail bridge is underway. The OSBP is work in progress. Maintain construction momentum. Project set to be complete in 2020.

12. *Bulawayo-Beitbridge Road (321km)*

RIDMP Project: Yes **STAP Project:** No **Status:** Project Design
Countries involved: Zimbabwe
Private Sector Involvement: No

Progress to date: Feasibility study completed by Common Market for Eastern and Southern Africa (COMESA). The Draft Final Report and Draft Bidding Documents submitted in July 2018 and identification of funding sources for construction required.

13. *Bulawayo-Victoria Falls Road (439km)*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Zimbabwe
Private Sector Involvement: No

Progress to date: Feasibility study being commissioned. Identification of additional funding sources required; widening of the actual road required.

14. *Harare-Nyamapanda Road (238km)*

RIDMP Project: No **STAP Project:** No **Status:** Pre-feasibility
Countries involved: Zimbabwe
Private Sector Involvement: No

Progress to date: Identification of funding sources and widening of the actual road required.

15. *North-South Dry Port in Lusaka, Copperbelt or Central Provinces*

RIDMP Project: Yes **STAP Project:** No **Status:** Pre-feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Not much progress, still at the concept stage. Identification of funding sources for pre-feasibility and detailed design required.

16. *Durban dig-out Port (Durban Port Expansion)*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Feasibility
Countries involved: South Africa
Private Sector Involvement: No

Progress to date: Pre-feasibility study completed. Review of the feasibility study and funding required for the Port.

17. *Plumtree/ Ramokgwebane OSBP*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Botswana, Zimbabwe
Private Sector Involvement: No

Progress to date: Situational Analysis completed. Feasibility study, detailed design and identification of funding sources required.

18. *Pioneer Gate Skilpadhek OSBP*

RIDMP Project: Yes **STAP Project:** No **Status:** Implementation
Countries involved: Botswana, South Africa
Private Sector Involvement: No

Progress to date: South African side completed. Identification of funding sources for detailed design and construction required.

19. *Nakonde/Tunduma OSBP*

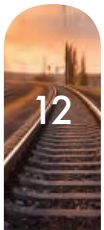
RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: Zambia, Tanzania
Private Sector Involvement: No

Progress to date: Construction of the Zambian side completed. Detailed feasibility study and designs completed for the Tanzanian side. A similar structure needs to be constructed in Tanzania; construction of multiple lanes on both sides needs to be done; construction of OSBP storage facilities.

20. *Beitbridge OSBP*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Project Design
Countries involved: Zimbabwe, South Africa
Private Sector Involvement: No

Progress to date: Mutual Administrative Assistance Agreement between the two Customs Units of South Africa and Zimbabwe was signed. A Beitbridge Border Efficiency Management Systems Inter-Ministerial Committee has been set up to come up with an OSBP Draft Agreement. Feasibility study, design and infrastructure master plan completed. Action required includes concluding an OSBP Agreement and identification of funding sources. Master Plan completed on the RSA side, and needs to be harmonized with Zimbabwe.



21. *Kasumbalesa OSBP*

RIDMP Project: Yes **STAP Project:** No **Status:** Implementation
Countries involved: DRC, Zambia
Private Sector Involvement: No

Progress to date: The building on the Zambia side is constructed and hardware set-up completed. Similar work is set to commence on the DRC side of the border.

22. *Martins Drift Bridge expansion*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Botswana, South Africa
Private Sector Involvement: No

Progress to date: Project yet to commence. Feasibility and detailed design required.

23. *Martins Drift Bridge OSBP*

RIDMP Project: No **STAP Project:** No **Status:** Pre-feasibility
Countries involved: Botswana, South Africa
Private Sector Involvement: No

Progress to date: Project is yet to commence. Feasibility and detailed design required.

24. *Beira-Machipanda Railway Upgrade*

RIDMP Project: Yes **STAP Project:** No **Status:** Project Design
Countries involved: Botswana, South Africa
Private Sector Involvement: No

Progress to date: Project yet to commence. Feasibility and detailed design required.

25. *Inland Cargo Dry Port at Dondo including an Inland cargo terminal at Inchope.*

RIDMP Project: No **STAP Project:** No **Status:** Project Design
Countries involved: Mozambique
Private Sector Involvement: No

Progress to date: Feasibility study completed by Mozambique Regional Gateway programme (MRGP)

26. *TAH9 Beira-Lobito Corridor: Lobito Roads*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: Lobito Corridor (Angola, DRC, Zambia)
Private Sector Involvement: No

Progress to date: The feasibility and assessment studies were completed in August 2012. Angola and Zambia are progressively rehabilitating and constructing the road networks in this region to SADC standards. Zambia is upgrading road links to DRC which are alternatives to Kasumbalesa in order to relieve congestion at Kasumbalesa. The convergence point is Jimbe where a new bridge and modern border infrastructure is planned. There is no clear time-based programme regarding the rehabilitation of the road networks in DRC on this corridor. Secretariat is planning to convene a meeting of the three member states in order to address infrastructure, institutional and legal issues on the corridor.

27. *Rehabilitation of Makambako- Songea Road (295 km)*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Project Design
Countries involved: Mtwara Corridor (Tanzania, Malawi)
Private Sector Involvement: No

Progress to date: Feasibility Study and Detailed Designs were completed in August 2014. Funds are being solicited for financing of the civil works.

28. *Dar es Salaam-Chalinze Toll Road (99.7 km)*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Feasibility
Countries involved: Tanzania
Private Sector Involvement: No. Despite efforts, the project is yet to attract private sector support.

Progress to date: The main shareholder is the Government of Tanzania through Tanzania National Roads Agency which acts on behalf of the Ministry of Works. The Private sector partners have not yet been secured and therefore no shareholding structure has been agreed until the firms which will be awarded the project, are formally known. A PPP Model Toll Road Transaction Structure is being considered. The Transaction Advisor is currently re-viewing/updating the Feasibility Study & Detailed Designs.

29. *Port of Walvis Bay-Container Terminal in Namibia*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: Namibia and Western Corridor
Private Sector Involvement: No

Progress to date: Construction of the New Container Terminal at the Port of Walvis Bay is at an advanced stage.

30. *Road rehabilitation RN 13: Tolanaro-Ambovombe*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Madagascar
Private Sector Involvement: No

Progress to date: Preparatory studies conducted and tender ready.

31. *Road rehabilitation RN 6: Antsiranana-Ambanja*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Madagascar
Private Sector Involvement: No

Progress to date: Preparatory Studies conducted and tender ready. Road giving access to food production region (230km) and regional port of Diego Suarez, co-financing with NIP & EIB.

32. *Port Victoria*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Seychelles
Private Sector Involvement: No

Progress to date: Preparatory studies conducted and tender ready.

33. *Cargo and Freeport Development at the Airport*

RIDMP Project: No **STAP Project:** No **Status:** Project Design
Countries involved: Mauritius
Private Sector Involvement: No

Progress to date: Project study of Euro 5 million already completed.

34. *Kisantu-Ndidinga-Kindopolo Road (117 km)*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: DRC
Private Sector Involvement: No

Progress to date: Concept note to undertake the feasibility study has been completed. The concept note needs to be evaluated so as to raise funds for this exercise.

35. *Lubumbashi-Bukavu Road (1,402 km)*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: DRC
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

36. *Tshikapa-Kananga-Kisangani Road (1,524 km)*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Feasibility
Countries involved: DRC
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

37. *Port Kalemie Rehabilitation*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: DRC
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

38. *Rehabilitation of Kolwezi-Dilolo Railway*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Feasibility
Countries involved: DRC / Angola
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

39. *Sakania and Tenke Railway Rehabilitation*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: DRC
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

40. *Bunker Jetty at Fort George*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Mauritius
Private Sector Involvement: No

Progress to date: Only Pre-feasibility completed as part of the Port Master-planning Exercise.

41. *Lusaka to Luangwa bridge road rehabilitation*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Feasibility study completed by Mozambique Regional Gateway Programme (MRGP)

42. *Kafue-Lions Den Feasibility Studies and Engineering Designs*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

43. *Livingstone-Sesheke Railway Spur*

RIDMP Project: No **STAP Project:** No **Status:** Pre-feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Feasibility study completed by Mozambique Regional Gateway Programme (MRGP)

44. *Livingstone-Kazungula-Sesheke Road*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

45. *Modernisation of Mpulungu Port*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

46. *Mwami/Mchinji OSBP*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

47. *Nseluka-Mpulungu railway spur (175 km)*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

48. *Chipata-Petauke-Serenje Greenfield Railway Spur*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

49. *Rehabilitation of T1 from Kafue (Turnpark) to Mazabuka Road*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Project is yet to be implemented.

50. *Serenje Mpika Road*

RIDMP Project: No **STAP Project:** No **Status:** Financial Closure
Countries involved: Zambia
Private Sector Involvement: No

Progress to date: Feasibility studies completed. Alternative contacts can be replaced.

51. *Plumtree-Bulawayo-Gweru-Harare-Mutare road: rehabilitation*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Project Completion
Countries involved: Zimbabwe
Private Sector Involvement: No

Progress to date: Re-surfacing of the road and implementation of tolling system has been completed.

52. *Manyoni-Tabora-Kigoma Road*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: Tanzania
Private Sector Involvement: No

Progress to date: Project is being implemented. The Nyahua-Chaya section is 26 percent complete. The Urambo-Kaliua leg is 35 percent complete. Financial mobilisation has been a challenge.

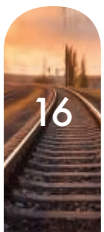


Table 3.4 provides a summary of the status of transport sector projects, indicating how regional projects have fallen behind schedule, with only one completed project in the transport subset. The majority or 65 percent of projects are at the feasibility or pre-feasibility stages.

The picture presented by these findings typifies the state of infrastructure projects within the region. This places added emphasis on the need for SADC to prioritise the implementation of agreed projects. A failure to do so would mean southern Africa's development goals will continue to look good on paper, yet fail to materialise into reality.

Table 3.3. **Summary of Transport Sector Projects**

Project Status	Number	Percentage
Pre-feasibility	7	13
Feasibility	27	52
Project Design	7	13
Financial Closure	1	2
Project Implementation	9	18
Project Completion	1	2
Total	**52**	**100**

3.3 Status of Energy Projects

Energy plays a pivotal enabling role in the overall developmental agenda of the region. Without access to modern energy services, vulnerable members of society spend most of their time on basic tasks that are time consuming, non-remunerative and highly laborious, such as collecting biomass fuels. This work is often done by women, whose valuable time is taken up by these non-remunerative jobs. Beyond its use in daily life, energy catalyses infrastructure projects that drive both national and regional development.

Table 3.4. **Overview of Regional Energy Projects**

Stage of Implementation	Number of Projects	Percentage
Pre-feasibility	3	10
Feasibility	20	67
Project Design	3	10
Financial Closure	1	3
Project Implementation	2	7
Project Completion	1	3
Total	**30**	**100**

The STAP had identified 16 energy projects with a total estimated value of US$12.27 billion. This RIDMP STAP assessment reviewed 30 energy projects, 10 of which fall under the original STAP list. As Table 3.5 shows, these regional energy projects have also fallen behind schedule, with 67 percent still at the feasibility stage.

Table 3.5. **Overview of Water Projects**

Project Status	Number	Percentage
Pre-feasibility	6	32
Feasibility	3	16
Project Design	9	47
Financial Closure	0	0
Project Implementation	1	5
Project Completion	0	0
Total	**19**	**100**

The following list summarises the review of power sector projects and seeks to identify some of the challenges encountered in the course of implementing the said projects. The report also identified a number of projects which are not in the STAP, but are being implemented by Member States. The Project Advisory Unit (PAU), which is part of the SAPP, is assisting Member States with implementation of most of the projects. The updates on these projects were provided by both the SADC Secretariat and is SAPP.

1 *Zambia-Tanzania-Kenya (ZTK) Interconnector Project*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: Zambia, Tanzania and Kenya
Private Sector Involvement: No

Progress to date

An MOU was signed between the SAPP and Zambia Electricity Supply Corporation (ZESCO) for the Project Advisory Unit (PAU) to assist with the implementation of the Zambia portion of the Zambia-Tanzania-Kenya (ZTK) Power Interconnector, while the Nile Basin (NELSAP [Nile Equatorial Lakes Subsidiary Action Program] - Office for Promoting Private Power Investment [OPPI]) undertook the work for the Tanzania component of the ZTK. For the Kasama-Nakonde line in Zambia, the contract was awarded and construction will take 18 months. Nakonde-Mbeya (100km) and Mbeya-Iringa (292km) feasibility study was completed and funding has

been obtained from the World Bank. The Iringa-Dodoma-Singida-Shinyanga (670km) line of 400kV transmission line was completed and is operating at 220 kV. Phase II of the substation upgrading to 400 kV substations is underway and will be expected to be completed by June 2020. Funding for the Singida-Arusha-Namanga (Kenya) was secured for the transmission and substation segments. Construction commenced and expected to be completed by April 2020. Technical studies are required for the remaining portion of the line between Pensulo-Nakonde to the Zambian border. Funding will be provided by the World Bank. Commissioning of Zambia-Tanzania Interconnector is expected in 2021.

Challenges: A number of challenges were encountered within the process of implementation of the ZTK project, and these included the following:

- The project experienced time over-runs due to expiry of agreements before project completion, and the projects had to await updating of the agreements; and
- The different utilities, ZESCO of Zambia and Tanzania Electric Supply Company (TANESCO) of Tanzania, employed separate and different processes, and this tended to slow down the project.

2 *Mozambique–Malawi Interconnector*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Feasibility
Countries involved: Mozambique and Malawi
Private Sector Involvement: No

Progress to date

The two utilities, *Electricidade de Moçambique* (EDM) of Mozambique and Electricity Supply Corporation of Malawi (ESCOM) of Malawi, undertook the project on their own, albeit requested the PAU to support the negotiation process, and commercial terms are under discussion at this stage. The draft feasibility study was presented in 2016 and discussions were held with various stakeholders. The technical and environmental feasibility studies were completed in 2017 and the project is expected to be commissioned by 2021.

Challenges: In terms of challenges, although the project has moved swiftly in recent years, it encountered challenges in the initial years as the two countries could not agree on the apportionment of costs for the project. This delayed the project for several years.

3 *Mozambique–Zambia Interconnector*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Mozambique and Zambia
Private Sector Involvement: No

Progress to date

The Feasibility Studies are in progress with funding from the NEPAD Infrastructure Project Preparation Fund (IPPF) administered by the AfDB together with contributions from the United States Trade and Development Agency (USTDA) and the national utilities, EDM and ZESCO. The Consultants contract for technical studies was signed on 15 January 2018 for a period of 18 months to August 2019. The Environmental and Social Impact Assessment (ESIA) contract was signed on 23 January for 15 months until 30 March 2019. The project is progressing well with the Preliminary Design Report submitted and training activities for the utilities in progress. The consultation for stakeholders for development ESIA feasibility studies was completed in 2017. The feasibility study was completed and the final technical design report was expected by December 2018 and discussions are ongoing with various stakeholders.

4 *DRC-Zambia Interconnector (Kolwezi, DRC – Solwezi)*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Feasibility
Countries involved: DRC and Zambia
Private Sector Involvement: No

Progress to date

In order to increase regional integration, the plan is to build another transmission interconnector between DRC and Zambia. The technical and environmental bids were evaluated and consultants were appointed for the technical studies. Two separate consultants are undertaking the ESIA study and work is ongoing on the preliminary design and Inception Report. The feasibility study for the 200 KM line is being funded by the NEPAD IPPF and the utilities (Société Nationale d'Électricité [SNEL] of DRC and ZESCO of Zambia) are required to meet 5 percent of the costs as a condition for AfDB support. The technical consultant commenced activities under a contract signed on 17 January 2018 for 18 months to August 2019. The ESIA contract was signed on 10 July 2018. Final feasibility study was expected to be completed in May 2019.

Challenges encountered: Given that there are two separate consultants for the ESIA Study, delays obtain and are occasioned by lack of accountability as the different parties continue to lay the blame on the other. Ideally the project moves much faster if one consultant is appointed as there are clear lines of accountability and obligations. There is also time lost where the funder is mobilising additional funding to meet the financial shortfalls. In addition, the contract has not been effected pending an advance payment from the AfDB. This has resulted in a 5 month delay on the ESIA activities. The delay will also impact the technical consultant and result in additional costs on the project. There will be a need to align the two contracts once the ESIA contract is effective. Final feasibility study is expected to be completed in November 2019. Furthermore, experience has shown that delays were also encountered in view of undertaking a feasibility study ahead of a pre-feasibility study.

5 *Malawi – Zambia Interconnector*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Malawi and Zambia
Private Sector Involvement: No

Progress to date

The feasibility and Environmental and Social Impact Assessment (ESIA) studies are in progress and will be completed in May 2018. The project is planned for commissioning in 2019.

6 *Zimbabwe – Zambia – Botswana – Namibia (ZIZABONA) Interconnector*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Feasibility
Countries involved: Zimbabwe, Zambia, Botswana and Namibia
Private Sector Involvement: No

Progress to date

The Project has been repackaged into three (3) components. Component A (Zimbabwe - Zambia), component B (Zimbabwe - Botswana) and component C (Zambia - Namibia). Negotiations with the African Development Bank (AfDB) for funding the Zimbabwe part are underway. ZESA completed Environmental and Social Impact Assessment (ESIA). ZESA completed the process of aligning technical feasibility to environmental studies, which will inform final technical specifications and Engineering, Procurement and Construction (EPC) documents. The project has reached financial closure and awaiting commitment from potential investors. Zimbabwe is at an advanced stage of discussions with AfDB for

the funding of component A where a total of US$30 million is being considered. As for component C, Namibia-Zambia, the SAPP is mobilising resources for project funding through the PAU.

Challenges encountered: The project experienced challenges on account of the need to mobilise resources for the different components. In addition, the project also dragged on arising from the need to update environmental studies.

7 *Botswana – South Africa (BOSA Interconnector)*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Botswana and South Africa.
Private Sector Involvement: No

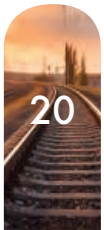
Progress to date
The SAPP secured funding for project preparation from the infrastructure Investment Programme of South Africa (IIPSA), which is supported by the EU and managed by DBSA. A Transaction Advisor has been appointed to carry out detailed feasibility studies and prepare the project to reach financial closure. The consultant presented the commercial structure and available options. The ESIA study is yet to be approved for BOSA. The project is planned for commissioning in 2022.

Challenges encountered: The termination point of the project in South Africa has not been finalised due to an interdependence on the environmental authorisation of another Eskom project on the Mahikeng Substation (expected in April 2019). However, the Environmental Authorisation (EA) for BOSA in South Africa has been obtained and an appeal was lodged against the record of decision by the South African Heritage Resources Authority (SAHRA). Delays on the project will be as a result of the EA appeal process as well as decision on the terminal point of the line in SA. The Project has been extended to be completed in December 2019. The Inter-Utility Memorandum of Understanding (IUMOU) for the BOSA project has been drafted and not yet signed by the utilities.

8 *Angola – Namibia (ANNA) Interconnector*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Feasibility
Countries involved: Angola and Namibia
Private Sector Involvement: No

Progress to date
The SAPP secured funding from the Infrastructure Investment Programme of South Africa (IIPSA), Norwegian Agency for Development Cooperation (NORAD) and Swedish International Development Cooperation Agency (Sida). A Transaction Advisor was appointed on 01 March 2017 to carry out detailed feasibility studies and prepare the project to reach financial closure. A pre-feasibility report was approved by the stakeholders in September 2017 covering the options and line route selection, market analysis, preliminary design, pre-feasibility financial analysis and cost estimates and potential commercial structures. The Final Scoping Report was delivered in March 2018. The project is currently discussing the business case, commercial structure and financial model. A major issue for the environmental survey on the 366km interconnector is demining of the line route and this could potentially delay the project. The Inter-Governmental Memorandum of Understanding (IGMOU) between the governments of Angola and Namibia was prepared and signed by ministers responsible for energy in November 2018. The IUMOU was signed on 29 November 2018 at the SAPP Executive Committee Meeting held in Maputo. A pre-feasibility report was approved by the stakeholders covering the options and line route selection, market analysis, preliminary design, pre-feasibility financial analysis and cost estimates and potential commercial structures.



Challenges encountered: There is need to undertake a de-mining exercise in Angola, which constitutes 80 percent of the route, and parts of the Namibia portion, and this is causing delays to the project. There was a funding gap on the project after securing US$500,000 from the PPDF, with a financing gap of US$1.4 million, and DBSA has since secured additional funding.

9 *Madagascar Backbone Transmission*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Madagascar.
Private Sector Involvement: No

Progress to date
Madagascar is the largest SADC Island State with a population and surface area greater than some of the mainland Member States. Madagascar is planning to build transmission lines to connect the north and the southern part of the country. The project feasibility has been completed.

10 *Mozambique – Tanzania Interconnector*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Mozambique and Tanzania
Private Sector Involvement: No

Progress to date
The project requires a bankable feasibility study for the construction of a 400kV transmission line of approximately 700km from Namialo in Mozambique via Metoro to Mtwara in Tanzania. Technical and environmental studies have been conducted by EDM for part of the line in Mozambique (200km) from Namialo to Metoro. The project requires studies for the remaining 500km from Metoro to Mtwara. The IUMOU signed by EDM and TANESCO in 2015 expired in 2017 and was renewed on 27 June 2018 for another 2 years to enable project development. SAPP is assisting the project to mobilise funding for the feasibility studies and submitted the project to the AfDB for NEPAD IPPF funding. The next steps include the signing of the IGMOU which will facilitate the mobilisation of funding.

11 *Mozambique – Zimbabwe – South Africa (MOZISA) Interconnector*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Mozambique, South Africa and Zimbabwe
Private Sector Involvement: No

Progress to date
The project will be phased for the ease of implementation into two components comprising Mozambique-Zimbabwe (MOZI) and Zimbabwe-South Africa (ZISA). The project preparatory funding is available from SADC PPDF through DBSA for feasibility studies. The IGMOU was signed by Mozambique and Zimbabwe on 21 June 2016 and by South Africa in June 2017. The utilities are in the process of redefining the two components and prepared terms of reference to procure consultants to prepare Bankable Feasibility Studies, with assistance from SAPP. The application for funding has been resubmitted to the DBSA for consideration under the SADC PPDF or IPPSA facility.

12 *Batoka Gorge Project*

RIDMP Project: Yes* **STAP Project:** No* **Status:** Feasibility

* Only the water development component was listed as a STAP project in the original RIDMP document.

Countries involved: Zambia, Zimbabwe

Private Sector Involvement: Yes. The intention is to ensure private sector shareholding.

Progress to date

The SAPP PAU has been requested to assist with the project. The Batoka Gorge Project is a bilateral organisation owned on a 50/50 basis by Zambia and Zimbabwe, and was established by Acts of Parliament passed in the two countries in 1987. The two governments mandated the Zambezi River Authority (also jointly owned by the two countries) to coordinate the project. Studies have been undertaken since 1972 on the project, and have been updated in recent years. The projected generation capacity is 2400MW (1200MW on each side). The project will be developed as a publicly financed and owned dam, spearheaded by separate financing, construction and operations Special Purpose Vehicles (SPVs). Three preparatory studies are ongoing — feasibility study, Environmental and Social Impact Assessment study and CFTAS, financed by the World Bank and Zambezi River Authority (ZRA). AfDB is the lead agency for resource mobilisation. The total estimated cost for the project is US$3.6 billion.

13 *Kudu Gas*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Feasibility

Countries involved: Namibia

Private Sector Involvement: No

Progress to date

The project went through preliminary evaluation and early assessments suggested the gas option did not appear to be financially viable and the project was suspended until further notice.

14 *Inga III Hydro-Power Project*

RIDMP Project: Yes* **STAP Project:** Yes* **Status:** Feasibility

* Listed as both a water and energy project in the original RIDMP STAP document

Countries involved: DRC

Private Sector Involvement: No

Progress to date

Plans for development of the scheme are advanced, and an agreement between DRC and South Africa to tap from the energy to be produced was in place. The likelihood for power purchasing agreement is high, therefore the need to have other Member States to sign IGMOU. The project will require the cooperation of power wheeling transit states, namely Zambia, Zimbabwe and Botswana for south-bound power transmission.

15 *Zambia, Kafue-Livingstone transmission line Upgrade from 220kV to 330kV*

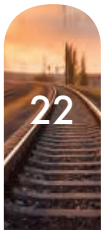
RIDMP Project: No **STAP Project:** No **Status:** Completion

Countries involved: Zambia

Private Sector Involvement: No

Progress to date

This project, which is not part of the RIDMP STAP, has been completed.



16 *Hwange Power Station Units 7 and 8*

RIDMP Project: Yes | **STAP Project:** Yes | **Status:** Implementation
Countries involved: Zimbabwe
Private Sector Involvement: No

Progress to date

Hwange Power Station units 7 and 8 expansion project was launched in August 2018. The project has commenced with a number of civil works now underway. The project will cost US$1.48 billion and is expected to deliver an additional 600MW, 300W from each unit. The project encompasses construction of a 600MW base-load power plant and high voltage transmission lines spanning over 350km from Hwange to Insukamini and Marvel sub-stations in Bulawayo. The scheme is one Zimbabwe's power projects financed under a loan facility from China Export Import Bank. State power utility Zimbabwe Electricity Supply Authority (ZESA) Holdings, through its generation arm, is implementing the project. Construction work is already taking shape, particularly geo-technical surveys and excavations for the main power island buildings. Work in progress also includes the construction of campsites, project offices, detailed geo-technical investigations, excavations for boiler and turbine house, setting out of the transmission lines, excavations for the sub stations and finalisation of detailed designs. The project is expected to be completed in early 2022.

Challenges encountered: As a result of the developments, evacuation of families whose places of residence fall under construction sites has already started. Consequently, ZESA's power generation unit, the Zimbabwe Power Company (ZPC) will resettle the affected households, especially those situated along transmission lines. This may cause delays.

17 *Gokwe North Power Station*

RIDMP Project: Yes | **STAP Project:** Yes | **Status:** Feasibility
Countries involved: Zimbabwe
Private Sector Involvement: Yes

Progress to date

The project owner is RioZim, a private mining entity in Zimbabwe. In 1989 the Zimbabwe government granted a coal mining license to Sengwa Colliery, a company owned by RioZim and Rio Tinto. The Sengwa coalfield has an estimated 538 million tonnes of coal reserves. The project was awarded by ZESA to RioZim in 2010. The project aimed at selling power to ESKOM in South Africa and Namibia Power Corporation (NamPower) in Namibia as off-takers. Zimbabwe would have to upgrade its transmission network to export the power. Efforts have been underway to secure partners for the project given its initial cost of US$4 billion. RioZim engaged a number of potential partners to execute the project. In May 2018 proposals from six companies to participate in its US$1.2 billion Sengwa power project were being evaluated, then set to a capacity of 700MW. The company was reportedly in talks with mainly Chinese groups, including National Energy Investment Group. Negotiations with potential partners are ongoing.

Challenges Encountered: The key challenge with this project was the need to secure a partner for the project, and the process has taken a long time. The project also relies on agreements with off-takers, currently ESKOM of South Africa and Nampower of Namibia.

18 *Kalungwishi Hydro Power Station*

RIDMP Project: Yes | **STAP Project:** No | **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: Yes

Progress to date
This project is purely a private sector project on Build Own and Operate (BOO) basis. It requires an estimated US$650 million. The Lunzua Power Authority is the implementing entity.

Challenges encountered: Potential lending institutions are requesting for the government to safeguard payments under the Power Purchase Agreement to be signed with the national utility, ZESCO.

19 *Luapula Hydro Power Station*

RIDMP Project: No | **STAP Project:** No | **Status:** Feasibility
Countries involved: Zambia, DRC
Private Sector Involvement: No

Progress to date
Project requires an estimated US$1.5 billion to undertake. To date, US$3.5 million has been accessed from the SADC PPDF. IGMOU signed between Zambia and DRC in July 2018. Project being implemented by ZESCO (Zambia), SNEL (DR Congo) and the SAPP PAU.

Challenges encountered: Delays in approval of procurement evaluation reports by financiers. Delay in engagement of Environmental and Social Impact Assessment consultant arising from delayed issuing of "No objections" by financiers. Need to arrange required financing through cooperating financing institutions. In addition there is need to improve communication among all key stakeholders.

20 *Lufubu Hydro Power Station*

RIDMP Project: No | **STAP Project:** No | **Status:** Feasibility
Countries involved: Zambia
Private Sector Involvement: Yes

Progress to date
This is a moderate priority national project being implemented in Zambia and requires US$610 million to complete. This project is purely a private sector project on Build Own and Operate (BOO) basis. Negotiations are underway for the Implementation Agreement between the developer (Lufubu Power Company) and the government.

Challenges encountered: Potential Financiers to the project are requesting for hydrological and geotechnical risks to be borne by the government which the latter is still analysing.

21 *Mulembo-Lelya Hydro Power Station*

RIDMP Project: No | **STAP Project:** No | **Status:** Pre-feasibility
Countries involved: Zambia
Private Sector Involvement: Yes

Progress to date
The project is purely a private sector driven initiative. A major challenge for the developer has been the lack of funding to undertake a detailed feasibility study. However,

funds for the feasibility study have been secured from the European Union through the SADC PPDF. The developer now expected to ensure the feasibility study is completed as soon as possible. Negotiation for the Implementation Agreement with the government of Zambia is in progress.

22 *Kikongwe Hydro Power Station*

RIDMP Project: No **STAP Project:** No **Status:** Pre-feasibility
Countries involved: Tanzania
Private Sector Involvement: No

Progress to date
Tanzania is currently at final stages of contract negotiations with M/S Studio Pietrangeli of Italy for award of Consultancy Services Contract to undertake Project Feasibility Study.

Challenge encountered: Project developers have not accessed funds from the SADC PPDF and highlight the long application process that one has to go through to be considered for support under this facility.

23 *Rufiji Hydro Power Station*

RIDMP Project: Yes **STAP Project:** No **Status:** Financial Closure
Countries involved: Tanzania
Private Sector Involvement: No

Progress to date
Project contracts for the construction of the project were signed in December 2018. Contractor is moving to site. The government has allocated US$305 million in the 2018-2019 national budget towards the financing of this project. The project is being implemented through the Tanzania Electric Supply Company Limited (TANESCO), Songwe River Basin Development Commission (SRBDC) as well as the Ministries of Water and Energy.

24 *Ruhudji Hydro Power Station*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Tanzania
Private Sector Involvement: No

Progress to date
The review of the project feasibility study is ongoing. The project is being implemented by TANESCO, as well as the Ministries of Water and Energy.

25 *Rumakali Hydro Power Station*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Tanzania
Private Sector Involvement: No

Progress to date
The review of the project feasibility study is ongoing. The project is being implemented by TANESCO and the Ministries of Water and Energy.

Challenges encountered: A major challenge for the power station has been an inability to access on-time project financing.

26 *Songwe Hydro Power Station*

RIDMP Project: Yes* **STAP Project:** No* **Status: Project** Design

*Only the water development component was listed as a STAP project in the original RIDMP document.

Countries involved: United Republic of Tanzania, Malawi

Private Sector Involvement: No

Progress to date

Convention for the establishment of the Songwe River Basin Commission was ratified by the Governments of Tanzania and Malawi in 2017 and came into force in July 2018. The Tanzania-Malawi Joint Permanent Commission for Cooperation (JPCC) concluded in March 2017 in Lilongwe, Malawi gives the Songwe River Basin Development Project a high priority status.

27 *2nd Alaska Sherwood 400KV line*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Project Design

Countries involved: Zimbabwe

Private Sector Involvement: No

Progress to date

Grant funding received from DBSA for detailed feasibility studies. Transaction Advisor appointed for the Alaska-Sherwood line project preparation where detailed feasibility study, ESIA and legal work streams are to be done. SADC PPDF is committed to support Pre-feasibility study of the project with US$ 2.1 million.

28 *Africa GreenCo*

RIDMP Project: No **STAP Project:** No **Status:** Project Design

Countries involved: All Member States

Private Sector Involvement: Yes. Africa GreenCo is a private sector-led initiative.

Progress to date

Africa GreenCo (AGC) is designed to make much more than a single project bankable. AGC aims to attract investments into the SADC power sector by setting up a regional intermediary creditworthy off-take and power trading company to interpose between buyers and sellers in order to mitigate the credit risks associated with the current lack of creditworthy of off-takers and promote regional integration. Facility agreement was completed by end of May 2018. The Final Scoping Report done in April 2019.

29 *Development of Guidelines and Standards for Renewable Energy Projects and Funding and Incentive Strategy, in Mauritius*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility

Countries involved: All Member States

Private Sector Involvement: No

Progress to date

The Final Scoping Report expected by June 2019.

30 *SADC Regional Gas Market and Infrastructure Study*

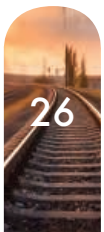
RIDMP Project: No **STAP Project:** No **Status:** Pre-feasibility

Countries involved: All Member States.

Private Sector Involvement: No

Progress to date

Final Pre-Feasibility Report produced in the last quarter of 2018.



3.4. Status of Water Projects

SADC Member States recognise the importance of investing in the water sector to improve the quality of life of citizens and spur economic development. Findings by the Water Diagnostic Study show that the SADC region retains only 14 percent of the available renewable water resources, of which 10 percent is retained in the Kariba and Cahora Bassa dams. This means that the rest of the total available renewable water resources return to the ocean. SADC has identified eight STAP projects worth US$13.48 billion designed to expand the region's water infrastructure and retrieve more of this water.

The RIDMP STAP assessment reviewed 19 water projects, five of which are listed under STAP, eight of the projects being non-STAP RIDMP projects, with six projects falling outside both RIDMP and STAP. The picture painted by the review process indicates that water-sector infrastructural projects have also fallen behind schedule, with the majority at the project design phase and none of the projects having been completed.

The status of the Short Term Action Plan projects in the water sector is highlighted as follows.

1 *Lomahasha / Namaacha Cross-Border Water Supply Project*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Project Design
Countries involved: Eswatini, Mozambique
Private Sector Involvement: No

Progress to date

Lomahasha/Namaacha (Mozambique and Eswatini) The negotiation for various financing instruments is underway between KfW, SADC Secretariat and the Fund Management Agency – DBSA. The Lomahasha/Namaacha Project feasibility study was completed in 2015 with the funding support of *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ). The EIA was revised and completed in March 2018, with the funding support of GIZ and has been approved by the environmental authorities in each country. Phase I of the Project entails mainly a water transfer pipeline from Simunye in Eswatini to the Lomahasha border, and crossing the water into the Mozambican town of Namaacha. This will also include the construction of a booster pumping station, water storage reservoirs and construction of water treatment works. Phase I of the Project has received funding support from the Regional Fund for Water and Basic Sanitation, to the tune of €8.0 million, while the total cost for the project is US$13.8 million project. The Member States will also fund 10 percent co-financing to the Project, plus tax exemption. Expected year of completion was 2017.

2 *Lesotho Highlands Water Project Phase II*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Project Design
Countries involved: Lesotho and South Africa
Private Sector Involvement: No

Progress to date

Feasibility Studies completed for transfer scheme, and designs underway while access infrastructure being developed. For Hydropower Component, feasibility related studies (e.g. market studies and environmental studies) are under implementation with World Bank support. The transfer scheme is progressing well. Lesotho Highlands Development Authority (LHDA) and Trans-Caledon Tunnel Authority (TCTA) are driving implementation, and assisted the two countries with resource mobilization. Construction of access infrastructure (e.g. roads and backbone services infrastructure) is underway. The Hydropower scheme market studies and socio-economic studies are underway. This is the component that has received intensive resource mobilization support from the SADC Secretariat through showcasing at various investor conferences.

3 *Lesotho Lowlands Water Supply Scheme Unit (LLWSSU), Phase II*

RIDMP Project: Yes | **STAP Project:** No | **Status:** Project Design
Countries involved: Lesotho
Private Sector Involvement: No

Progress to date
Successful undertaking of LLWSS Feasibility Study was done in 2004 with EU funding, and successful completion of Detail Designs in 2008 with EU funding. Implementation of Zone 4 and Part of Zone 5 (Metolong Dam Water Supply Project) done in 2016 with KBOSE funding (Kuwait, BADEA), but still to secure a technical advisor to assist LLWSSU in the implementation of LLWSS with funding from EU. Review and update of designs is ongoing with funding from the World Bank. The scheme consists of more than 765km of pipeline and more than 81 large reservoirs and 57 small reservoirs.

4 *Songwe River Basin Development Project*

RIDMP Project: Yes | **STAP Project:** Yes | **Status:** Project Design
Countries involved: Tanzania and Malawi
Private Sector Involvement: No

Progress to date
Detailed designs for the project have been completed with AfDB support, and investment finance is being sought. Some funding support has been received to deal with the institutional and river basin sustainability components. Feasibility studies and detailed design were completed with AfDB support. Interim institution for joint river basin management has been established and is due to be launched soon. SADC Secretariat is assisting countries with resource mobilisation.

5 *Inga III Hydropower Project*

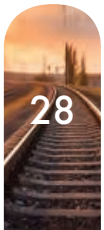
RIDMP Project: Yes | **STAP Project:** Yes | **Status:** Pre-feasibility
Countries involved: DRC
Private Sector Involvement: No

Progress to date
Plans for development of the scheme are advanced, and an agreement between DRC and South Africa to tap from the energy to be produced was in place. The likelihood for power purchasing agreement is high, therefore there is need to have other Member States to sign IGMOU.

6 *Bulawayo Zambezi Water Project*

RIDMP Project: Yes | **STAP Project:** No | **Status:** Project Design
Countries involved: Zimbabwe
Private Sector Involvement: No

Progress to date
Phase I of the project entails the construction of the Gwayi/Shangani Dam, with a hydropower generating capacity of 15MW. Phase I of the project is in progress. The government of Zimbabwe allocated US$35 million to the project in this financial year, and Phase I of the project is about 33 percent complete. Phase II of the project entails construction of the Zambezi (Deka) – Gwayi/Shangani pipeline. Bulawayo will be principally supplied from the Gwayi/Shangani Dam, and the Zambezi water supply will top up the requirements for Bulawayo as and when required. The power generated at Gwayi/Shangani will be used to pump water from the Zambezi. Phase III of the project entails the construction of the Gwayi/Shangani Dam–Bulawayo Pipeline. In terms of challenges, the project is unable to draw water upstream of the Victoria Falls as this would impact on the tourism activities of Victoria Falls as well as Livingstone Power



Station. Further, much more power will be required for pumping from upstream of the Falls, and the unit cost of water landed in Bulawayo would be too high and the project would not be feasible.

7 *Nakonde – Tunduma Joint Cross Border Water Supply Sanitation Project*

RIDMP Project: Yes **STAP Project:** No **Status:** Project Design
Countries involved: Zambia and Tanzania
Private Sector Involvement: No

Progress to date
This project requires funding to carry out the feasibility stage of the project. The budget for the project is €395,000.

8 *Kasumbalesa Water Supply Scheme*

RIDMP Project: Yes **STAP Project:** No **Status:** Project Design
Countries involved: DRC and Zambia
Private Sector Involvement: No

Progress to date
This project is still at the funding level required to carry out the feasibility stage of the project.

9 *Beitbridge Cross-Border Water Supply Project*

RIDMP Project: Yes **STAP Project:** No **Status:** Pre-feasibility
Countries involved: South Africa and Zimbabwe
Private Sector Involvement: No, although a framework to attract private sector is being considered.

Progress to date
The project requires a feasibility study to be done. The Zimbabwe government has invested in the upgrading of Beitbridge water treatment works. The works will treat 4000m³/day and was commissioned on 10 August 2017. However, various funding options have been considered, including loans, Build-Own/Operate-and-Transfer (BOT/BOOT), and PPPs for the completion of the outstanding works. Repayment of financing would come from sales of water. Outstanding works include development of a pipeline from the existing Zhove dam to the treatment works. The overall project proposes to also transfer water to the South African Side of the border. Therefore, the first step of this project is to have a detailed feasibility report done which will highlight the actual infrastructure development that is required for the joint project. Zimbabwe and South Africa are currently working on a joint application for funding of the technical feasibility studies from DBSA.

10 *Chirundu Cross-Border Water Supply Project*

RIDMP Project: Yes **STAP Project:** No **Status:** Pre-feasibility
Countries involved: Zambia and Zimbabwe
Private Sector Involvement: No

Progress to date
Conducting feasibility studies for the upgrade of water and wastewater treatment facilities and supply reticulation networks (in Chirundu border towns - Zambia & Zimbabwe), as well as physical/spatial town planning studies. Design and construction of water supply and wastewater management infrastructure is needed. Existing systems were recently rehabilitated on Zimbabwean side, but need upgrade of treatment facilities. Feasibility study for water supply infrastructure was completed for Zambia side of the border. Physical planning concerns are noted in both border towns. Estimated project cost is US$75 million.

11 *Lesotho–Botswana Water Transfer Project*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Pre-feasibility
Countries involved: Botswana and Lesotho
Private Sector Involvement: No

Progress to date
The project, which seeks to channel water from Lesotho to Botswana, is still at the concept stage.

12 *Waste Water Treatment and Separation Network Projects in 9 Towns*

RIDMP Project: No **STAP Project:** No **Status:** Pre-feasibility
Countries involved: Madagascar
Private Sector Involvement: No

Progress to date
Involves Feasibility Studies and construction of Wastewater Treatment Station, and collecting/separation network system for nine large towns (6 Provinces, Nosy-Be, Taolagnaro and Antsirabe) in Madagascar. It also includes a water re-use scheme to increase availability of water to urban and peri-urban communities in the different towns. Planned soft-infrastructure projects on policy enhancement in the country that will help with standardization of practice and improved water management in the country. Ongoing initiatives on capacity-building and awareness-raising to communities on Water, Sanitation and Hygiene (WASH) offered by other service providers will provide sustenance capacity to project infrastructure to be developed.

13 *Congo Basin Water Transfer Project*

RIDMP Project: No **STAP Project: No** **Status:** Feasibility
Countries involved: DRC, Angola, Botswana, Namibia, Zambia, Zimbabwe
Private Sector Involvement: No

Progress to date
To determine the feasibility of transferring water from the Congo River or its tributaries to water deficient SADC countries and make preliminary design of the most optimum option. It will investigate aspects such as (a) possibility of augmenting the supply in the Okavango River to meet Angola's, Botswana's and/or Namibia's demands, (b) possibility of water transfer from the Congo River Basin via the Kassai 1 Pump Scheme to an upper tributary of the Zambezi River, (c) the Kassai 2 and Luapula 2 Schemes, as these would enable larger volumes of water (in excess of 100 m^3/s) to be transferred from the Congo River Basin into the Zambezi River Basin, and (d) generate information to inform preliminary designs, e.g. detailed topographical and geological maps; updated estimates and information on future water requirements and land-use; and information regarding existing and planned hydropower installations.

14 *Construction of a new dam at Riviere des Anguilles*

RIDMP Project: No **STAP Project:** No **Status:** Project Design
Countries involved: Mauritius
Private Sector Involvement: No

Progress to date
The project seeks to respond to requirement for water supply in the southern and south-western region for both potable and irrigation needs. The project entails construction of a rock-fill dam with cut-off wall and asphalt sealing with storage capacity of 14 million m^3 and an annual yield of 50 million m^3. Construction period is 3.5 years. Feasi-

bility studies completed, but a consultant is required for design review and construction supervision

15 *Enhancement of Storage Capacity for La Gogue Reservoir and Upgrading of La Gogue Distribution System*

RIDMP Project: No **STAP Project:** No **Status:** Feasibility
Countries involved: Seychelles
Private Sector Involvement: No

Progress to date
Project consists of (a) Dam raising to provide additional storage capacity, (b) Construction of new treatment plant for increased reliability in supply in the densely populated Mahe area, and (c) Construction of new treatment works at La Gogue (4000 m^3/day) to serve the area from Anse Etoile to Sorento. Studies are on options of increasing of reservoir capacity.

16 *Ressano Garcia Weir – Water Supply*

RIDMP Project: Yes **STAP Project:** No **Status:** Feasibility
Countries involved: Mozambique and South Africa
Private Sector Involvement: No

Progress to date
Preliminary studies and designs implemented with World Bank support on the Mozambican side.

17 *Kunene Transboundary Water Supply and Sanitation Project*

RIDMP Project: No **STAP Project:** No **Status:** Implementation
Countries involved: Angola and Namibia
Private Sector Involvement: No

Progress to date
Construction for some of the project components has commenced. Feasibility study for pipeline planned.

18 *Kazungula Town Water Supply and Sanitation Project*

RIDMP Project: No **STAP Project:** No **Status:** Project Design
Countries involved: Zambia
Private Sector Involvement: No

Progress to date
Project has received funding from Regional Water Fund, and a Financing Agreement is in place. Climate Resilient Infrastructure Development Facility (CRIDF) supporting with detailed designs & upstream infrastructure rehabilitation. Zambia is to provide 10 percent counterpart funding.

19 *Ruhuhu Valley Irrigation Scheme*

RIDMP Project: Yes **STAP Project:** No **Status:** Pre-feasibility
Countries involved: Tanzania
Private Sector Involvement: No

Progress to date
Pre-feasibility study for both irrigation and hydropower components completed with CRIDF support. Scope expanded to include hydropower component.

Table 3.6. **Overview of ICT**

Project Status	Number	Percentage
Pre-feasibility	1	6
Feasibility	0	0
Project Design	0	0
Financial Closure	0	0
Project Implementation	14	82
Project Completion	2	12
Total	**17**	**100**

3.5 Status of ICT Projects

All ICT projects listed under RIDMP STAP are not country specific but regional in nature. In this context, some Member States may have moved further than others. However, the status depicted in this section looks at the overall picture for each project. The overview of ICT projects is summarized in Table 3.6.

The Table shows that 82 percent of regional ICT projects are being implemented. This is a good sign in that it indicates significant action being taken by Member States to pursue such projects to completion. However, as with the sectors reviewed in the preceding sections, ICT projects are also lagging behind original timeframes established under the RIDMP STAP policy document. The ICT projects assessed in terms of this study are outlined below to show the extent of progress in greater detail.

1 *Digital Terrestrial Television Migration Support to SADC Member States*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date

Five Member States (Eswatini, Malawi, Mauritius, Namibia and Tanzania) have completed SADC DTT Migration while eight Member States (Angola, Botswana, Lesotho, Mozambique, Seychelles, South Africa, Zambia and Zimbabwe) are at an advanced stage and were making all efforts to complete Digital Terrestrial Television (DTT) migration by the end of 2018. The project status of Member States was confirmed at the SADC Digital Sound Broadcasting (DSB)-DTT Content Development and Post DTT Migration Workshop held from the 13-16 March 2019 in Gaborone, Botswana, where the Draft SADC Post DTT Migration Plan and a Framework for its implementation; and Draft Framework for DSB and DTT Content Development and Production were developed. A Draft SADC Post DTT Migration Plan and a Framework for its implementation, and a Draft Framework for DSB and DTT Content Development and Production were developed.

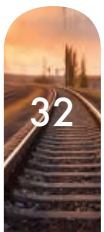
The SADC Television Bouquet has now been taken as a SADC Television Channel. The SADC TV Channel involves streaming of content online using Content Hub Sharing. The programme name is "Eyes on SADC" and is currently a 30-minute news programme until it becomes a full channel. A successful demo of the SADC TV Channel was made by the National Broadcasting Corporation (NBC) to the SADC ICT Ministers at their meeting in September 2018 in Windhoek, Namibia. Six Member States (Botswana, Eswatini, Malawi, Mauritius, Namibia and Zambia) are contributing content for the SADC TV Channel. However, all SADC Member States may download the "Eyes on SADC" Programmes to broadcast on their public broadcasting networks. The SADC TV Channel initiative will be continuously refined until it is finally launched in August 2019.

2 *SADC Regional Information Infrastructure*

RIDMP/STAP Project: Yes **Status:** Completed
Countries involved: All SADC Member States
Private Sector Involvement: Yes

Progress to date

All SADC Member States have set up cross-border transmission links using optical fibre technology as envisaged under the SADC Regional Information Infrastructure (SRII) project, a regional programme for developing regional optic fibre links, terrestrial backhauls, backbone access networks, migration to all IP Network and connection to the International Internet backbone via the submarine cable networks. This intervention has allowed Member States that are landlocked (Botswana, Eswatini, Lesotho, Malawi, Zambia and Zimbabwe) to connect to the submarine cables on the east and/or west coast of Africa.



3 *Ensuring Confidence and Security of ICT Networks and Services*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date

Four Member States (Malawi, Mauritius, South Africa and Tanzania) have established and operationalised their National Cyber Incident Response Teams (CIRTs). Eight Member States (Angola, Botswana, DRC, Eswatini, Lesotho, Mozambique, Namibia and Zimbabwe) have completed the International Telecommunication Union (ITU) CIRT Assessment and are awaiting the enactment of appropriate legislation to operationalise their National CIRT. All National CIRTs are to be operational by December 2019. The SADC Expert Group on Public Key Infrastructure (PKI) and CIRT, established in March 2018 in Pretoria, South Africa and chaired by Mauritius, has developed a Draft Framework for Setting up the SADC Regional CIRT. Member States are to submit their expression of Interest for hosting the SADC Regional CIRT. The process is ongoing for two Member States (Madagascar and Seychelles). Malawi is currently designing its CIRT. Five Member States (DRC, Mauritius, Mozambique, Seychelles and South Africa) are using some form of PKI.

4 *Regional/National Internet Exchange Points (NIXPs/RIXPs)*

RIDMP/STAP Project: Yes **Status:** Completed
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date

To date, all SADC Member States have established at least one National Internet Exchange Point (NIXP). SADC shall undertake an assessment on the performance and types of setup on all NIXPs. Going further, a SADC Roadmap was developed to guide the process to establish the SADC Regional Internet Exchange Points (RIXPs). Two NIXPs from South Africa and Zimbabwe were awarded contracts to be supported technically and financially, developed and transformed into SADC RIXPs. Both SADC RIXPs completed the transformation since 31 December 2018. An assessment of the performance of all NIXPs is ongoing.

5 *SADC Regional and National Integrated Broadband Infrastructure*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: Yes

Progress to date

The SADC Regional and National Integrated Broadband Infrastructure Study Project, which consists of the National and Cross Border ICT Broadband Study and Rural ICT Broadband Study was completed. The study highlighted the International, Inter-SADC, Intra-SADC, national urban and rural broadband connectivity gaps and proposes three baskets of ICT projects for Member States to pursue:

- Priority Projects for regional and national pro-broadband policies, legislations and regulatory readiness gaps;
- Priority Projects to address regional and national core infrastructure, interconnection and last mile readiness gaps; and
- Priority Projects Basket to address national broadband adoption readiness gaps.

SADC Guidelines on Development of National Broadband Plans which were approved in June 2015 are to assist Member States to develop their own National Broadband Plans. Broadband targets for SADC Member States have been set and the Communications Regulators Association of Southern Africa (CRASA) has been tasked to undertake the monitoring of these broadband targets. A report is produced by CRASA at the end of every year. SADC Guidelines on Rural Broadband were developed by CRASA in 2017 to assist with accelerated deployment of broadband networks in rural and remote areas. CRASA monitors the broadband targets set by SADC ICT Ministers via an online database containing 81 Indicators which include postal and broadband.

6 *Shared Satellite Network Development for Connecting Remote Research Centres, Schools, Meteorology Stations, Wildlife Conservation Posts, Border Posts, Clinics, Emergency Services and Postal Branches.*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date
A concept note has been developed to undertake a SADC Shared Satellite Benchmarking Exercise, for which a questionnaire has been created. A SADC Shared Satellite Task Force was set up in March 2018 in Pretoria, South Africa to complete the proposal for a Shared Satellite system. A Capacity Building Workshop ITU Radio Regulation and Rules and Procedure on Satellite Networks was held in January 2018 in Sandton, South Africa. ITU has been requested to undertake an analysis for a new satellite slot for the SADC Region under a 16 composite beam in both the BSS and FSS Planned Bands. ITU has indicated that it would not be easy to pool together the various planned resources of all SADC Member States because they are located at different orbital positions. The SADC Satellite Expert Committee was established in March 2018, Pretoria, South Africa, chaired by South Africa, and has developed a Draft Framework for SADC Shared Satellite which would facilitate the development of a SADC Regional Shared Satellite Programme that harnesses the potential of the satellite technology to provide satellite communication services and products to fulfil the economic, political, social and environmental needs of SADC.

7 *Implementation of Postal Code Addressing Systems*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date
Most SADC Member States are implementing their own Postal Code Addressing System. Universal Postal Union (UPU) is working with the Post Office in 12 SADC Member States (except Angola, Comoros, DRC and Madagascar) deploying an e-commerce solution. This will enable SADC Citizens to purchase goods and services from abroad or become online merchants, thus contributing towards the economic development of the region.

8 *Extension of National Postal Branch Networks to more locations, especially rural areas*

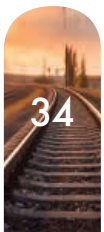
RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date
A study was undertaken by the UPU with the objective of developing a model to be used by all Postal Operators in Africa in sourcing funds to address this Electrification and Internet connectivity problem. Awaiting funding from UPU and Pan African Postal Union (PAPU) to trial run the SADC Electrification and Internet Connectivity Project. Some SADC Member States are part of this global pilot project.

9 *Improving Use of ICTs in Postal Systems*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date
A study was undertaken by the UPU with the objective of developing a model to be used by all Postal Operators in Africa in sourcing funds to address this Electrification and Internet connectivity problem. Awaiting funding from UPU and Pan African Postal Union (PAPU) to trial run the SADC Electrification and Internet Connectivity Project. Some SADC MS are part of this global pilot project.



10 *Regional Global Monitoring System for Mail Quality of Service Measurement*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date

Convened workshops to monitor and evaluate the implementation of the Regional Postal Project by Postal Operators. All projects are being implemented by Member States and are on track. Ten Member States are on the Global Monitoring System (GMS). The idea was to implement the Postal Quality of Service (QOS) Programme for SADC Member States to achieve high UPU certification ranking. SADC Postal Operators committed to ensure that 75percent attain gold and the rest silver awards by the next UPU. The QOS programme is on schedule. CRASA and the UPU are also finalising their proposal regarding the use of the Global Monitoring System (GMS) to monitor and analyse the Postal Quality of Service on specific links between SADC Member States for regulatory purposes. This project utilizes the existing GMS equipment already installed by the Postal Operators to give CRASA members the ability to monitor and report the mail transmission times between the different Member States along with diagnostic information that pin-points any areas of delay.

11 *Establishment of a Regional Centre of Excellence for ICT and Postal Systems*

RIDMP/STAP Project: Yes **Status:** Feasibility
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date

Research on existing Centres of Excellence in SADC that meet the SADC Guidelines on the Centre of Excellence will stimulate formulation of a SADC Framework for ICT Centre of Excellence. Project is envisaged to commence by 2020.

12 *Development and Review of Enabling Policy and Regulatory Environment for Maximising ICT Infrastructure Deployment*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date

Ongoing and many guidelines, policies, model regulations and laws have been released which SADC Member States are domesticating. An assessment is underway on the Transposition on SADC Model Law on Data Protection in SADC Member States. The objective of this assessment is to review, with a view to enhancing, the existing SADC harmonised data protection framework across all SADC Member States, mapping existing or planned laws in each Member State in line with best principles contained in international frameworks.

13 *Development of the SADC ICT Observatory*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date

SADC in collaboration with the United Nations Economic Commission for Africa (UNECA) has developed Phase 1 of the SADC ICT Observatory Implementation Strategy. This was approved in September 2017 in KwaZulu Natal, South Africa. A workshop was held in December 2018 to initiate Phase 1 of the SADC ICT Observatory and start

preparing for Phase 2. The SADC ICT Observatory has 88 Core and 28 Extended ICT indicators. These consist of both supply-side and demand-side indicators. In order to assist Member States in conducting their annual surveys, templates have been prepared at the SADC level for Member States to modify and utilise. The proposed data collection schedule will be from 1 July to 15 September annually. The Terms of Reference for National Focal Point Persons for the SADC ICT Observatory have been developed and Member States are in the process of nominating their Focal Point Persons and Alternates for this project.

14 ICT Capacity Building and Content (Broadcasting and Universal ICT Education Programme)

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date

SADC and the Southern African Broadcasting Association (SABA) held two Digital Broadcasting Forums (September 2017 in Namibia and October 2018 in South Africa) where there were several capacity-building presentations on stimulating the creation of local content. This is now to become an annual event. The SADC Digital Sound Broadastinig (DSB) / Digital Terrestrial Television (DTT) Content Development and Post DTT Migration Workshop was convened in Gaborone, Botswana. Two SADC Capacity Building Workshops on the ITU satellite applications and rules of procedures (January 2018 and February 219) and the ITU Satellite Applications. These events are SADC Secretariat's ongoing effort on capacity building as per request from Member States.

15 Regional/National e-Services and Applications Development (e-commerce & e-post)

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date

Under the e-Post project, two strategies have been developed — the SADC Postal Strategy (2017-2020) and the SADC Postal Financial Inclusion Strategy to reduce the number of adults in Southern Africa that are formally unbanked. All Member States are implementing an e-commerce project supported by the Universal Postal Union (UPU) entitled Operational Readiness for E-commerce (ORE). UPU is working with the Designated Post Offices in all 16 SADC Member States deploying e-commerce platforms but they are at different levels of implementation.The ORE provides an enabling environment for the SADC Citizens to purchase goods and service from abroad or become online merchants, thus contributing towards the economic development of the region.

A SADC e-Commerce Payment Gateway Survey was undertaken which assisted to build capacity and assess the e-commerce payment gateway solutions that Member States have implemented. The survey resulted in the formulation of several recommendations as the way forward including: the need for collaboration of relevant stakeholders in a coordinated manner on this complex and crosscutting matter, capacity building and the development of an e-commerce regulatory framework to create a conducive and sustainable environment to promote export of SADC goods and services. This would facilitate the establishment of optimum e-commerce platforms, including the e-Commerce Payment Gateways that reap maximum benefits and make SADC competitive.

16 *Promote Improved Collaboration, Information and Knowledge Sharing Between Research Centres*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date
Collaboration with Science Technology Innovation (STI) Unit on the development of the Cyber Infrastructure, which involves the deployment of National Research and Education Networks (NRENs) for the interconnectivity and collaboration between research centres.

17 *Development of ICT Equipment Manufacturing, Software and Applications*

RIDMP/STAP Project: Yes **Status:** Pre-feasibility
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date
Project is stalling due to an inability to secure funding or partners to launch the project. Private sector involvement could help ensure project take-off.

3.6 Status of Meteorology Projects

The Meteorology Sector Master Plan component identified areas in which upgrades or installation to such infrastructure will have the greatest benefit, as follows:

- Regional Observation Networks for strengthening the capacity of observation networks and monitoring stations to allow for more accurate weather prediction;
- Global Telecommunications Systems for transferring Data and disseminating weather and climate information through dedicated networks to ensure warning systems are effective; and,
- Regional Climate Data Processing Centre for providing climate information, prediction and climate services, early warning and related applications to support sustainable development in the SADC region.

In terms of progress, investments have been made in meteorological infrastructure, equipment and institutional capacity-building to enhance the capacity of Member States to monitor climate and environment phenomena for early warning and disaster preparedness. The investments have been made through the Institutional Support to African Climate Institutions (ISACIP) and Monitoring of Environment for Security in Africa (MESA) projects. The ISACIP project which ended in December 2016 has provided support for strengthening of Regional Early Warning System (EWS) equipment at the Climate Services Centre (CSC) and National Hydro-Meteorological Services (NHMSs) through the following interventions:

- Equipment to enhance the EWS comprising telecommunication equipment and an integrated computer system for the CSC was purchased, delivered and commissioned in March 2017;
- Automatic Weather Stations (AWS) were delivered and installed in 10 Member States. The installation has inter-connected the SADC CSC with the NMHSs. This has also helped to enhance the capacity of Member States to collect meteorological observational data; and,
- Even with the contribution of the project to complement existing capacity, the observation stations are still inadequate to effectively generate credible, quality information as the stations are spread beyond the recommended 30km radius. As a result, the number of climatic reports produced annually by the SADC region remains below the global average as indicated Table 3.7.

Table 3.7. **Inadequacy of Climatic Reports in the SADC Region**

Type of report produced	Number of reports produced in SADC per year	reports produced globally per year
Temperature reports	9	71
Climatology reports	19	73
Synoptic reports	39	80

Source: SADC Infrastructure Directorate

The following is an assessment of the status of meteorology projects.

1 *African Monitoring of the Environment for Sustainable Development (AMESD) Project*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Completed
Countries involved: Angola, Botswana, Namibia, Lesotho, Malawi, Mozambique, South Africa, Swaziland, Tanzania, Zimbabwe and Zambia
Private Sector Involvement: No

Progress to date
The AMESD Project in support of SADC region funded by EU is now complete. Its successor, the Monitoring for Environment and Security in Africa (MESA) is also now complete.

2 *Monitoring for Environment and Security in Africa (MESA) Project*

RIDMP Project: Yes **STAP Project:** No **Status:** Completed
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date
MESA programme is the successor to AMESD. This project, which was being implemented in all Member States, has been completed and is now closed.

3 *Strengthening of Observation Network in the SADC region*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: Angola, Botswana, DRC, Lesotho, Malawi, Mozambique, Namibia, Swaziland, Zimbabwe, and Zambia
Private Sector Involvement: No

Progress to date
Project seeks to procure Automatic Weather Stations (AWS) for data observation and collection to improve the accuracy of products. To date, 10 automatic weather stations have been delivered to MS under the Institutional Support Project to the African Climate Institutions (ISACIP) framework.

4 *Climate for Development (Clim-Dev) Africa Project*

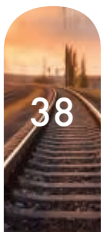
RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date
The Southern African Regional Climate Information Services for Disaster Resilience Development (SARCIS-DR) was launched in June 2018 at the SADC Secretariat in Gaborone, Botswana. This project is a component of the continent-wide Satellite and Weather Information for Disaster Resilience in Africa (SAWIDRA) project in the SADC region. The key Project Management staff has been recruited.

5 *Improvement of Meteorological Telecommunications and Communication Systems*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: All Member States
Private Sector Involvement: No

Progress to date
The project aims to improve Meteorological telecommunications and communication systems for rapid data collection, exchange and dissemination of data and information. The procurement of Automatic Message Switching Systems (AMSS) telecommunication equipment for SADC CSC in compliance with the World Meteorological Organisation (WMO) Regional Climate Centre (RCC) requirement is ongoing.



6 *Improvement of Technical Capacity Levels*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date
Procurement of High Performance Computers for climate monitoring, climate scenario development and early warning system for SADC-CSC is ongoing.

7 *Strengthening the Institutional Capacity of the NMSs Institution*

RIDMP Project: Yes **STAP Project:** Yes **Status:** Implementation
Countries involved: All SADC Member States
Private Sector Involvement: No

Progress to date
Support training of Class 1 Meteorologists in climate modelling and related sciences. SADC has awarded eight student scholarships at the five Universities in the SADC region (University of Cape Town (two PhD), University of Stellenbosch (one MSc and one PhD), University of Lilongwe (one MSc and one PhD), University of Botswana (one BSc)).

3.7 Status of Tourism Projects

In terms of the tourism sector, RIDMP STAP had identified 15 projects worth an estimated US$324 million. These projects were to be completed within the 2012 to 2018 RIDMP STAP implementation timeframe. However, as indicated below, the majority of the projects are still being implemented, itself a reflection that the tourism sector is also lagging behind in terms of targeted project completion deadlines. Evidently, new *modus operandi* is required to ensure the completion of regional infrastructure development initiatives.

1 *Upgrading of the Sani Pass Road from Himeville to Mokhotlong (Maloti/Drakensberg TFCA)*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: Lesotho, South Africa
Private Sector Involvement: No

Progress to date
The upgrading began in late 2016. There are three stages to the upgrade, two already in operation and a third in the planning stage.

2 *Upgrading of the Barberton to Piggs Peak Road (Lubombo TFCA)*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: Eswatini, South Africa
Private Sector Involvement: No

Progress to date
Project completed on the South African side. Work is in Progress on the Eswatini side.

3 *Construction of the Dinosaur Interpretative Centre at Golden Gate National Park (Maloti- Drakensberg TFCA)*

RIDMP/STAP Project: Yes **Status:** Implementation
Countries involved: South Africa
Private Sector Involvement: No

Progress to date
Construction began in July 2018. Project due for completion within the first quarter of 2020.

4 *Upgrading of Joel's Drift to Monontsa Pass Road and Border Post (Maloti-Drakensberg TFCA)*

RIDMP/STAP Project: Yes
Countries involved:
Private Sector Involvement:
Status: Implementation
Lesotho
No

Progress to date
Project is nearing completion.

5 *Upgrading of Ha Mpiti to Sehlabathebe National Park via Ramatseliso's border gate (Maloti- Drakensberg TFCA)*

RIDMP/STAP Project: Yes
Countries involved:
Private Sector Involvement:
Status: Implementation
Lesotho
No

Progress to date
Soil-turning ceremony to mark beginning of construction phase held in December 2018.

6 *Upgrading of Aliwalskop to Telebridge Road (Maloti-* Drakensberg TFCA)

RIDMP/STAP Project: Yes
Countries involved:
Private Sector Involvement:
Status: Implementation
Lesotho
No

Progress to date
Ground-breaking ceremony to mark beginning of construction phase held in May 2018. The upgrade involves tarring 9.5 km of road.

7 *Usuthu Gorge (Mambane) Community Conservation Area Fencing*

RIDMP/STAP Project: Yes
Countries involved:
Private Sector Involvement:
Status: Feasibility
Eswatini
No

Progress to date
Project is at feasibility stage. Draft consultation and basic assessment report was released in October 2018.

8 *Development of Marketing Tools and Systems, as well as Building Capacity to Create Awareness for the Uni-Visa*

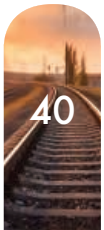
RIDMP/STAP Project: Yes
Countries involved:
Private Sector Involvement:
Status: Pilot phase complete
Member States for the pilot phase are Angola, Mozambique, Namibia, Eswatini and Zimbabwe
No

Progress to date
The pilot project was a success in Zambia and Zimbabwe. The two countries have been urging other Member States in the region to fully adopt this initiative.

9 *Development and Marketing of Trans-National Tourism Products for the Vanilla Islands States*

RIDMP/STAP Project: Yes
Countries involved:
Private Sector Involvement:
Status: Implementation
Mauritius and Seychelles
No

Progress to date
The Indian Ocean island nations of Seychelles, Mauritius, Madagascar, Comoros, Reunion, Mayotte and Maldives initiated a joint travel brand under the banner 'Vanilla Islands' in 2010. This is an ongoing project.



3.8 Impact of Implementation of the SADC RIDMP STAP and Other Projects

The report seeks to identify and document some of the positive impacts arising from the implementation of the SADC RIDMP. Figure 3.1 depicts the benefits derived from the implementation of infrastructure.[1] An attempt is made to highlight the impact that the implementation of some of the RIDMP STAP has brought about to Member States.

According to the Southern African Power Pool, energy trade has increased from about 500 MW (1% of operating capacity) in 2012[2] to about 14,500 MW (24% of operating capacity) by 2018, following the implementation of both generation and transmission/interconnector projects. Second, operating capacity has increased from 51,702 MW in 2013 to 60,719 MW in 2018[3], an increase of 17.4 percent. Regional power demand rose from about 53,800 MW to 58,100 MW between 2013 and 2018. In addition, access to power by the population has increased significantly as is shown in the Figure 3.3. The figure shows that access to electricity increased between 2011 and 2016 especially for Tanzania, Eswatini, Lesotho, Madagascar, Botswana and Mozambique, which ranged from 4 percent to 18.6 percent over the five years considered.

Figure 3.2 shows the impact of implementation of ICT on fixed telephone lines per 100 inhabitants in the different countries. Only Mauritius experienced an upsurge in the number of fixed lines per 100 inhabitants, by 4.8 percent between 2012 and 2017, with others are facing a decline. The decline is attributed to subscribers abandoning fixed lines in favour of mobile cellular due to its convenience.

This is confirmed by the growth of mobile cellular in terms of number of mobile cellular subscribers per 100 inhabitants as shown in Table 3.8 and Figure 3.3. Significant increases in mobile penetration were experienced by Seychelles (29%), Mauritius (27%), Tanzania, DRC (14%) and Eswatini (12%). Surprisingly, some countries recorded a decline in cellular subscription between 2012 and 2017, with Angola and Botswana each dropping by 6 percent while Madagascar declined by 5 percent.

Five SADC Member States have mobile penetration rates in excess of more than 100 percent – Botswana (141.41%), Mauritius (145.40%), Namibia (105.78%), Seychelles (176.58%) and South Africa (156.03%), which means more than one line per person. Mobile cellular penetration now ranges from 34.1 percent to 176.6 percent. The SADC average mobile cellular penetration is 72.2 percent compared to the world average of 107 percent.

Examples of absolute figures are as follows: Angola – 12,785,109 (2012) and 13,323,952 (2017); Botswana – 3,081,726 (2012) and

Figure 3.1. SADC Countries Access to Electricity % for 2011 to 2016 and Variance (2011-2016)

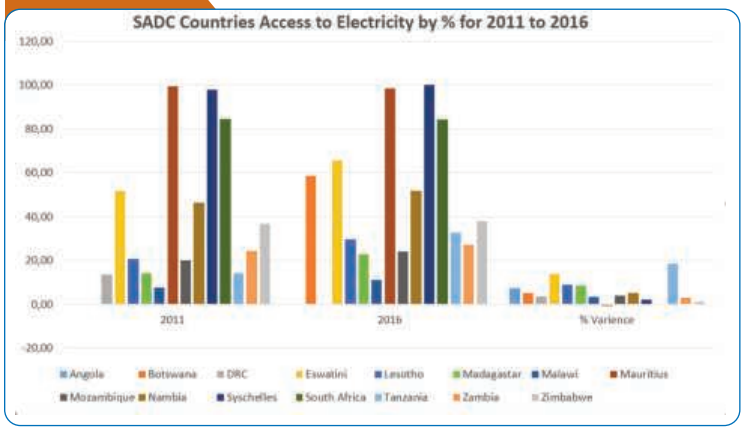
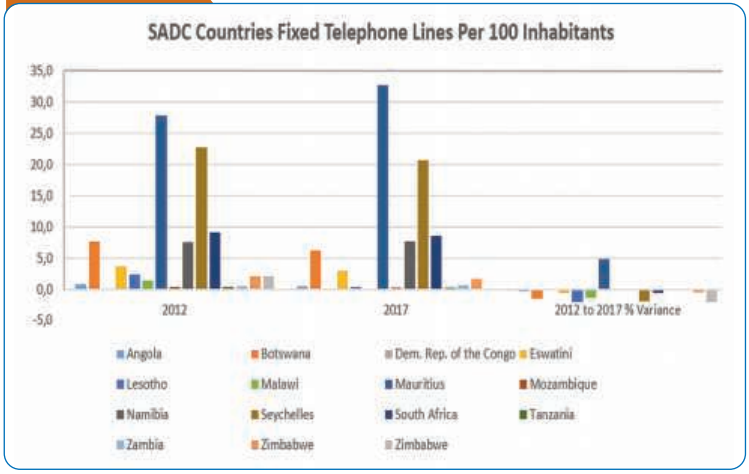


Figure 3.2. SADC Countries Fixed Telephone Lines Per 100 Inhabitants 2012-2017 and Variance



Source: World Bank Development Indicators Data Base, 2019

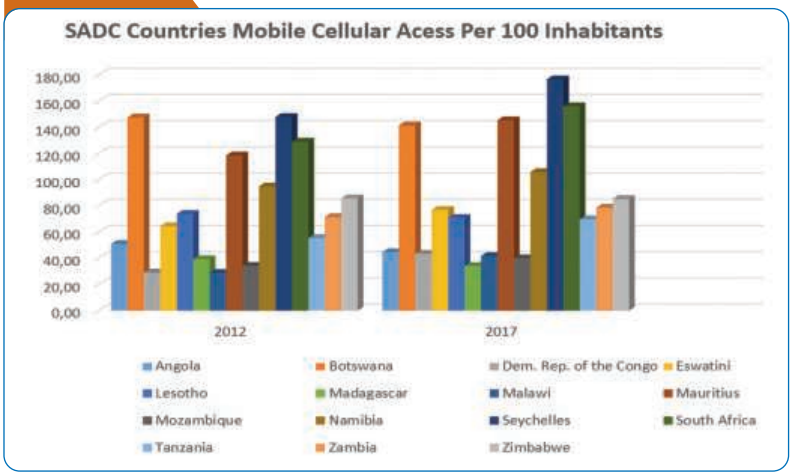
Table 3.8. SADC Countries Mobile Cellular Per 100 Inhabitants

Country	2012	2017	Variance %
Angola	50.94	44.73	-6
Botswana	147.50	141.41	-6
DRC	29.13	43.49	14
Eswatini	64.50	76.94	12
Lesotho	73.92	70.90	-3
Madagascar	39.28	34.14	-5
Malawi	28.87	41.74	13
Mauritius	118.54	145.40	27
Mozambique	34.29	40.03	6
Namibia	94.83	105.78	11
Seychelles	147.89	176.58	29
South Africa	129.05	156.03	27
Tanzania	55.46	69.72	14
Zambia	71.60	78.61	7
Zimbabwe	85.25	85.25	0

Source: World Bank Development Indicators Data Base, 2019

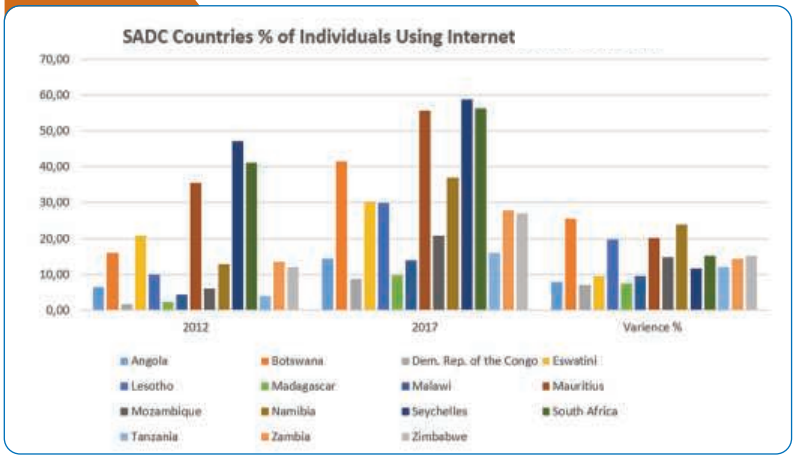
[1] Source: ACBF Final Report on Regional Trade Policy Guidelines for Cross Border Infrastructure, Ndlovu, B, 2018
[2] Record of SADC Ministers responsible for Energy, 2012
[3] Record of SADC Ministers responsible for Energy, 2018

Figure 3.3. SADC Countries Mobile Cellular Access per 100 Inhabitants 2012 – 2017 and Variance (2012 – 2017)



Source: World Bank Development Indicators Data Base, 2019

Figure 3.4. SADC Countries % of Individuals Using Internet 2012 – 2017 and Variance (2012 – 2017)



Source: World Bank Development Indicators Data Base, 2019

3,240,589 (2017); Madagascar – 8,778,600 (2012) and 8,730,499 (2017); Zimbabwe – 12,613,935 (2012) and 14,092,104 (2017).

Also of significance is the increase in percentage population with access to the internet from 2012 to 2017, as shown in Figure 3.3. The figure suggests that most SADC Member States experienced significant increases in internet access by population, with Botswana highest at 25.4%, followed by Namibia (23.9%), Mauritius (20.1%), Lesotho (19.8%), and Zimbabwe (15.1%). DRC had the lowest growth (6.9%) followed by Angola (7.8%).

For the five Water projects:

- Namaacha-Lomahasha Transboundary Water Project has been completed.
- Songwe River Basin Multi-Purpose Dam Project and the Bulawayo-Zambezi Water Transfer Project are at implementation stage.
- Batoka Gorge Hydro Power Project and the Lesotho Highlands Water Transfer Project (Phase II) are currently at studies level.

For Meteorology, given the installation of meteorological observation systems across the region, with support from the World Meteorological Organisation (WMO), SADC states have improved their severe weather forecasting, enabling them to distribute climate products to related stakeholders in good time, and this is essential support due to the severe weather variability arising from the climate change phenomena. This has also enabled the authorities to put in place appropriate mitigation measures against weather adversities in good time, to prevent loss of life and damage to property.

Progress with STAP projects in the Trans Frontier Conservation Areas has been slow, as the appetite for investment has not grown.

It can be concluded that the rollout of STAP projects ushers in significant benefits to both business and citizens. Concerted efforts need to be made to initiate and conclude the outstanding projects for the purposes of economic gain and human security across the region.

KEY FINDINGS ON THE FINANCING OF PROJECTS

Without access to funding, the developmental aspirations outlined in the Regional Infrastructure Development Master Plan (RIDMP) and the Short Term Action Plan (STAP) will not be achieved. This means that the mobilisation of funds by SADC Member States must receive the much-needed priority.

In terms of the original estimated budget for RIDMP STAP projects, Member States were expected to raise about US$64.32 billion to finance the 98 projects falling within the ambit of the short term plan. These budgetary requirements for STAP have been tabulated below.

As shown in the Table 4.1, the sector requiring the largest amount of funding is ICT, at an estimated US$21.4 billion. The transport sector is next, with an estimated requirement of US$16.65 billion. This is followed by the water sector, which has an amount of US$13.48 billion attributed to its projects. The energy sector comes fourth, with a total requirement of about US$12.27 billion. Projects estimated amounts below the billion mark are the tourism and meteorology sectors, each requiring US$324 million and US$192 million respectively.

Table 4.1. **Original Budget Estimates for STAP projects**

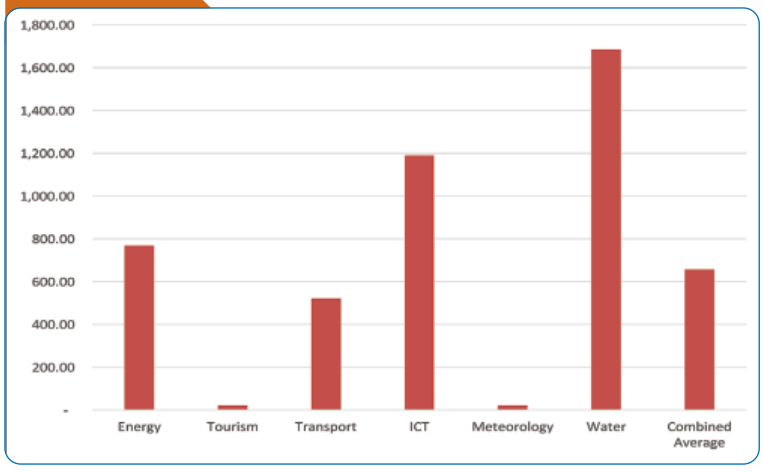
Sector	Number of Projects	Project Estimated Cost (US$ billion)	Average Cost Per Project (US$ million)
ICT	18	21.40	1 190
Transport	32	16.65	520
Water	8	13.48	1 690
Energy	16	12.27	770
Tourism	15	0.324	23
Meteorology	9	0.19	21
Total	**98**	**US$64.32 billion**	**US$656 million**

Source: RIDMP, 2012

4.1. The Capital Intensive Nature of Infrastructure Projects

From the budget estimates shown in Table 4.1, it is clear that infrastructure development projects are capital intensive given that a combined US$64.32 billion was required to fund projects listed as part of the first phase of RIDMP. The picture becomes more vivid when one looks at the average cost per STAP project which is about US$656 million. The water sector has the highest average cost per project, at about $1.69 billion. The ICT sector comes next with an average US$1.19 billion per project, while energy and transport follow at US$770 million and US$520 million respectively. Meteorology and tourism have the least cost per project each at an average US$20 million. This position is illustrated in the chart:

Figure 4.1. Average Cost per Project (US$ million)



4.2. Status of Financial Mobilisation Efforts for Infrastructure Projects

With an average cost per project of US$656 million for 98 STAP projects, it is clear that the region must devise innovative funding models to prop-up its infrastructure development initiatives. The study sought to investigate the funding adequacy levels for STAP. The Table below provides a summary of some of our findings based on the projects reviewed.

Table 4.2. **Financial Status of Projects Submitted by Member States**

Category	Percentage
Facing funding challenges	70
Funds partly secured	41
National Budget allocations for project	12
Accessed funds from the SADC PPDF	6
Project a national priority	97
Incorporated in national development plans	94
Adoption of user pays principle/cost reflective tariffs	30

From Table 4.2, it is clear that funding challenges have been a major drawback towards the implementation of SADC infrastructure projects. Findings show that at least 70 percent of the reviewed projects are struggling to raise the required levels of funding. In addition, only 41 percent of the projects have partially secured funding and amounts raised are inadequate to complete projects.

A major contradiction highlighted in the study is that 97 percent of the projects reviewed have been described by Member States as being of high priority status with 94 percent of the projects having been incorporated in national development plans. This unfortunately is not reflected in national budget allocations, where just 12 percent of the projects have received funds through national budget financing. This calls into question the level of priority that regional infrastructure projects are actually being given by SADC Member States.

In 2006, SADC established the Project Preparation and Development Facility (PPDF), whose purpose is to provide regional capacity for the development of bankable infrastructure projects. Member States are being encouraged to access this facility to enable them to expedite the implementation of planned projects. During the period under review, an amount of US$16,324,000 had been approved through replenishments from the European Union and KfW. However, Table 4.2 shows that only six percent of the total projects reviewed had accessed funds from the PPDF, largely due to the scarcity of funding in the envelope, and none a contribution from Member States.

The PPDF is to be transformed into a window of the Regional Development Fund, with all member States contributing to this fund. There is therefore a need for Member States to contribute to the PPDF envelope in order to give more traction to RIDMP projects and ensure a comprehensive pipeline of projects benefitting all Member States.

The Funding Mismatch between Member States and Financing Partners

There is a funding mismatch between Member States and funding partners. On one hand, Member States cite the lack of funding for infrastructure projects whether national or regional. As shown in Table 4.2, about 70 percent of projects assessed noted that they are facing resource mobilisation constraints. On the other hand, funding institutions such as the DBSA and the AfDB are looking for bankable projects to invest in. This mismatch can be attributed to the following factors:

- The debt sustainability or affordability by the SADC Member States, especially Member States without headroom for further borrowing.
- Gaps in project information that make such projects unattractive to potential financing partners.
- The absence of an online platform where project information can be uploaded and marketed for the benefit of potential investors or financiers.
- The limited capacity within Member States to prepare bankable projects or fiches that attract the attention of financial partners or investors.
- Failure by Member States to leverage project preparation and development facilities within the region and at the continental level, such as the Africa Development Fund (ADF).

These limitations would need to be overcome, to enable the region to unlock the much-needed funding for regional infrastructure projects.

KEY FINDINGS ON PRIVATE SECTOR PARTICIPATION

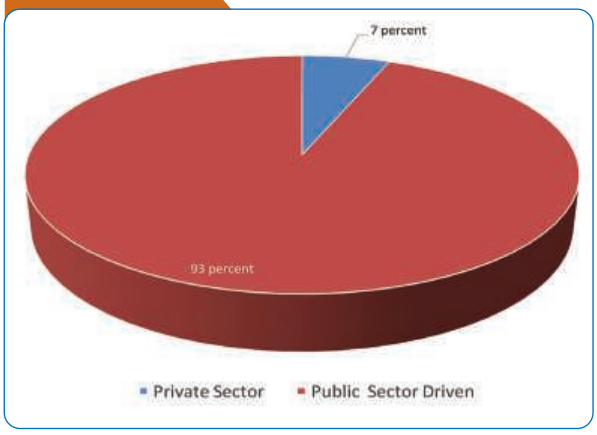
The success of Regional Infrastructure Development Master Plan (RIDMP) is partly rooted in the ability of SADC Member States to attract private sector investments for infrastructure projects. The RIDMP policy document advocates for the adoption of Public Private Partnership (PPP) participation in regional infrastructure development. The policy document also recommends the elimination of state monopolies in key sectors, so as to encourage greater private sector participation. Some Member States have invited the private sector to partner with government in terms of investments in infrastructure, either as sole investors or in the form of PPPs.

Closely linked to private sector participation is the creation of an enabling environment, which promotes investment flows towards planned projects. A key enabler in this regard would be the adoption of the "user-pays principle" and the adoption of cost-reflective tariffs for infrastructure development. Such an environment would guarantee investors a favourable return on infrastructure investments.

5.1. Status of Private Sector Participation in the Region

Indications are that the level of private sector participation remains below expectations, particularly in infrastructure development. Out of 134 projects assessed in this study, only nine have private sector participation. The nine comprise two ICT projects, six energy projects, and one transport project. As shown in Figure 5.1, the level of private sector participation represents seven percent of the total projects assessed, far from the expectation of Member States.

Figure 5.1. Private Sector Participation



Related to this is the observation that 30 percent of projects reviewed in this study have adopted the "user-pays principle" and or cost-reflective tariffs, mainly in the transport and ICT sectors. This means that the investment climate remains largely unattractive to private capital. Findings show that while the region has started the process towards cost reflective tariffs in the energy sector, this is yet to be fully realised across board. Some Member States have adopted the user-pays principle on road transport through the adoption of tolling systems.

The correlation between competitive tariffs and private sector involvement cannot be ignored. In the energy sector, SADC adopted the principle of cost-reflective tariffs as far back as 2004. However, most countries are yet to migrate to cost-reflective electricity tariffs. Only Namibia has reached cost-reflective energy tariffs ahead of the revised deadline of 2019.

SADC Member States are therefore urged to continue making steps to ensure that pricing structures do indeed attract the much-needed private capital.

5.2. Private Sector Participation in Zambia's Energy Sector

Notwithstanding the challenges described above, it is noted that some energy projects being implemented in Zambia have attracted private sector participation. Most electrical power in Zambia is operated by ZESCO, the state-owned utility. However, the sector is opening up to Independent Power Producers (IPPs) for on-grid and off-grid transactions, creating opportunities for private sector investment. Table 5.1 shows some of the energy projects in which the private sector is involved in Zambia.

Table 5.1. **Zambia Energy Projects with Private Sector Involvement**

Project Name	Level of Private Sector Involvement	Private sector shareholding %	Challenges
Batoka Hydro-electricity Power Plant	Private sector to come in as equity partners in the SPV for the Batoka North Bank Power Station (Zambia). Also through use of project bonds for implementation of the project.	49	This project is being implemented together with Zimbabwe. Private sector agreements are yet to be concluded but the intention is for the private sector to own 49 percent of the project.
Kalungwishi Hydro Power Project	This is a private sector project on Build Own and Operate (BOO) basis. The Lunzua Power Authority is implementing the project.	100	The tariff for electricity is not fully cost reflective. The potential financiers are requesting Government guarantees from the developer.
Lufubu Hydro Power Station	This project is private-sector driven on the basis of Build Own and Operate. Negotiations are underway for the Implementation Agreement between the developer (Lufubu Power Company) and the Government.	100	The tariff for electricity is not fully cost reflective. The potential financiers are requesting Government guarantees from the developer.
Mulembo-Lelya Hydro Power Station	This project is also private-sector driven.	100	The tariff for electricity is not fully cost reflective. The potential financiers are requesting Government guarantees from the developer.

As shown in Table 5.1, the private sector will hold 100 percent of shareholding with respect to the Mulembo-Lelya, Lufubu and Kalungwishi hydro projects. For the Batoka plant, the private sector will own 49 percent of the shareholding in the Special Purpose Vehicle (SPV) that is being set up to implement the project.

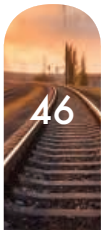
The Council of Ministers drafted a split commercial structure in which the dam will be owned by the Zambezi River Authority and the power plants will belong to Special Purpose Vehicles (SPVs). On the Zambian side, this SPV is known as the Bakota North Bank Power Corporation Limited. On the Zimbabwe side, the SPV is known as the South Bank Power Corporation. A summary of the ownership and financing structure for the Batoka project is outlined in Table 5.2.

Table 5.2. **Batoka Project Proposed Shareholding Structure**

Shareholding Split	Ownership	Financing
Shareholding Split	Ownership	Financing
North Bank Power Plant	North Bank Power Co.	Public/Private
South Bank Power Plant	South Bank Power Co.	Public/Private
Dam	ZRA	Public

5.3. Challenges to Private Sector Participation in Zambia's Energy Sector

Despite this private sector involvement in Zambia's energy sector projects, constraints are mainly relate to the fact that the country is yet to fully implement cost-reflective tariffs, a condition that has a bearing on the sustainability of such projects. The Zambian government is considering the implications of adopting cost-reflective tariffs following a Cost of Service study conducted in 2018 for the electricity sector. The country is currently using a long-term, tariff increase plan which is under implementation.



In order to safeguard the interests of private sector investors, Zambia is promoting the use of Power Purchase Agreements (PPAs) between ZESCO and project owners. The idea here is to guarantee the private project developer a market for their electricity output, over a specified period of time. Ideally, this should reduce the risks of associated energy projects, and ultimately attract funding. This has not been smooth however, with some potential lending institutions requesting for the government of Zambia to guarantee payments under the PPAs to be signed with the national utility ZESCO.

5.4. Other Examples of Energy Projects with Private Sector Involvement

Two other energy projects in terms of this study, with private sector involvement are:

- Africa Green Co, a private-sector led initiative which seeks to attract investments into the region's power sector by setting up an intermediary that mitigates credit risk. Africa Green Co has established its office in Zambia. However, all SADC Member States are able to benefit from this initiative.

- The Gokwe North Power Station in Zimbabwe is a project owned by a private mining concern known as Rio Zim. The project is aimed at selling power to Eskom in South Africa and Nampower in Namibia as off-takers. Efforts are underway to secure partners for the project given its initial cost of USD4 billion. As discussed in Chapter 3, this project is yet to secure funding partners and agreements with off-takers are yet to be concluded.

5.5. Private Sector Participation in the Transport Sector

In the transport sector, one out of 52 projects assessed has private sector involvement, representing two percent of total transport sector projects. This project is the construction of the Standard Gauge Railway from Mtwara- Mbamba railway with spurs to Liganga and Mchuchuma in the United Republic of Tanzania. The feasibility study for PPP investment is underway.

5.6. Private Sector Participation in the ICT Sector

In the ICT sector, two projects have attracted the private sector — the SADC Regional and National Integrated Broadband Infrastructure Project, as well as the SADC Regional Information Infrastructure (SRII). This shows that the private sector is indeed interested in the implementation of priority projects to improve broadband access in both rural and urban areas within the region, when conditions are right.

5.7. Impediments to Private Sector Participation in Regional Infrastructure Projects

In the other sectors of water, tourism and meteorology, not a single project has attracted the attention of the private sector. The reasons for lack of interest from the private sector include the following:

- ***Regional infrastructure projects as a public service.*** Some regional infrastructure projects are mainly a public service in nature and have therefore not been able to attract the private sector. This is largely the case for water and meteorology projects.
- ***Lack of a conducive and enabling environment.*** Some Member States do not have the regulatory or policy environment through which the private sector can participate.
- ***Absence of cost-reflective tariffs.*** In some regional projects, such as the energy sector, most Member States are yet to adopt tariffs that ensure the viability of private sector investments.
- ***Challenges of structuring PPPs.*** Some respondents from Member States indicated that they lack the capacity with which to structure Public Private Sector Partnerships (PPPs).

KEY FINDINGS ON POLICY, REGULATORY AND INSTITUTIONAL FRAMEWORKS

The RIDMP policy document emphasises the importance of enabling policy, regulatory and institutional frameworks to drive infrastructure projects in the region. At the SADC level, relevant protocols, model policies and institutional frameworks have been developed for adoption and domestication by Member States. The study therefore enquired as to the level at which Member States have put in place supportive policy and institutional frameworks to ensure the success of infrastructure development initiatives.

Table 6.1 summarises the findings from the study in terms of the policy and regulatory framework within the region in relation to infrastructure projects.

Table 6.1. **Summary of Policy and Regulatory Findings**

Category	Percentage
Project in National Plans	98
Institutional support in place	99
Governance structures in place	98
Policies and regulatory framework in place	97
Monitoring and evaluation frameworks in place	92

6.1. Incorporating Projects in National Development Plans

Respondents were asked if the infrastructure projects that they are undertaking form part of the national development plans of respective Member States. The purpose of this enquiry is to establish the extent to which targeted projects form part of the development policy frameworks of the respective countries.

Findings show that 132 out of 134 projects submitted for review had indeed been incorporated into national development plans, representing 98 percent of the total. Only two projects, namely the Lufubu and Mulembo Hydro Power projects, which are being implemented in Zambia, have not been incorporated into that country's development plan. The reason given is that both projects were initiated after Zambia's national development plan had already been finalised. Notwithstanding this position, both projects are still considered as top priority by Zambian authorities.

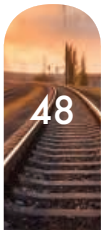
6.2. Institutional Support

In terms of the institutions required to ensure the success of infrastructure projects, 99 percent of the respondents noted that these were adequately in place. Findings show that where institutional structures are reported to be in place, these tend to take the form of government ministries, utility companies and in some cases implementing agencies established specifically for targeted projects.

Table 6.2. **Institutions Established by Zambia to Oversee Infrastructure Projects**

Energy Projects	Transport Projects
Lunzua Power Authority (Implementer) Lufubu Power Company (Implementer) Officer for Promoting Private Power Investment National Utility (ZESCO) Energy Regulation Board (ERB) Water Resources Management Authority (WARMA) Zambia Development Agency (ZDA) Zambia Environmental Management Agency (ZEMA) National Heritage Conservation Commission (NHCC) Southern Africa Power Pool Project Advisory Unit (SAPP PAU)	Ministry of Housing and Infrastructure Development Road Development Agency

Table 6.2 shows that in Zambia, the energy sector has a comprehensive list of institutions that have been established to support developments in the energy sector. In this instance, one can see that for certain projects, specific implementing entities have been set up to help drive projects. Examples include the Lunzaua Power Authority and the Lufubu Power Company which have been set-up as lead implementers for specific projects.



Other examples where specific institutions have been established to provide support to projects relates to developments taking place within the Songwe River Basin. In this case, the Songwe River Basin Commission has been set up, incorporating representatives from both Tanzania and Malawi, whose mandate is to play an oversight role concerning projects taking place in the Basin, as shown in Table 6.3. These projects include the Lower Songwe Dam and irrigation scheme.

Table 6.3. **Institutions Established for Projects within the Songwe River Basin**

Songwe River Basin Commission
Interim Secretariat of Songwe River Basin Commission

In the DRC for example, institutional support for transport projects is derived from two main government ministries — the Ministry of Infrastructure, Public Works and Reconstruction; and the Ministry of Transport and Communication. Similar institutions have been set up in Zimbabwe and Mauritius for their respective infrastructure projects.

6.3. Governance Structures

The study confirmed that Member States are indeed using various forms of institutions, regulations and policies to oversee the governance aspects of the infrastructure projects. In some instances, Member States use the same institutions responsible for implementing the project to handle governance or regulatory issues. For example, in Zimbabwe, the same structures established to oversee the implementation of three of its water projects are the same institutions that provide the governance oversight for the same projects. The three projects are the Beitbridge Cross Border Water Supply project, the Chirundu-Cross Boarder Water Supply Project and the National Matabeleland Zambezi Water Project. This approach may not be ideal for sound governance necessary for a checks and balances system.

In other cases however, Member States have created specific governance structures that augment the effectiveness at which projects are implemented. Table 6.4 shows how some SADC countries have put in place specific governance mechanisms for infrastructure projects.

This approach has the advantage of creating checks and balances for the effective implementation of infrastructure projects.

Table 6.4. **Specific Governance Frameworks for Infrastructure Projects**

Zambia Energy Projects	Songwe River Basin Projects	Mauritius Infrastructure Projects
• Intergovernmental Memoranda of Understanding • Joint Technical Committee • Project Management Unit • Project Steering Committee	• The Council of Ministers • The Joint Steering Committee • The Songwe Basin Secretariat	In Mauritius, governance issues pertaining to financial indebtedness or expenditure are managed by the Ministry of Finance and Economic Development

6.4. Policy Framework for Infrastructure Development

As highlighted above, 97 percent of the projects submitted for STAP review are supported by adequate policy frameworks that are conducive to infrastructure development in the region. A number of Member States have implemented new policies since 2012 to support RIDMP. Examples of such policies are shown in Table 6.5.

6.5. Monitoring and Evaluation

For infrastructure projects to succeed, RIDMP recommends the adoption by Member States of robust monitoring and evaluation systems in order to ensure the adequate follow-up on progress relating to infrastructure development projects. Out of 134 projects submitted for STAP review, 124 have monitoring and evaluation systems in place while 10 projects do not.

Findings show how institutions are also important in providing the required monitoring and evaluation support. Some of the monitoring and evaluation mechanisms that have been put in place include those shown in Table 6.6.

Table 6.5. **Examples of Policies Introduced by Member States to Support Infrastructure Projects**

Zimbabwe	DRC	Tanzania
• National Water Policy 2013 • Joint Venture Act Chapter [22:22] • Public Sector Investment guidelines • National Constitution 2013 • Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZIMASSET) blueprint • Public Procurement and Disposal of public assets Act (Chapter 22:23)	• The National Strategic Development Plan, which sets out the country's vision and development approaches to the 2050 horizon as well as the macroeconomic and sectoral implementation strategies	• MOU between Tanzania and Malawi signed in May 2018 to implement Phase 3 of the Songwe River Basin Development Programme under the Interim Secretariat of Songwe River Basin Commission before the establishment of the Songwe River Basin Commission • Convention for establishment of the Joint Songwe River Basin Commission between Tanzania and Malawi ratified by both governments in 2017

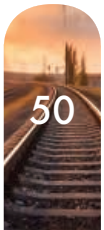
Table 6.6. **Monitoring & Evaluation (M&E) Mechanisms**

Tanzania (Songwe Basin)	Zambia (Transport Projects)	Zimbabwe (Water Projects)
Under the Lead Project funded through grant from the Global Environment Facility (GEF) there is a component on M&E aimed at supporting the design and development of a modern integrated basin knowledge base (including a range of new datasets such as satellite imagery etc.), and information management system for the basin in order to facilitate systems operation planning. It also includes knowledge dissemination, including information sharing as well as monitoring and evaluation of the entire activities plan of the project.	Ministry of Housing and Infrastructure Development, Road Development Agency, Ministry of Transport and Communication, Ministry of Commerce, Industry and Trade provide mechanisms for monitoring and evaluation.	The government is currently implementing the Results Based Budgeting process. The process requires submission of plans for the following year during the end the current year. After these have been approved funding is released from Ministry of Finance and Economic Development. Quarterly reports are submitted by each implementing agency to the Ministry of Finance indicating budget released, budget utilised and progress achieved during each quarter.

Where monitoring and evaluation systems are not in place, respondents gave various explanations. These include that affected projects are still at pre-feasibility or feasibility stages and have therefore not yet been implemented. However, waiting for projects to be implemented before setting up a monitoring and evaluation framework is not consistent with best practice. It would be prudent for Member States to have monitoring and evaluation systems in place before the project is implemented.

6.6. Progress with Domestication and Implementation of Regulatory Frameworks

In developing the RIDMP, the region remained mindful of the need to create an enabling environment for the development of infrastructure, more so, to enhance the appetite for private sector participation in infrastructure investment and operations. To this end, the development of a sound regulatory, legislative and policy environment was deemed pivotal in order to underpin the development of infrastructure in the region, across all sectors.



6.6.1. Energy Regulation

Given the pivotal role played by energy in catalysing development, the region set out to enhance the investment enabling environment through the development, domestication and implementation of a number of these frameworks. Some initiatives to strengthen the SADC energy sector regulatory environment include the following:

- Adoption of the "Regional Electricity Regulators Association (RERA) Guidelines on Cross-Border Power Trading in Southern Africa" by SADC Ministers responsible for Energy in 2014[4];
- Successful setting up of 14 regulatory oversight bodies by June 2016, with the DRC remaining the only Member State to establish such a body;
- Preparations by Member States for migration to cost reflective energy tariff, including preparations for measures to cushion the poor upon coming into force of the cost reflective tariffs in different states. Only Namibia had fully migrated to full cost recovery tariffs by June 2016[5]; and
- Various Member States have adopted policies that seek to pave the way for private sector in the power sector, especially Independent Power Producers (IPPs), with the region witnessing opening up to the private sector in terms of power generation as well as renewable energy projects.

6.6.2. ICT Regulation

ICT is one of the high end sectors that brings about high and short term rewards to investors. The propensity for multiple operators coming into the fold has been very high, and given such a scenario, there is need to ensure that a proper enabling ICT regulatory environment is put in place in all Member States. To this end a number of such measures included the following:

- e-Commerce Strategy and Action Plan, in 2012
- SADC Harmonised Model Laws on Cyber Security, in 2012 namely:
- SADC Model Law on e-Transaction/e-Commerce.
- SADC Model Law on Data Protection.
- SADC Model Law on Cyber Crime.
- SADC Frequency Allocation Plan 2013;
- SADC Guidelines on Transparency, in 2013;
- Retail and Wholesale Roaming Prices Glide Path, in 2014
- Guidelines on Consumer Protection and Awareness on Digital Broadcasting Migration, in 2014;
- SADC Postal Strategy 2013 – 2016, in 2014;
- SADC Roaming Policy Guidelines and SADC Model Roaming Regulations, in 2015;
- SADC MOU on Cross-Border Coordination, in 2015;
- SADC Harmonised Framework on Spectrum for Broadband Services, in 2015;
- SADC Guidelines for Development of National Broadband Plans, in 2015;
- SADC Model Policy Guidelines on Postal Services in SADC, in 2015;
- International Telecommunications Union (ITU) Guidelines on Child Online Protection (COP), targeting online protection education and awareness raising for children, parents, care givers and policy makers, in 2015;
- SADC Frequency Allocation Plan 2016 and Footnotes, in 2016;
- Adoption of the SADC Regional Cross-Border Interconnection Policy Framework and Reference Interconnection Offer (RIO), in 2017;
- SADC Digital Sound Broadcasting Policy and Regulatory Framework, in 2017;
- SADC fair use policy on Roaming Services in adherence to the SADC Roaming Regulations;
- SADC Regulatory Guidelines for the SADC TV Bouquet, in 2017;

[4] Record of Meeting of SADC Ministers responsible for Energy, 2014
[5] Record of Meeting of SADC Ministers responsible for Energy, 2016

- SADC Guidelines on ICT and Broadcasting Infrastructure Sharing, in 2017;
- SADC Postal Strategy 2017-2020, in 2017;
- SADC Postal Costs and Tariff Regulation Guidelines, in 2017;
- SADC Postal Quality of Service Monitoring Guidelines, in 2017;
- SADC Rural Broadband Guidelines and Recommendations, in 2018;
- SADC Cyber Security Action Plan, in 2018;
- Recommendations on Harmonisation of Emergency Services Numbering in SADC, in 2018;
- Recommendation on a Harmonised Approach to Domestic Licensing and Mutual Licence Recognition of Earth Stations in Motion (ESIMs), in 2018.

It must be noted that most of these regulatory regimes have since been agreed for implementation at the level of the COMESA-EAC-SADC Tripartite.

In the area of air transport, regulation has pertained largely to statutes required for the implementation of the Yamoussoukro Decision and the development of the Single African Air Transport Market (SAATM), whose implementation gained momentum in the last year. According to the NEPAD Agency, the SAATM is a flagship project of the AU to create a single unified air transport market and the liberalisation of civil aviation in Africa and as an impetus to the continent's economic integration agenda. This follows the Assembly of Heads of State and Government having adopted the Declaration on the Establishment of a SAATM and also issued a commitment to the immediate implementation of the Yamoussoukro Decisions towards the establishment of a single African air transport market by 2017.

Eleven African Member States championed the Declaration by signing the Solemn Commitment to actualise the Decision creating the single market, among them four SADC States, namely, Botswana, Eswatini, South Africa and Zimbabwe. These countries will automatically grant Fifth Freedom Traffic Rights to other participating states in respect of scheduled air services and permits to eligible African carriers to fly between two other African countries on a flight originating or ending in its own country.

KEY CHALLENGES AND OPPORTUNITIES

SADC faces a number of challenges with regard to the provision of adequate regional infrastructure, as noted in preceding sections. A sense of urgency must now permeate the region, to expedite the implementation of strategies required to bridge the identified gaps and eliminate barriers hindering the region's full potential. This Chapter seeks to articulate some of the challenges faced by SADC with implementation of infrastructure, and identifies a number of opportunities which if implemented could scale up infrastructure deployment and assist in availing funding to bridge the infrastructure gap.

7.1. Stagnation of Regional Infrastructure Projects

With only a handful of completed projects, the region's infrastructure gap is widening, particularly in the context of population and economic growth. This is reflected in terms of the insufficient energy supply, the highly priced, unpredictable transport and logistics services, especially for landlocked states, and a lack of low-cost access to information communications technologies, which render poor services in most localities. Furthermore, the region still has inadequate meteorological services for effective and efficient planning and management of water resources, energy production, transport services and other climate-sensitive sectors. Indications are that a large portion of the population in southern Africa remains without safe drinking water or adequate sanitation. This calls for greater investments in infrastructure development.

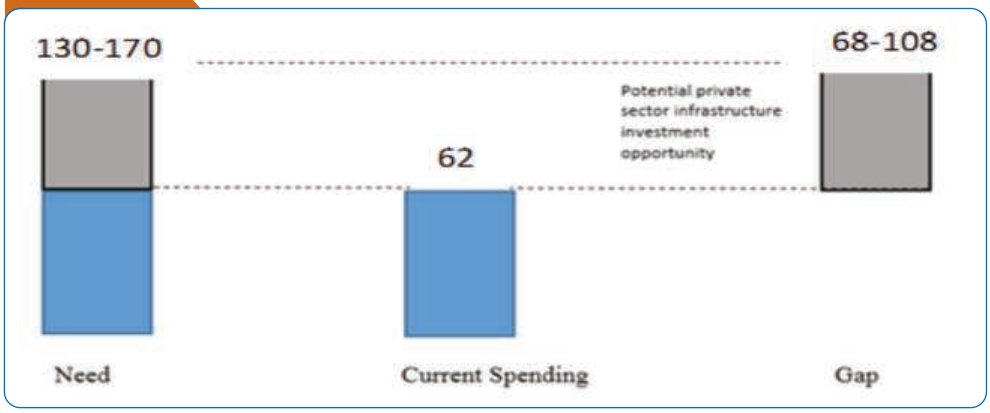
The region enjoys low levels of infrastructure stock compared with developed regions or other developing regions. The lack of infrastructure continues to affect productivity maintaining the cost of doing business at an unacceptably high level, thereby eroding the region's competitiveness. This has also slowed down regional and continental integration. The AfDB argues that poor infrastructure shaves off at least two percent of potential per capita growth.[6] The report further identifies three key challenges Africa faces in its efforts to accelerate infrastructure deployment — weak legal, regulatory and institutional frameworks; weakness in infrastructure planning and project preparation; and poor governance and rampant corruption.

Based on about every indicator of infrastructure coverage, Africa and hence the SADC region lag behind their peers in other parts of the developing world (Yepes et al, 2008). The differences are particularly large in the case of paved roads, broadband coverage, and power generation capacity and transmission. For all key infrastructure sectors (energy, transport, ICT and water), Africa has been expanding stocks much more slowly than other developing regions, meaning that unless something changes, the gap will widen over time (World Bank, 2008).

Figure 7.1 shows Africa's current infrastructure investment needs, its current spending on infrastructure and the spending gap. The continent's needs range between US$130-US$170 billion per annum, suggesting the need for innovative ways of funding infrastructure. The infrastructure spending gap is too big to be bridged by the public sector alone and hence it presents an opportunity for private sector participation in infrastructure if the public sector provides incentives for the private sector through improved investment environment and the risk/return profiles of infrastructure assets. SADC's infrastructure spending is a mirror image of that of Africa.

[6] *Africa Economic Outlook 2008*, African Development Bank

Figure 7.1. Limited Investment in Infrastructure, US$ Billion



Source: AfDB Africa Economic Outlook 2018

This study confirms that a large number of planned RIDMP STAP infrastructure projects in the region are not progressing from preparation, financial closure through to implementation, as there is a high level of stagnation at various stages of their preparation cycle. This trend needs to be reversed if SADC is to create the infrastructural capacity for growth and development, and catalyse industrialisation, underpinned by trade led growth.

The report has also demonstrated that financing of infrastructure development remains central to the success of the projects as the lack of financial resources has stalled the region's many projects that could anchor industrialization and development. There is no doubt that closing the infrastructure gap in southern Africa will require a concerted effort to mobilize resources from diverse sources. The report suggests that the magnitude of the infrastructure financing challenge far outweighs the resources available from any single source, necessitating a broad collaborative approach among partners and financiers, whether public, private or bilateral partners. It is also strategic that private finance be increased with grant finance playing the catalytic role of leveraging additional private capital.

Traditionally, funding for infrastructure has been the preserve of the state. However, due to competing national needs in different countries, and on account of escalating social needs, public sector funding though still important, has declined at a time when private sector interest is growing but remains cautious to invest in infrastructure development due to many challenges, among them high risk, whether perceived or real. Member States have embraced private sector funding for infrastructure and its operations and should address the risks inherent in infrastructure projects as well as create an appropriate enabling environment.

According to the United Nations Economic Commission for Africa (UNECA), international experience has demonstrated that the surest way of addressing the infrastructure backlog is through the utilisation of locally sourced finance[7]. In this regard, it is necessary to create local funding ring fenced for such purposes, augmented by external funding resources. The creation of regional funds such as the COMESA Fund and the SADC RDF, are a step in the right direction. However, more funding vehicles of a regional nature need to be established by pooling national level resources from, for example, pension funds. As noted by the Infrastructure Consortium for Africa (ICA), funding infrastructure generates economies of scale moreso on a cross-border basis. This is especially true for countries with relatively small economies and thus a regional integration-based funding model for infrastructure is desirable as this would create opportunities for economies of scale and enhanced projects viability. A regional approach can also help overcome constraints relating to absorptive capacity at the national level. In order

[7] Trade Facilitation in Southern Africa: Bridging the Infrastructure Gap, ECA, 2017

to ensure effective implementation and absorption, there is need to scale up the capacity of implementing agencies and a regional approach provides those opportunities.

International experience suggests that those countries with strong capital and financial markets have a better opportunity to access private sector funding, and these are linked to the provision of appropriate enabling environments and thus are able to develop their infrastructure faster. Furthermore, issues of macro-economic stability are important for investors in long term projects.

Innovative ways of funding infrastructure and regional integration can be considered for domestic and regional resource mobilization to complement the traditional sources of funding. As demonstrated in a recent study undertaken by SADC, other avenues for funding regional integration projects include levies on import and export duties, illicit financial flows recalled to the region, regional lotteries and events, tourism levies, transport levies, diaspora remittances, sovereign wealth funds and philanthropy. All these options can be harnessed through the creation of attractive investor conditions conducive to competitive returns on investment. Collaboration creates competitive conditions to harness these resources across the region and provides a pool for investment in larger transboundary projects.

Furthermore, given the huge financial outlays on some projects, it is necessary to encourage co-funding by partners sharing the same vision. This can be further supported by blending mechanisms, where a partner draws down seed money to reduce risk and enhance potential to leverage the rest of the required resources.

7.2. Lack of Bankability in RIDMP STAP Project Pipeline

According to the Dakar Financing Summit (DFS) and the Dakar Agenda for Action (DAA) in June 2014, a diagnosis of infrastructure challenges in Africa is in many ways caused by the following deficiencies on the part of RECs and Member States:

- Lack of human capacity for project preparation to bankability by the Regional Economic Communities (RECs) and Member States;
- Lack of financing capacity for project preparation to bankability by Member States; and
- Lack of capacity for project financing for implementation by Member States.

When applied to the sub-set of projects forming the RIDMP STAP project pipeline for the period 2013 to 2017, it can be revealed that:

- There is a lack of RIDMP STAP projects prepared to bankability, confirming the DFS diagnosis;
- Most of the RIDMP STAP projects are stuck in the early preparation stage;
- There are institutional challenges in the form of the capacity of different institutions (National Governments, RECs, and PPFs) to prepare projects to bankability;
- There are financing challenges on the part of national government project sponsors to prepare and implement RIDMP STAP projects; and
- There is little private sector participation in infrastructure development in the SADC region.

7.3. Institutional Challenges to RIDMP STAP Project Implementation

RIDMP STAP project implementation is an end product of a value chain that includes, among others, project development, environmental and social assessments, and financial closure. Project preparation is a process involving all the activities undertaken to take a project from conceptualization to implementation. The aim is to take a project idea and develop it to the point where it can attract funding. This results in the production of a suite of project documents which demonstrate bankability and thus motivate financier's interest. This complex process involves several stakeholders that include national governments, international, regional and domestic financiers, technical specialists and PPFs. Each of the stakeholders play a critical role in project preparation. This review focused on the various entities involved in the value chain:

a) National governments/project owners;
b) SADC Secretariat (and its affiliated Sub-regional Organisations);

c) Development Finance Institutions (DFIs), Multilateral Development Finance Institutions (MDFIs) and other bilateral partners, including PPFs; and,
d) Private sector.

The role played by these entities and their institutional architecture also contributes towards the manner in which projects progress from inception, preparation through to implementation.

7.3.1. National Governments' Institutional Challenges

National governments in the SADC region play a central role in infrastructure development. They are the project sponsor in the form of line ministries or government agencies such as road agencies, water or electricity utilities. Bureaucrats within these departments are the initiators and drivers of the project preparation process and coordinators of inputs from various parties to the project. While undertaking technical studies may be beyond their resource capacity, the study found that the government ministries or agencies lack technical capacity to anchor critical activities in the project preparation process, and transaction management in general, including the following areas.

Less bureaucracy and high political commitment

Strong, broad-based and consistent political support is critical for driving RIDMP STAP infrastructure project development. SADC countries acknowledge that issues where political commitment to implement measures such as increasing user charges, combating under-collection of tariffs, preventing illegal connections and making government ministries and agencies pay for services provided as a major challenge to infrastructure development. The other major challenge is ensuring that government bureaucracy is accountable, effective, and efficient in planning, coordinating, executing, and monitoring such that unnecessary delays related to land acquisition, licenses and permits, connecting existing infrastructure and so on, are minimized. The delays caused by the bureaucracy introduce high cost of capital because some infrastructure projects take as much as three to five years seeking approvals. Private investment is sensitive to such avoidable costs.

Strengthen competencies

SADC national governments face a skills and capacity shortage where preparation and implementation of RIDMP STAP projects is concerned. The preparation (as well as implementation) of infrastructure projects requires various specialized skills ranging from technical and engineering to environmental, legal, financial, and negotiation. These skills deficits to national governments impact through delayed decision-making or approvals, lengthy negotiations, inappropriate decisions, and inadequacies in contract and performance management (which can also result in the public sector getting locked into fiscally unsustainable contracts that are subsequently cancelled). The skills and capacity shortage is at the root of the entire spectrum of issues depicted in Figure 7.2, from policy development, through to planning, preparation and execution.

Higher levels of transparency

Regardless of the level of detail in the Request for Proposal (RFP), the tender process for RIDMP STAP projects must be managed proactively to drive value through competition and ensure multiplicity of requirements do not jeopardize the process. Whether real or perceived, RIDMP STAP project sponsors face transparency challenges partly because of their limited competencies and also because of negative perceptions due to lack of a track record of transparency. Reports of Auditors General in many states paint a bleak picture by highlighting lack of transparency on contract award and flouting of extant national guidelines and rules. Transparency in tendering is the essence of a fair and competitive process. The tender process must be seen to meet international standards for transparency and provide a level playing field for bidders. Tender processes also determine the credibility of contractors engaged for the execution of the projects.

Stable legal and regulatory environment

RIDMP STAP infrastructure assets have huge upfront costs, long life and are immobile. To achieve payback, predictable and long-term cashflows are required. This in turn requires tried and tested stable and transparent legal and regulatory frameworks clearly stating the conditions for setting up of PPPs and private investment in infrastructure. Because the economic cycle where infrastructure investments belong is long-term and the political cycle where stable legal and regulatory frameworks to support infrastructure development is often short-term, the stability of the environment becomes one of the largest political risks for RIDMP STAP projects, especially as it relates to ensuring subsidies on user fees or feed-in tariffs are not abruptly altered or removed.

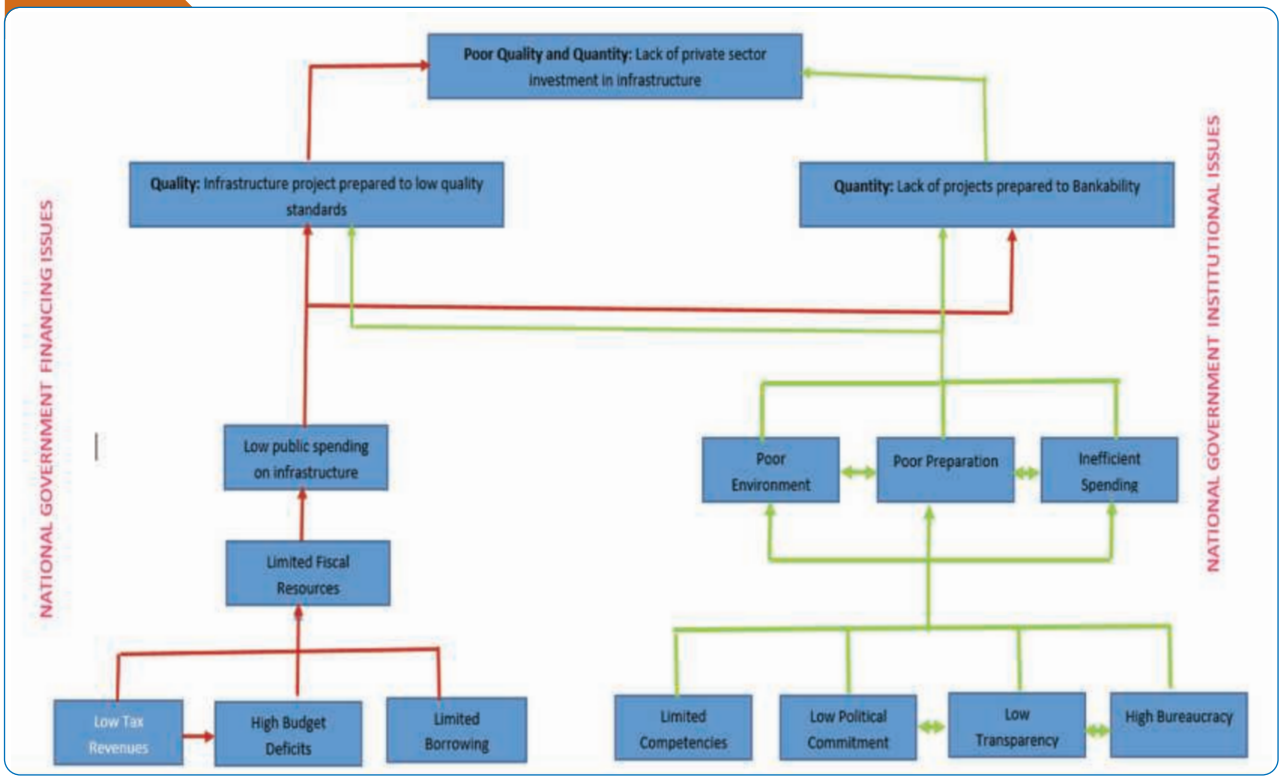
Bankable RIDMP STAP projects

Poor environment, limited competencies, low transparency, bureaucracy and inefficient spending results in projects prepared to low quality standards. This lack of properly structured, bankable projects is a critical issue slowing the flow of private capital to RIDMP STAP infrastructure projects. Many projects do not have an adequate fact file built during preliminary work and therefore potential investors face ambiguity or uncertainty. Funding sources and mechanisms are largely responsive to the depth and quality of the project pipeline.

More efficient spending

The poor environment, limited competencies, low transparency and bureaucracy also lead to inefficient spending where the value and impact of every dollar spent on RIDMP STAP infrastructure projects, especially during early preparation, achieves less in Africa and SADC as compared to other regions. Because the projects are prepared to low quality standards, money spent during preparation is not attracting the much-needed private investment and these poorly prepared projects are not being implemented. The preparation costs become sunk costs.

Figure 7.2. SADC National Government Institutional and Financing Challenges and Outcomes



Source: Infrastructure Consortium Africa, 2014

The question is — how do the national government institutional factors that contribute to Africa and SADC infrastructure stocks remain so much less than needed and lower than other regions? Taking into account the above national government institutional spectrum, the main challenges facing infrastructure development in Africa and SADC can be depicted through a cause and effect diagram, which presents the problems in symptoms and root causes and also indicates the relationship between the different issues.

7.3.2. Institutional Challenges to Project Preparation Facilities (PPFs)

Infrastructure PPFs are institutions with funds specially demarcated for use in the early, mid or late stages of project preparation. PPFs are not homogenous and vary according to several parameters such as host organisation, type of financing provided, sector, geography, project stage focus and whether support is provided to PPP projects. The following are some of the institutional challenges faced by the PPFs.

Bureaucratic administration of facility funds

The majority of SADC PPFs are hosted by Regional Development Banks. This means that their operations are heavily influenced by the institutional structure of their host and they are faced with heavy administration requirements. Further, SADC active PPFs are predominantly accessing financing from donors. As a result, the accountability required of PPFs regarding the financing requirement is often unrealistic, particularly in light of the scarcity of grant funding. There can be a huge time lag between the financing commitment made by a donor, and actual disbursement to the facility, due to administrative procedures. This, then leads to delays when PPFs disburse funds to project sponsors. Hence, there is a need to conduct an in-depth assessment to streamline bureaucratic procedures for PPFs, on a case by case basis.

Lack of transparency

The process of obtaining information about SADC active PPFs needs to be improved because this review has revealed that there is a vast amount of information on detailed eligibility criteria, and PPFs' funding criteria in terms of sectors, countries and grant sizes which is difficult to obtain. Further, it remains difficult to obtain explanations from facilities on the reasons for the rejection of an application. Hence, PPFs should find ways to engage with their applicants to provide feedback on improving future applications

7.3.3. Institutional Challenges to the REC (SADC Secretariat)

The SADC Secretariat plays a pivotal role in coordinating programmes of the Member States, as well as playing the role of knowledge and strategy broker in the process. The Secretariat also provides a planning, monitoring and evaluation role for the various projects identified as regional projects.

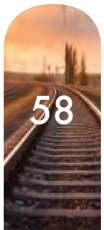
In this regard, a number of recommendations relating to the role of the SADC Secretariat are outlined below.

Oversight

It is recommended that the SADC Secretariat be involved in providing oversight of the project preparation to implementation process, but not participate in its technical aspects. This must be communicated to Member State project sponsors to align their expectations that are otherwise currently misaligned in the sense that they expect the SADC Secretariat to act as the project sponsor.

Coordination

The SADC Secretariat should strive to build consensus between all stakeholders around priority regional infrastructure projects, which can form part of the regional infrastructure master plan so that a pipeline of priority projects can move into preparation with the full



political support of the Member States involved. The challenge is that Member States present projects for inclusion into the RIDMP often based solely on political rather than economic or social considerations. This results in projects that are not on Member States' National Development Plans being presented to the RIDMP as priority projects.

Project information gathering, monitoring and evaluation

One of the key contributors to RIDMP STAP project failing to secure financing for preparation is lack of information for financiers to decide on. Given the challenges associated with obtaining accurate project information, SADC Secretariat should lead data and information collection efforts for gathering key details on regional priority projects including project sponsors, stakeholders involved, project technical components, estimated costs, potential risks, etc.

Need to operationalise the SADC Regional Development Fund (RDF)

Access to adequate funding is one of the major draw-backs to the implementation of regional infrastructure projects. SADC does not have a functioning RDF, whose purpose can be to, among others mobilise funds for key infrastructure and industrialisation projects.

Ensure the Project Preparation and Development Facility (PPDF) is adequately resourced

SADC established the PPDF to assist SADC Members States with funds required to prepare bankable project proposals that will in turn attract financial partners. However, indications are that the PPDF is not adequately resourced, a situation that is compromising fundraising efforts for the region's infrastructure projects.

Capacity building within Member States

As highlighted for the National Governments, lack of human capacity to prepare projects to bankability is a major challenge. SADC Secretariat should revisit the PPDF capacity building programme with the view of enhancing it.

Strengthen the capacity of subsidiary organisations to track project implementation

SADC has established subsidiary organisations in all the key infrastructure development sectors. Most of these subsidiary organizations lack the capacity to discharge their functions in implementation monitoring and evaluation is concerned.

7.4 Policy and Regulatory Challenges

SADC has adopted the transboundary and corridor approach to implementation of projects. Some of the STAP projects are corridor/transboundary projects. These projects, which are meant to sustain and define the region are usually broken down into modules within individual Member States. This then has brought the misunderstanding of treating a project module that lies in a Member State as a National project yet it is a piece of a corridor/regional infrastructure network. Preparing corridor/regional projects has been complicated on account of the following.

Inherent complexities at project level

Preparation of regional STAP projects is arduous in comparison with national projects due to the involvement of more than one national government. This has made establishment of clear ownership of the project difficult. External parties are finding it difficult to engage all the involved national governments for such projects.

Regional and national priorities are often misaligned

While SADC Secretariat had a bigger regional picture when corridor/regional projects were identified, national governments have a tendency to look inwards at their national priorities resulting in corridor projects being treated as national projects or at most as bilateral projects. This regional versus national dimension can diminish national support for a regional project and reduce the value of a project by only taking into account national considerations.

Member States appear to be prioritising domestic over regional projects. This explains why few governance instruments or agreements are being concluded among Member States sharing transboundary infrastructure projects.

Misunderstanding of the term "Priority Project Status"
The study shows that 91 percent of the regional RIDMP STAP projects have been identified by Member States as top priority. Unfortunately this priority status has not been matched to the raising or financial resource or allocation of required funds from national budgets. Such a contradiction suggests that Member States may not have a full understanding of what the term "Priority Project Status" really means.

Disharmony in legal and regulatory regimes
This is affecting regional STAP projects hindering their project development trajectory. In the short term, a regulatory framework that is specific to the project could be adopted awaiting harmonization.

Coordination failure in the absence of formal institutional mechanisms
During project inception before establishment of joint institutions, coordination failures are being experienced.

Differing technical and institutional capacity for project preparation
During project inception before establishment of joint institutions each country makes differentiated contributions in accordance with its capacity. In the absence of joint institutions, STAP projects suffer lack of technical and institutional capacity thus delaying their launch.

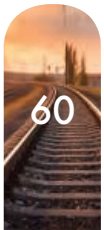
Limited mainstreaming of gender and youth issues
Both the RIDMP and STAP policy documents are silent on gender or youth mainstreaming in infrastructure development. This is despite the acknowledged benefit accruing from deliberate policies that encourage women and youth participation in infrastructure development as an important ingredient for success. There is scope to provide greater opportunities to women and youth in terms of business opportunities and employment.

Climate change mitigation and management
The RIDMP and STAP policy documents both acknowledge the importance of climate change mitigation and management. Through the meteorology sector, the region intends to create infrastructure with which to develop adequate early warning systems for climate related developments. Unfortunately, none of the Member States provided an update in this regard. This suggests that climate change issues may not be getting the priority that they deserve. For example, the lower than average rainfall experienced in southern Africa over the 2018-2019 rainfall season saw power utilities in Zimbabwe and Zambia implementing demand-side management practices through load shedding, in order to manage the reduced power generation capacity at Kariba. In addition, the destruction that followed Cyclone Idai in March 2019 and Cyclone Kenneth in April 2019 demonstrates how climate change and variability can prove costly given the widespread destruction to transport, power, ICT, water and other social infrastructure.

7.5. Financing Challenges to RIDMP STAP Project Implementation

One of the main reasons why projects are stalling is the limited access to finance for infrastructure project preparation and implementation. This has resulted in RIDMP STAP projects that were meant to be completed between 2013 and 2017 STAP period being still stuck at various stages of the preparation cycle.

As shown in Figure 7.1, there is a big financing gap for infrastructure projects in SADC. This has negatively affected the implementation of RIDMP STAP projects. For the SADC region project preparation takes between 5 percent and 10 percent of the total project cost.



The dominant form of financing for RIDMP STAP project preparation is grant funding from (i) national governments, (ii) directly from donors as Official Development Assistance (ODA), and (iii) as well as routed through PPFs active in the SADC region.

Further, this review has revealed that the financing gap is concentrated in the early stages of RIDMP STAP project preparation. This is due to excessive demand for funding at this stage in the project life cycle and because project risk is concentrated in the early state of project preparation. PPFs and other investors prefer to get involved from the mid to final stages of project preparation as certainty and information around the project increases.

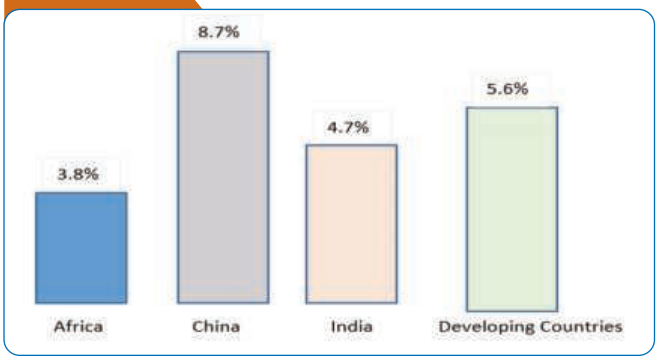
Further financing challenges can be understood at the level of the following during project preparation to bankability:

a) National Governments;
b) Project Preparation Facilities;
c) The SADC Project Preparation and Development Facility; and
d) Donors.

7.5.1 National Governments

It is clear that SADC national government are investing less in infrastructure as a percentage of GDP as compared to other regions. The question is what causes this insufficient investment? Looking at the spending patterns for infrastructure in Africa, not only is spending less than needed, it can also be concluded that it is significantly less in comparison with other developing countries. Whereas total spending in infrastructure amounts up to 3.8 percent of GDP in Africa, regions such as India and China spend on average 4.7 percent and 8.7 percent of GDP respectively on infrastructure development. According to McKinsey on average developing countries spend some 5.6 percent of GDP on infrastructure. Were Africa able to achieve such level, it would imply an increase in spending of approximately US$43 billion per year. This analysis is depicted in Figure 7.3.

Figure 7.3. Africa Average Infrastructure Investment Compared to other Developing Countries



Source: Infrastructure Consortium for Africa 2014

Africa and SADC's insufficient investment in infrastructure is caused by poor domestic resource mobilization. Generally, domestic resource mobilization in Africa is constrained by the following:

Low domestic savings rate

The savings to GDP ratio for SADC is approximately just 22 percent (much lower than the 46% in East Asia). This arises from a lack of access to the formal banking system for low income earners and low interest rates paid on savings. This in turn affects the width and depth of SADC countries' financial sector. The financial markets are therefore unable to support the required investments in infrastructure.

Low tax to GDP ratios

The average tax-to-GDP ratios in SADC Member States is 15 percent compared to a 26 percent world average excluding the Middle East. African countries can increase tax revenues by expanding their tax base and focus on tapping underutilised sources such as property and environmental taxes.

Inefficient investment

The impact per US$1 invested in infrastructure by the national governments can be improved. This would have similar effect as increasing domestic resource mobilization as the national governments will end up being able to do more from the same amount of domestic resources.

High budget deficits

Low tax revenues collected by many SADC countries lead to budget deficits beyond three percent of GDP and this is regarded as above the maximum allowable deficit. These deficits in turn constrain the public budgets for RIDMP STAP infrastructure development both from current accounts and from debt financing. As such, debt financing will lead to future fiscal obligations in terms of interest expenditures and principal payments.

Limited borrowing capacity

Some of the SADC countries who are RIDMP STAP project sponsors are listed as Low Income Countries (LIC) and/or Heavily Indebted Poor Countries (HIPC) under the International Monetary Fund (IMF) and World Bank debt relief programmes. Because they have entered the IMF debt relief programmes, they must of necessity comply with strict debt limits when borrowing from new creditors, in order to prevent the build-up of new unsustainable debts. This has put limits on public sector spending in infrastructure in these countries leading to failure to adequately prepare RIDMP STAP projects to bankability standards.

7.5.2 Project Preparation Facilities (PPFs)

Most PPFs available to Africa are focused on mid to late stage project preparation, with the early stage receiving the least attention. The World Bank's facility being an exception, providing 40 percent of its total support to early stage project preparation activities.

The following key structural features of PPFs hinder the efficacy of PPFs.

Unsustainable funding models

Most of the PPFs in SADC predominantly use grant financing for RIDMP STAP project preparation. When grant funding is provided for project preparation it results in a moral hazard problem due to the misalignment of incentives between the counter-party, the fund seeker and the grantor, in this case the PPF. National governments project sponsors and fund seekers do not need to repay the project preparation financing that would have been provided as a grant and hence lack the incentives to prepare projects to bankability. The moral hazard problem can result in high levels of sunk costs for PPFs, such that their spending on the early to mid-stages of project preparation can be lost in such situations. Therefore, innovative models of cost recovery, such as success fees and redeemable grants must be explored in order to have sustainable PPFs which do not constantly draw down on their financing allocation.

Lack of project appraisal and managerial capacity

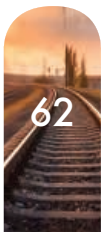
There is a skills gap as most PPFs have underestimated the challenges involved with the wider role that their management may be called upon to play in project preparation, when driving tasks in each project preparation phase.

In response to the above challenges affecting PPFs (supply side of project preparation and implementation financing), SADC developed its own PPDF hosted by the DBSA in South Africa.

7.5.3 The SADC Project Preparation and Development Facility (PPDF)

Most of the RECs recognised the need to create a pipeline of bankable projects to accelerate scaling up of infrastructure deployment. The genesis of intensification of project preparation lies in the recognition by the African Union Commision (AUC) and its partners in March 2005, at a meeting convened by the AUC to review the implementation of the NEPAD STAP. At this meeting, stakeholders concluded that lack of bankable projects constituted a major obstacle to the speedy rollout of infrastructure projects. In this regard, several regional blocs established ring-fenced funding for project preparation and investment.

It was in this context that SADC took a decision to establish the SADC PPDF, whose objective was to ensure a long-term and sustainable flow of technically, economically and financially viable infrastructure projects prepared or financed for the SADC region. The



PPDF also sought to facilitate the development of human capacity for the identification, preparation, evaluation and marketing of economic infrastructure projects.[8]

The PPDF was initially resourced with €13,603,367 (US$16,324,040) by the EU and KfW[9]. However, the total amount was too little compared to the regional demand for SADC infrastructure projects. Through the mechanism of an MOU, the DBSA was appointed as the Fund Manager, and all decisions around the PPDF (projects to be funded, amounts, etc) are made by the PPDF Steering Committee. The following projects were funded by the PPDF.[10]

Table 7.1. **Projects Funded by PPDF**

	Project	Location	Date Committed	Facility Amount US$ Million
1.	2nd Alaska Sherwood Transmission Line	Zimbabwe	31.03.2016	2.1
2.	Kasomero – Mwenda toll road	Zambia	30.11.2016	2.8
3.	Luapula Hydro Power Development Project	Zambia	03.11.2016	3.5
4.	Mulembo Lelya Hydro Electric Power Project	Zambia	06.12.2016	2
5.	North-South Corridor Rail Project preparation	SA, Zimbabwe, Zambia, DRC	13.03.2018	0.24
6.	Angola Namibia (ANNA) Transmission Project	Namibia, Angola	12.12.2018	0.55
7.	Mozambique – Zimbabwe Interconnector	Mozambique, Zimbabwe	01.01.2016	-
8.	Africa GreenCo	-	09.01.2017	-

The total cost of projects in the STAP of the SADC RIDMP was estimated at about US$65 billion, and assuming that project preparation requires an average of 10 percent of investment costs, the STAP required an estimated cost of US$6.5 billion, which is by far higher than the amount allocated to the PPDF.

It is however, acknowledged that the PPDF is supplemented by other PPFs that are either regional or continental in terms of footprint. Whilst a large number of projects in the STAP required project preparation funding, this was limited in view of the limited resourcing of the PPDF. It must also be noted that all the funding for the PPDF was provided by ICPs, and Member States did not contribute any funding in this phase of the project. It is however, encouraging to note that there are processes for Member States to contribute to the PPDF as part of the SADC RDF.

The PPDF Mid-Term Review noted that none of the projects funded by the PPDF had reached financial closure. All the projects funded were in the SADC RIDMP or addressed the objectives of the RIDMP.

The key conclusions of the PPDF Mid-Term Review were as follows:

- Although delays were encountered, the programme built a pipeline of six projects covering seven Member States;
- Some commendable capacity-building had been achieved through three training courses;
- There were notable delays in implementation;
- Concerns were raised on management and leadership deficiencies in PPDF implementation by the fund manager, coupled with weaknesses in reporting; and,
- There was no long-term strategy of PPDF outside of current donor funding.

[8] Mid-Term Review of SADC Project Preparation Development Facility, 2019
[9] PPDF Quarterly Progress Report No. 1, November, 2016
[10] Mid-Term Review of SADC Project Preparation Development Facility, 2019

The key recommendations of the PPDF Mid-Term Review were as follows:

- The need for more in-depth reporting by the PPDF Secretariat;
- Overhaul of the PPDF Steering Committee;
- Overhaul PPDF processes and identification of experts at technical levels, and benchmarking the same with other fund managers.

7.5.4 Donors

Donors are the largest source of project preparation financing in the SADC region. However, this financing was greatly reduced after the 2008 global financial crisis and the 2010 European financial crisis. This source of financing is now focusing on leveraging private sector funding and co-financing with the project sponsor or with other donors. There is also a visible shift from hard infrastructure to soft issues such as legal and regulatory framework harmonisation. This is further squeezing funding out of the risky early RIDMP STAP project preparation stages. Donors also want to showcase success stories quickly and hard infrastructure takes time to move from inception to implementation and ultimately to completion.

7.5.5 China as a Leading Financier of Regional Infrastructure Projects

SADC Member States can capitalise on the growth of China as one of the main financiers of regional and continental infrastructure projects. Since the establishment in the year 2000 of the multilateral Forum on China-Africa Cooperation (FOCAC), China has helped to meet some of Africa's infrastructure financing needs. Table 7.2 confirms this trend, highlighting that for the period 2012 to 2016, African infrastructure investment has been funded largely by traditional investors, such as African governments, donors and Multilateral Development Banks (MDBs). In addition, the Table further indicates that China is the single largest national financier of Africa's infrastructure projects.

Table 7.2. **Sources of Infrastructure Financing in Africa, US$ Billion**

SOURCE OF FUNDING	2012	2013	2014	2015	2016	Average
African Governments	26.3	30.5	43.6	24	5	30.1
Donors (ICA members)	18.7	25.3	18.8	19.8	18.6	20.2
MDBs	1.7	2	3.5	2.4	3.1	2.5
China	13.7	13.4	3.1	20.9	6.4	11.5
Arab countries	5.2	3.3	3.4	4.4	5.5	4.4
Private sector	9.5	8.8	2.9	7.4	2.6	6.2
Total	75.1	83.3	75.4	78.9	62	75

Source ICA 2017, 2018

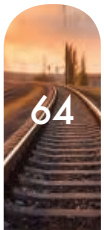
The 2018 Deloitte Africa Construction Trends report shows that China is mainly funding the Transport, Shipping and Ports sectors (52.8%), followed by Energy and Power (17.6%), Real Estate (14.3 %), and Mining (7.7%). Deloitte Africa further reports that to date, China has participated in over 200 African infrastructure projects. Chinese enterprises have completed and are building projects that are designed to help to add to or upgrade about 30,000km of highway, 2,000km of railway, 85 million tonnes per year of port throughput capacity, more than nine million tonnes per day of clean water treatment capacity, about 20,000MW of power generation capacity, and more than 30,000km of transmission and transformation lines.

The 2016 *SADC Energy Investment Yearbook* indicates that at the time of publication, China had invested in at least 21 regional energy projects in southern Africa alone, worth about US$50 billion. These projects include Lesotho Highlands Water Project worth US$15 billion, the Rovuma-Gauteng pipeline worth US$6 billion, and the Kafue Gorge Lower Hydropower Station worth US$2 billion.

China is therefore a viable funding partner for southern Africa's infrastructure projects.

7.6 Challenges to Private Sector Participation in RIDMP STAP Funding

This study has established that private sector financiers have a limited interest in RIDMP STAP project preparation, particularly in the early stages where the risks are highest. South Africa's Renewable Energy IPP programme is one of the few examples where private sector bidders took the lead in detailed project preparation at the mid-to late stages. Private sector investments are driven by a business case (risk/return) approaches. If a project does not show



commercial viability, it will be difficult to bring a private sector financier on board for project preparation. Hence, there is a need to devise innovative financial instruments to involve the private sector in project preparation.

Coupled with the above challenges that affect a specific type of project financier, channelling domestic resources to infrastructure development requires the availability of suitable instruments of financing. With the challenges faced by the public sector who are the traditional sponsors of infrastructure in the SADC region, private sector involvement is cited as the answer to bridging the infrastructure funding gap, as shown in Figure 7.1.

However, private sector participation is generally suited for project implementation as the private sector financiers are profit seeking. RIDMP STAP projects are relatively high risk and low return when compared to alternative investments on the market. The time it takes for RIDMP STAP projects to move from inception to implementation is relatively long (on average, 8-10 years) increasing the opportunity cost of capital for private investors.

Political risk has been found to be the biggest impediment to African infrastructure investments by the private sector (OECD-AfDB, 2014). Standard commercial risks such as credit risks, currency risks, and interest rate risks are also relatively high in Africa and sometimes the Organisation for Economic Co-operation and Development (OECD) and other markets exaggerate risk, resulting in private sector there asking for too high returns on their capital.

The "rules of the game" are set by sector regulators and the private sector is expected to operate within them if they wish to invest in RIDMP STAP infrastructure projects.

For RIDMP STAP, the main regulatory constraints preventing private sector from investing in infrastructure may be in form of the following.

Financial restrictions

Under Basel III regulations, capital charges against long-term infrastructure loans may increase, making banks wary of financing long-term, illiquid assets. In addition, the Solvency II directive could make infrastructure debt unattractive for insurance companies, as capital requirements are increased. These regulations which dis-incentivise private sector financiers from long-term investments have a restrictive impact on the kind of capital which can be attracted for infrastructure projects.

Predictability and consistency of regulations

Private investors are willing to invest only when they can find a proven track record of the regulations in a country. Most SADC economies, however, lack this track record and thus private sector financiers are dis-incentivised from undertaking such high risk investments into infrastructure projects.

Shallow and narrow domestic financial markets

Some of the RIDMP STAP projects are mega projects (e.g. Batoka Gorge and Inga III Hydro Electric Schemes) in terms of investments required for both preparation and implementation. SADC domestic financial markets are shallow and narrow to absorb the financing requirements of such proportions. Most inputs for project preparation and implementation for RIDMP STAP projects are in foreign currency and therefore investors provide infrastructure financing in foreign currencies. This exposes them to currency risks in lending to SADC infrastructure projects, particularly in the absence of suitable hedging instruments. Further, there is a lack of innovative financing instruments, such as local currency infrastructure bonds which can absorb private sector financing in most SADC economies.

Asymmetric information

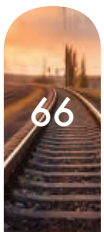
SADC RIDMP STAP national government project sponsors lack technical capacity to prepare projects to bankability including planning and execution. Bureaucracy causes delays in project approvals and drafting supporting regulations. Hence urgency in communicating the

needs and opportunities in project preparation to the private sector is as important as providing incentives for leveraging financing. Producing appropriate marketing materials which provide clear information about the project would greatly assist private sector financiers in making investment decisions. PPFs should assist and advise project sponsors in their communication efforts with large private sector financiers thanks to their vast experience and networks.

7.7 Opportunities for Scaling Up Infrastructure Projects in SADC

The challenges outlined above are certainly not insurmountable, and can be turned into favourable opportunities.

- Regarding the challenge of implementation, there is an opportunity for Member States to revisit timeframes to provide more realistic deadlines within which projects will be completed.
- The widening infrastructure and funding gap is an opportunity for greater private sector participation in regional infrastructure projects. The appropriate enabling environment would need to be developed.
- SADC would need to capitalise on an educational opportunity to ensure that terms used for infrastructure development, such as Priority Project Status, are universally understood. This should help to build consensus among Member States and move the priority status of RIDMP projects from talk to actual reality, through implementation.
- In order to mitigate the challenge of how Member States are prioritising national and regional projects, SADC must continue to highlight the benefits of regional projects to the respective economies of Member States. It has to be clear that implementing RIDMP projects will primarily benefit host countries, with secondary benefits to the region.
- SADC also has an opportunity to mainstream gender and youth issues in infrastructure development. This can be done by extending employment or business opportunities to the marginalized groups. The long-term strategy should contain empowerment dimensions to widen the scope and quality of women and youth involvement in development issues. This is against the backdrop of a youth unemployment rate within SADC Member States, with infrastructure development projects as envisioned in terms of RIDMP STAP, creating direct opportunities for youth employment.
- Given the impact of climate change issues on the regional economy, such issues must therefore be prioritised. The region must take advantage of the quick-wins that can be realised by completing planned meteorological projects. It is also important for the SADC region to implement environmentally friendly infrastructure development projects with focus on climate resilience. This has not been exhaustively discussed in this study and is an area for further investigation. There are immense opportunities for SADC to implement RIDMP in line with the Regional Green Economy Strategy and Action Plan for Sustainable Development. To this end, steps must be taken to ensure that the region's development projects improve human wellbeing and economic growth, while minimising the exposure of current activities on future generations.
- Member States could engage the Secretariat, in order to further understand and appreciate the variety of project preparation funds that are at their disposal, in order for them to maximise these opportunities, and scale up implementation of infrastructure.



RECOMMENDATIONS

8.1. Recommendations for Governments of Member States

National Ownership. The project owners for RIDMP STAP (Line Ministries and Government Agencies) often seem to wait for the SADC Secretariat to raise funds to prepare their projects. State Parties sometimes fail to understand that political and bureaucratic support from national governments, in their capacity as projects owners, is a necessary condition for undertaking project preparation. Further, because grant funding is being provided by donors or PPFs, and where governments make no contribution, there is reduced urgency to reach milestones (moral hazard).

National-level ownership and accountability should be accompanied by the institutionalising of project preparation within government departments to ensure a clear delineation of roles between stakeholders. Thus it is recommended that the project preparation process be anchored by the relevant line ministry or agency within any given Member State. National ownership is strengthened where the project sponsor contributes to preparation costs (as in the case of Bulawayo-Beitbridge road), as the sponsor becomes directly accountable for the project outcomes. Further, this serves as a strong signal from the private sector's perspective, of the National Government's commitment to the implementation of the project. Hence, a financial and/or in-kind contribution by national governments is preferable.

Strengthen Private-Public Partnerships. SADC Member States should be willing to strengthen their public-private sector frameworks. This principally entails creating an enabling environment through which the private sector can thrive.

Adopt Cost Reflective Tariffs and the "User Pays" Principle. To ensure sustainability, it is important that Member States adopt the "user pays" principle and/or cost-reflective tariffs for infrastructure development projects. Success in this regard has been achieved in the road sector by some countries, with the adoption of tolling systems. Examples include Zimbabwe, Zambia and South Africa. The concept can be expanded to other sectors such as water, energy and ICT.

Increase National Budget Allocations to RIDMP. An observation from this study is that few Member States are allocating resources to regional infrastructure projects from their respective national budgets. It is recommended that SADC Member States must give higher priority to regional infrastructure development through national budget allocations.

Reduce Bureaucracy and Strengthen High Political Commitment. SADC Member States acknowledge that political commitment is required to implement regional infrastructure projects. This has to be reflected in greater accountability, more efficient and effective planning, coordinating, executing, and monitoring of projects. Member State governments have the opportunity to ensure that they expedite regulatory processes such as licenses and permits, in order to accelerate the implementation of regional projects.

Strengthen Competencies. The region needs to strengthen skills and competencies in the preparation as well as implementation of infrastructure projects. This includes specialized skills ranging from technical and engineering to environmental, legal, financial, and negotiation. These skills barriers appear in the form of delayed decision-making and approvals, lengthy negotiations, inappropriate decisions, and inadequacies in contract and performance management (which can also result in the public sector getting locked into fiscally unsus-

tainable contracts that are subsequently cancelled). Assisted by the SADC Secretariat, SADC PPDF and SADC PPP, Member States should aim at creating a pool of technical experts through the development of a human capacity within the region for project identification, preparation, evaluation and marketing of infrastructure projects.

Ensure Higher Levels of Transparency. Whether real or perceived, RIDMP STAP project sponsors face transparency challenges. These may be partly because of limited competencies on the part of project owners or simply because of negative perceptions due to lack of a track record of transparency. Reports of Auditors General in Member States paint a bleak picture when highlighting lack of transparency on contract awards and flouting of extant national guidelines and rules. Transparency in tendering is the hallmark of a fair and competitive process. The tender process must be seen to meet international standards for transparency and provide a level playing field for bidders. Tender processes also determine the credibility of contractors engaged for the execution of the projects. Member States should strive to establish documented procedures that guarantee transparency in the tender process for infrastructure.

Stabilize Legal and Regulatory Environment. The economic cycle for infrastructure investments is long-term. However, the political cycle where stable legal and regulatory frameworks to support infrastructure development are derived, is often short-term in nature. This means that the stability of environment is one of high political risk for RIDMP STAP projects, especially as it relates to ensuring subsidies on user fees or feed-in tariffs are not abruptly altered or removed. Prior to presenting a project to potential investors including PPFs, Development Finance Institutions (DFIs) and Multilateral Development Banks (MDBs), project sponsors must seek to improve the legal and regulatory environment to which the project belongs.

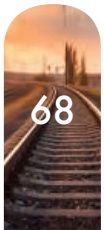
More Efficient Spending. With projects that are prepared to low quality standards, money spent during preparation is not attracting the much-needed private investment and these poorly prepared projects are not implemented. Under such circumstances the preparation costs become sunk costs. Member States need to circumvent this challenge by ensuring more efficient spending.

Bankable RIDMP STAP Projects. Funding sources and mechanisms are largely responsive to the depth and quality of the project pipeline. Project owners must therefore strengthen their capacity and competencies to produce bankable project proposals that attract the much-needed investment.

8.2. Recommendations for SADC

Oversight. It is recommended that the SADC Secretariat be involved in providing oversight and coordination of the project preparation to implementation process. Similarly, Member States should be responsible for resource mobilisation for their respective projects as well as the technical aspects of the implementation of such projects. The Secretariat, assisted by key participating DFIs, should produce standardised templates, and guidance documents, such as standardised procurement documents (EOI, RFP, RFQ) for PPP projects, and guidelines for feasibility studies, among others. These can be used by national governments and PPFs across the region and contribute to establishing uniform SADC-level standards for project documentation across Member States.

Coordination. SADC Secretariat should strive to build consensus between all stakeholders around priority regional infrastructure projects, which can form part of the regional pipeline of priority projects that can move into preparation with the full political support of the Member States involved. SADC has been playing this role already. However, it is recommended for SADC to strengthen this role through stronger consensus-building.



Operationalize the SADC Regional Development Fund. Access to adequate funding is one of the major drawbacks to the implementation of regional infrastructure projects. SADC recognises this challenge, hence efforts to establish and operationalize the Regional Development Fund (RDF), whose purpose, among others, is to mobilise funds for key infrastructure and industrialization projects, as well as implementation of the Regional Agricultural Investment Programme (RAIP) in southern Africa. Article 26A of the agreement amending the Treaty of the Southern African Development Community provides for the establishment of the RDF. Unfortunately, there have been delays by Member States in signing and ratifying the agreement required to operationalize the RDF. SADC countries are therefore urged to expedite the processes required to make the RDF a resource mobilisation reality for the region.

Project Information Gathering, Monitoring and Evaluation. One of the key contributing factors to the failure by RIDMP STAP projects to secure financing for preparation, is the lack of information for financiers to make decisions. Given the challenges associated with obtaining accurate project information, the SADC Secretariat should lead data and information collection efforts for gathering key details on regional priority projects including project sponsors, stakeholders involved, project components, estimated costs, potential risks, etc.

The SADC Secretariat is in the process of developing a web portal for project information monitoring and evaluation. This information is intended to be disseminated online through a knowledge-sharing platform based on the Africa Infrastructure Database (AID) and the NEPAD Agency's Virtual PIDA Information System, for use by Member States and PPFs. The recommendation here is for the project information gathering to be a biannual event, perhaps preceding Ministerial Meetings, so that Member States are ready with the information without having to be prompted. The progress can be reported to the Committee of SADC Ministers responsible for Infrastructure.

Promote use of the Virtual Information System for Real-Time Reporting of Regional Projects. A Virtual Information System was put in place by SADC with an objective to strengthen the monitoring and evaluation process for infrastructure projects. This system is currently not being utilised. It is recommended that Member States begin to use this platform to periodically report on and communicate issues relating to regional projects that they are undertaking.

Develop a Human Capacity within the Region for the Identification, Project Preparation, Evaluation and Marketing of Economic Infrastructure Projects. Training of infrastructure experts from Member States has been taking place through the PPDF Capacity Building Programme. The following weaknesses in the programme have been identified: (i) not enough effort to target relevant candidates for training; (ii) post-training follow-up has not been undertaken to verify effectiveness of training; and (iii) during training, focus on RIDMP Projects in preparation or implementation, to use as case studies, has not been factored in. It is recommended that a wider strategic and management reflection from SADC and DBSA (the host of PPDF) on how to best achieve results under this work area, in particular with a view to creating strategic and systemic change and momentum in capacity-building and in building a human ecosystem, rather than delivery of once-off courses (PPDF Midterm Review, SADC-EU, 2018).

Accelerate the Spatial Corridor Development Strategy. In 2008, SADC adopted the Spatial Corridor Development Strategy to create avenues through which the region's infrastructure can be consolidated. In terms of this strategy, infrastructure development projects will be focused mainly on routes that connect areas of industry with areas of trade, and in the process facilitate transport and trade facilitation, as a contribution towards the much-needed elimination of non-tariff barriers across the region. Examples include the Maputo Development Corridor, which links South Africa's landlocked provinces of Gauteng and Mpumalanga with the port of Maputo. The Beira Corridor links landlocked Zimbabwe to the Indian Ocean. The North-South Corridor seeks to develop transport infrastructure to interconnect SADC Member States with each other. The implementation of the Spatial Corridor Development Strategy needs to be accelerated as a vehicle to cover the infrastructure deficit in the region.

8.3. Recommendations for Subsidiary Organisations

Subsidiary organisations are effective pillars for policy implementation and for coordination of implementation of regional infrastructure projects. The Southern African Power Pool (SAPP), for example, continues to play a pivotal role in the development, project packaging and coordination of implementation of key regional power projects through the entire value chain, and hence offers a viable model. In addition, they are repositories of knowledge and capacity, and can be neutral brokers for the various state infrastructure agencies as well as providing key platform to address political and technical blockages to regional project implementation as a collectively owned interlocutor. To this end, the recommendations for Subsidiary Organisations are as follows:

- Strengthen the capacity of subsidiary organisations to track project implementation. SADC has established subsidiary organisations in all of the key infrastructure development sectors.
- The capacity of these subsidiary organisations must be strengthened in order to make the tracking of RIDMP STAP projects more effective.

8.4. Recommendations for the SADC PPDF

Special focus should be applied to SADC PPDF and hence there are specific recommendations commensurate with it being a direct product of the observed need to increase and improve the quantity and quality of projects prepared to bankability.

Sustainability. SADC PPDF is predominantly providing grant funding for project preparation. When grant funding is provided for project preparation, it results in a moral hazard problem due to the misalignment of incentives between the counter-party, i.e. the fund seeker and the grantor. At present the sustainability prospects for the SADC PPDF appear highly uncertain, and this is a further constraint on creating a significant impact on increasing investor interest and appetite, while building an institutional and financing ecosystem. To date neither SADC nor PPDF Secretariat has initiated any substantive steps to start a reflection process on the future of the PPDF, and if and how it might be continued beyond the current donor-financed contracting windows.

Regarding financing sustainability, the current prospects for the PPDF do not appear very strong, beyond the possibility of continuing with further donor funding. This would seem at best a low-ambition strategy, and it might also prove challenging to secure further donor financing based on the relatively limited results and momentum achieved to date (PPDF Midterm Review SADC-EU, 2018). The recommendation here is for SADC Secretariat and PPDF Secretariat to agree on SADC PPDF exploring the use of innovative models of cost recovery, such as success fees and redeemable grants in order to improve sustainability and avoid constantly drawing down on their donor financing.

Private Sector Participation in RIDMP Projects. The projects being prepared under the SADC PPDF Funding need to be marketed to investors including private sector. Even though most of the projects being prepared using SADC PPDF funding are still in the early to mid-stages of their preparation, beyond the beneficiary projects' own marketing efforts, there seems to be significant lack of a dedicated investment contact, promotion and outreach activity at the overall PPDF level, with no overall investment approach and investor outreach plan has to date having been made available from PPDF Fund (PPDF Midterm Review SADC-EU, 2018).

Asymmetric Information. The private sector's perception of SADC RIDMP STAP is that national government project owners lack the technical capacity to prepare projects to bankability, including planning and execution. The private sector believes that government bureaucracy causes delays in project approvals and in drafting the supporting regulations. The national gov-

ernment project sponsors know more about their projects than the private sector potential investors, who are sceptical about the bankability of the RIDMP STAP projects. Hence urgency in communicating the needs and opportunities in project preparation to the private sector is as important as providing incentives for leveraging financing from the private sector. Producing appropriate marketing materials which provide clear information about the project would greatly assist private sector financiers in making investment decisions.

SADC PPDF with the coordination role of SADC Secretariat should assist and advise project sponsors in their communication efforts with large private sector financiers, PPFs, DFIs and MDBs. The SADC Secretariat has done this before, when project pre-market sounding and high-level roundtable meetings were convened where interaction between private sector and project sponsors (Senior Officials and Ministers) took place for five projects – the Francistown-Nata road, Dondo Dry Port, Beitbridge Border Post, Zambia-Tanzania-Kenya interconnector, and the Rail Wagon Rolling Stock. ***This needs not to be ad hoc but a deliberate strategy formulated by the SADC Secretariat and PPDF.***

Flexibility in Funding of the PPDF. Member States can adopt flexile funding of the PPDF by Member States, allowing the states to resource the fund outside of an agreed formula, moreso if the intention is to fund the projects relating to that Member State (PPDF Midterm Review SADC-KFW, 2019).

Transfer of Responsibility for PPDF Tier 1 Prioritisation to PPDF Secretariat. There is a thinking that while the current practice is for the SADC Secretariat to undertake a Tier 1 exercise on Prioritisation, this responsibility could be transferred to the PPDF Secretariat as part of the due diligence exercise or possibly allow both the SADC Secretariat and PPDF Secretariat to collectively undertake this exercise (PPDF Midterm Review SADC-KfW, 2019).

Hosting of the PPDF. Another school of thought is that, given its political clout, the fund could be hosted in-house by the SADC Secretariat. The challenge however, is that highly specialised skills would be required to undertake this exercise in-house, and if the fund is not big enough, the SADC Secretariat may not achieve economies of scale in terms of human resource utilisation (PPDF Midterm Review SADC-KfW, 2019).

8.5. Recommendations for other PPFs

Although SADC national governments assume the ownership of the project preparation and implementation process, they may lack the skills and experience to undertake project preparation, particularly for large, complex projects. In this framework, it is envisaged that Project Preparation Facilities (PPFs) shall assist national governments throughout the project preparation cycle by providing technical and managerial assistance as well as financial resources. Specific ways in which they can assist include:

- In the early stage, PPFs can add value by guiding the national governments on legal and regulatory issues, refining the scope of the project and undertaking stakeholder engagement.
- In the mid-stage, PPFs can either undertake the feasibility study, or assist in the selection of a technical consultant. The PPF staff (or their nominated experts) can also provide oversight of the feasibility study for maintenance of quality standards.
- In the late stage, PPFs can assist national governments in liaising with public and private sector financiers, appointment of transaction advisors as well as in dealing with legal and regulatory issues.

These coordinating services are being provided by PPFs for the projects they are financing. They offer Technical Assistance as and when needed by the Member State project sponsors. However, the recommendation is that PPFs active in SADC should offer such Technical Assistance as and when needed. Table 8.1 summarises the recommendations for other PPFs in addition to the SADC PPDF, for example the AfDB-NEPAD Infrastructure Project Preparation Facility.

Table 8.1. **Challenges and Recommendations for PPFs**

Challenges Faced by PPFs	Suggested Solutions
Unsustainable funding models	Innovative and leveraged financing based on cost recovery for (i) success fees, (ii) redeemable grants and (iii) revolving funds.
Bureaucratic administration of PPF Funds	Streamlining procedures at facility level to make them (i) easily available to project sponsors and (ii) easy to understand and comply with.
Lack of involvement in early stage project preparation	Increased grant for early stage project preparation to catalyse investments at later stages.
Lack of project appraisal and managerial capacity	Increasing capacity of PPFs in order to be able to effectively oversee project preparation activities.
Lack of transparency	SADC Secretariat to coordinate standardization of the PPFs funding criteria and make the information available on the SADC Infrastructure Monitoring and Evaluation Web Portal.

PPF Sustainability. The financing model of the Project Preparation Facilities in the SADC region is predominantly non-redeemable grants. The following recommendations are made to improve the sustainability of PPFs:

i. **Returns to Private Sector.** If cost recovery mechanisms are instituted at PPFs, private sector financiers can consider infrastructure projects as assets which pay a rate of return upon reaching financial closure. Further, if upstream financiers are allowed to trade their equity investments with downstream financiers, then the time horizon for investments in project preparation can be shortened, reducing risks further and lowering the opportunity cost of capital.

ii. **PPFs Financial Sustainability.** Grant financing to RIDMP STAP projects by PPFs is not sustainable. PPFs need to recoup their investments, at least in the case where a project reaches financial closure. In all cost recovery mechanisms, it is recommended that the ultimate bearer of the project preparation costs be the supplier of the capital investment funds. Typically, this would fall on the project sponsor, but if project implementers undertake the capital investments, they should bear the project preparation expenses. While in public sector originated projects, this would fall on the government agency acting as project sponsor, in a PPP project, the risk-sharing arrangement would dictate the bearer of the preparation expenses.

iii. **Success Fees.** This is a cost recovery mechanism as well as an incentive for SADC PPFs to prepare projects to high quality standards that can raise private sector appetite as the private sector uptake of the project at financial closure will guarantee success fee payment. When a RIDMP STAP project reaches financial closure, a proportion of the total project preparation cost is charged by the PPF. On one hand, this incentivises the PPF to take as many projects as possible to financial closure; it also incentivises the PPF/PPU to stop the preparation of projects which are unlikely to reach financial closure. Hence, success fees could encourage private sector financiers to invest in project preparation, as the risk perception associated with project failure could be lower under this incentive system.

iv. **Redeemable Grants.** Under this arrangement, grants would be given to PPFs by donors under the "business as usual" scenario. However, if financial closure is reached, the grants would be repaid to the PPF and re-invested in project preparation. The advantage of this approach is that there is no requirement to provide an additional return and only

the project preparation costs need to be repaid, thus making it suitable for those projects which are economically viable but not commercially oriented.

v. **Revolving Fund.** A revolving fund is an entity in which, after the infusion of seed capital, the replenishment of the fund occurs through repayment for goods and services provided by the fund. The SADC Secretariat should coordinate contributions from SADC Member States for the seed capital, and from donors currently providing grants and concessional funding as well as private sector financiers providing more commercial forms of funding. The revenues from cost recovery would then be re-invested into project preparation and repayment of private sector loans. If the private sector financiers find that their investments yield sufficient returns, they would continue to provide investments into the fund.

vi. **Equity.** With this approach the PPF takes the full risk of project preparation by providing financing to RIDMP STAP Projects, either as a grant or loan, at any stage of the project preparation process. When the project reaches financial closure, the PPF would receive an equity stake in the project organisation, in proportion to its initial contribution to preparation. The PPF could then sell its equity stake or equity option to a private sector financier and re-invest the recouped amount into project preparation if it seeks quick recovery. Ultimately the private sector will have provided financing for RIDMP STAP project preparation.

vii. **PPPs.** PPPs realize efficiencies through thorough risk analysis and allocation to the entity that can best manage it. The early stage of RIDMP STAP project preparation carries high levels of political risk, which is best allocated to the public sector because they can manage it better. However, private sector resources can be leveraged for late stage project preparation in PPPs in two key ways:
   - *Cost Recovery*: As stated above, a condition can be placed on the private sector partner that it absorbs a proportion of the RIDMP STAP project preparation costs as part of the total project costs and repays external technical consultants or PPFs for project preparation expenses at financial closure.
   - *Detailed Design Costs*: The private sector partner may undertake detailed design after being appointed, using its own resources. Alternatively, private sector bidders may invest in the preparation of detailed implementation designs and conceptual plans as part of the competitive bidding process.

8.6. Recommendations on Private Sector Investment in Infrastructure

The participation of private sector financiers in RIDMP STAP infrastructure projects between 2015 and 2017 for early project preparation is insignificant. Private sector participation in RIDMP STAP project preparation is mostly concentrated in the mid-to-late stages, in specific functions such as consulting on feasibility studies and transaction advisory. In the implementation phase, private sector participation has been in the form EPC contracts and PPPs. In order to broaden private sector participation in RIDMP projects, there is a need for meaningful engagement with the private sector, in the following way:

Risk/Return Profile Orientation. Private Sector participation in RIDMP infrastructure investment is driven by the risk/return profile of the underlying infrastructure assets relative to other assets on the market. RIDMP project sponsors need to view projects from a commercial point of view in order to be able to distinguish between projects whose risk/return profiles are both financially and economically viable and hence attractive to private sector, from those which should be undertaken solely for their social and community level benefits and remain in the domain of public sector investment.

Partnership Approach. Project sponsors should not view the private sector as simply a source of financing, but as a source of ideas, skills and experience. A continuous dialogue needs to be fostered to understand their capacity for contribution, and they should be viewed as true development partners. This coordination must be driven from the SADC Secretariat, especially during SADC calendar events like the SADC Industrialization Week, and specific meetings organized to solicit private sector inputs into project prioritization process and selection of projects to constitute the RIDMP. It has been confirmed that this has been happening via an MoU between SADC and NBF and it is also inbuilt in the corridor governance instruments. This consultation should continue and be intensified.

It is feasible to involve the private sector in RIDMP STAP project preparation and that this can occur only in the late stages of the project life cycle, and early stage preparation would largely fall on the national governments due to concentration of political risk in the early stages. A project which clearly demonstrates this is the N4 toll road, one of the first PPPs undertaken in South Africa.

8.7. Recommendations on Climate Resilient Infrastructure

In order to mitigate the challenges posed by climate change and variability in the region, SADC Member States are encouraged to develop climate resilient infrastructure projects. The AfDB defines climate resilient investments as those that are "climate proof" because they take into account predicted changes in climate during planning, design and implementation.

In his statement on the effects of Cyclone Idai, then SADC Chairperson and President of the Republic of Namibia, His Excellency Dr. Hage Geingob emphasised the need to "reduce the impacts of climate change and variability, while stepping up efforts to enhance adaptive capacities of developing countries in line with the spirit of the Sendai Framework for Disaster Risk Reduction (2015-2030) and Article 8(4) of the 2015 Paris Agreement on Climate Change."

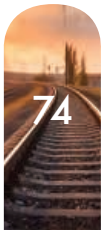
The Paris Agreement on Climate Change was adopted in December 2015 under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) with the aim of limiting global warming to an increase in the global average temperature of 1.5°C above pre-industrial levels. The Sendai Framework for Disaster Risk Reduction is a 15-year, voluntary, non-binding agreement signed in 2015 and endorsed by the UN General Assembly, which seeks to reduce disaster risk in signatory countries by 2030. The development of climate resilient infrastructure is one of the global targets of the Sendai Framework in terms of substantially reducing disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities. In addition, the Sendai Framework also seeks to significantly reduce the global disaster mortality, the number of people affected and the direct economic loss arising from such disasters while also strengthening early warning systems.

8.8. Recommendations for Financing Options and Models

The following recommendations are aimed at the Member State Governments, SADC Secretariat and the PPFs active within the region. The three institutional structures must work together to match the sources or forms of financing to the level of each project risks/return profile.

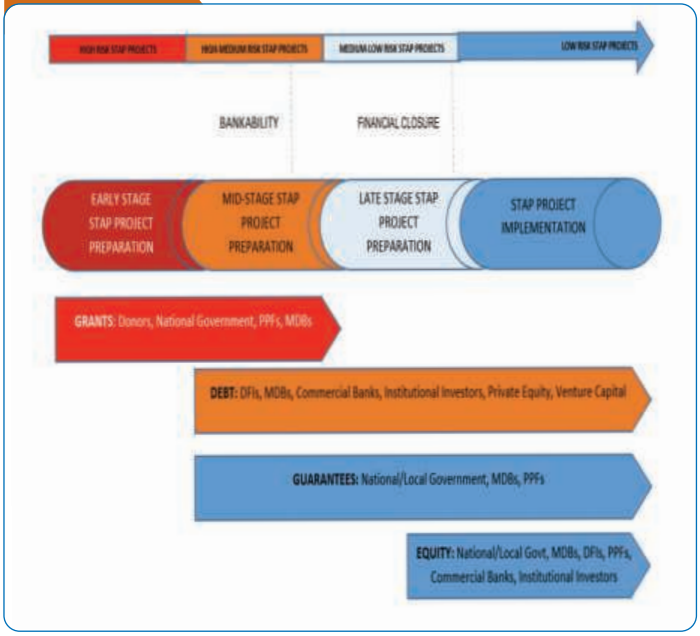
Given the risk-return profile of infrastructure projects, the appropriate source and form of financing should be matched at the project preparation stage to realise efficiencies by matching the most suitable type of funding to the appropriate risk-return profile.

Matching the correct source or form of financing on the supply side with the given risk-return profile on the demand side can result in a market equilibrium with optimal levels of



investment. Hence, efficiencies can be realised by matching the risk-return profile desired by financiers with the appropriate project preparation stage. Donors, governments, PPFs, MDBs and the SADC Secretariat must focus sufficient attention to early stage project preparation so that project information and required documentation (quality) to take the projects to mid-stage and late stage are available. If this element of quality is achieved in the early stage project preparation, it is a tool that the SADC Secretariat, national governments and PPFs can use to market the projects to matching forms (debt and equity) and guarantees resulting in a pipeline (quantity) of well-prepared bankable projects with the potential of attracting private sector investment.

Figure 8.1. Matching Source/Form of Funding to Project Risk-Return Profile



Source: Infrastructure Consortium for Africa, 2014

Guarantees and Risk Mitigation Instruments

There is not noticeable widespread use of guarantees and risk mitigation instruments designed for the specific application to RIDMP and RIDMP STAP projects. This is regardless of RIDMP STAP projects being seen as high risk. DFIs, IFIs and MDBs offer guarantees and risk mitigation instruments with the aim of assisting in leveraging private sector financing. Since guarantees cover commercial and political risks throughout the project development cycle, they improve the risk-return profile of the infrastructure investment, thereby making the investment more attractive for private sector financiers. Guarantees directly assist in mitigating non-repayment and political risks and have been very effective tools for leveraging finance in the late project preparation stage from the private sector for reaching financial closure. Private sector financiers perceive the provision of risk-insurance products, first-loss positions in projects, and other risk mitigation instruments by MDBs, DFIs and IFIs to be even more important than their grant-making functions.

Public Financing

Public financing of infrastructure has traditionally been the norm for financing of infrastructure projects. However, owing to the growing and competing needs within the public sector financing framework, in particular the socio-economic areas of health, education and other utility deliveries, the public sector has in recent years reduced its role in infrastructure financing, save where international financing partners are meeting almost all the costs of the project. The state has tended to finance high risk areas, which in the main, the private sector does not deem viable.

Domestic Resource Mobilisation

Domestic resources can be mobilized from domestic taxes, minerals and fuel, banking revenues, stock market capitalization, private equity markets, diaspora remittances and curbing illicit financial flows, all of which can potentially raise substantial amounts of money. It is necessary to create Special Purpose Vehicles as funding instruments for utilization of such funding. It is also on this basis that Africa has recommended the creation of the Africa 50 Fund coupled with, among others, the African Credit Guarantee Facility (ACGF), deepening bond markets on the continent and establishment of Sovereign Wealth Funds. Ultimately, the strengthening of Public Private Partnerships and related frameworks remains key to the success of Domestic Resource Mobilisation (DRM).

The enhancement of DRM in the region is desirable, as greater reliance on internal resources increases ownership of public policy, ties accountability to citizens instead of external investors and partners and avoids volatility arising from outside funding. DRM requires a stable macroeconomic environment, a well-structured financial sector with a competitive banking sector.

On the other hand, most Sub-Saharan African countries depend on taxes as a source of revenue, while the revenue authorities remain weak with a narrow tax base, which is prone to tax evasion. The average tax revenue constitutes about 18 percent of GDP while the ratio in resource rich countries is about 25 percent. It is critical that states build capacity for revenue collecting institutions to enhance their effectiveness.

There are many shining examples in Africa where DRM and PPPs have taken root, among them, the Grand Ethiopian Hydro Power Scheme with more than 50 precent local commercial funding, the New Limpopo Bridge between South Africa and Zimbabwe, and the Beitbridge-Bulawayo Railway in Zimbabwe, which were premised on the Build Operate and Transfer (BOT) models.

Private Sector Financing

There has been phenomenal growth in private sector financing of infrastructure in recent years, with the communications and ICT sectors taking a lead in attracting private sector investment, given demonstrable adequacy of cash flow and acceptable rate of return. In all such cases, the element of risk has been perceived to be very low. The structure of private sector financing has been the constitution of consortiums with a defined equity structure in the investment (e.g. the Maputo Corridor Development and the New Limpopo Bridge). This option avoids crowding out of private sector by government and facilitates confidence building between government and private sector. It ultimately sends out positive signals within the international setting and relieves pressure on the state for infrastructure financing and maintenance, thereby availing capacity for mandatory social welfare spending.

Public Private Partnerships

In a number of other cases, when the government sees infrastructure as strategic, it has bought equity directly or indirectly in the project. Government can also provide guarantees in order to reduce risk when partnering with the private sector on a Build Operate and Transfer (BOT) framework, where after an agreed period (say 30 years), the private sector wholly transfers the assets and management to the state. There are also cases of the Build Own Operate Transfer (BOOT), Lease Rehabilitate Operate Transfer (LROT), the Build Transfer Lease (BTL) and Joint Ventures (JVs). The Bulawayo Beitbridge Railway, Gautrain, Sena Rail Line, Kazungula Bridge, are typical examples of Public Private Partnerships (PPPs).

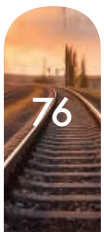
Grant funding

Grant funding from the public sector, donors and PPFS should be used largely in the early to mid-stages of project preparation; for tasks relating to the creation of an enabling environment, project definition, and pre-feasibility and feasibility phases for the following reasons:

- Grant funding is becoming scarcer taking into account the long list of RIDMP STAP projects and the amounts required to prepare them. As such, Grants must be focused on leveraging additional financing;
- In the absence of financial innovation to reduce risk, private sector financiers are reluctant to invest in the early stages of RIDMP STAP project preparation tasks; and
- Where national governments make financing contributions to project preparation it has been shown to have a catalytic impact in attracting financing from other sources as risk and moral hazard is reduced in the project preparation process.

Debt Financing

Debt financing for RIDMP STAP projects should be used from mid-stage project preparation



onwards. This is because value addition from early stage project preparation increases project worth and uncertainty reduces, implying that it becomes progressively easier to involve financiers with lower risk appetites.

In the mid stages of STAP project preparation, concessional loans can be taken by the project sponsor from MDBs or DFIs or PPFs and blended with grants, particularly for those projects which show the promise of commercial viability at pre-feasibility. This takes into account the fact that MDBs and DFIs, which have an AAA rating, are able to obtain lower cost capital on international capital markets to fund the projects.

Using concessional loans would lower the financing cost of the feasibility stage tasks.

Post the feasibility stage, more commercial forms of debt financing can be used in the project structuring and transaction stages, as the risks associated with the project reduce. The costs of project preparation for these stages can be repaid at financial closure, alongside an additional return on the investment by the project implementer through cost recovery mechanisms.

Equity

Equity financing for RIDMP STAP projects should be used in the later stages of project preparation. The reasons are that in the early stages of project preparation equity financing from private sector financiers is difficult to access for public-sector originating projects due to the high levels of risk. Further, the returns expected by equity financiers would be very high due to the high levels of risk.

Private sector financiers, such as private equity funds, venture capital, commercial banks and institutional investors, would become more inclined towards purchasing an equity stake in the project organisational once the uncertainty of the early stages has waned, the project bankability has been established and the project implementing organisation structure has been decided.

Equity investments from private sector financiers such as institutional investors, private equity funds and venture capital funds, can be routed through specialised infrastructure funds, or can be provided directly to the project company. These can be encouraged further by providing guarantees as shown in Figure 8.1.

Pension Funds and insurance Reserves

Owing to the increasing demand for funding of infrastructure, there is high propensity to utilise Pension and Insurance Funds. The main challenge for these options is the need to ensure that the funds get good returns from such investments. In any case, these two funding modalities have been applied to develop numerous real estate projects, and there are expectations that some viable infrastructure projects could compete aggressively in terms of returns.

As a first step towards leveraging funding from these sources, it is critical to develop the instruments that can be applied to "sell money" to infrastructure investors. However, given that this is new terrain, these funds largely remain in exploratory stages, with the hope of becoming a reality in the near future.

Climate Finance

One of the innovative ways of funding infrastructure is the application of climate funding, in the form of the Green Climate Fund (GCF) and the Global Environmental Fund (GEF). The GCF is a unique global platform aimed at responding to climate change through investing in low emission and climate resilient development. The fund, headquartered in Korea, was established to limit or reduce Green House Gas (GHG) emissions in developing countries and help vulnerable societies adapt to avoidable impacts of climate change.

In the area of infrastructure, GCF supports energy, transport and water security projects for both public and private sectors. About 26 percent of projects approved by GCF are for the Africa region focusing on adaptation, mitigation and crosscutting sectors.

The GCF programme supports the entire value chain of a project, from preparation, feasibility, project financing and attendant transaction management support. The support takes the form of direct funding, blending and co-funding with other partners. GCF approved 42 new projects in 2018.

The Global Environment Facility (GEF) funds are available to developing countries and countries with economies in transition to meet the objectives of the international environmental conventions and agreements. GEF support is provided to government agencies, civil society organizations, private sector companies, research institutions, among the broad diversity of potential partners, to implement projects and programmes in recipient countries. [11]

A number of States are beneficiaries of climate financing, advanced for the purposes of project preparation, Readiness Support Facilities for Climate financing as well as investment. A number of institutions have been accredited by GCF and GEF to provide agency support, and these include the United Nations Development Agency, African Development Bank and the Development Bank of Southern Africa. Examples of countries that are receiving support in Africa include Zambia and Uganda for National Adaptation Plans Readiness Support, through AfDB. Burundi and Eswatini have also submitted requests for support in this area. On the infrastructure side, two key projects for LLDCs include the Livingstone Climate Resilient WASH Project in Zambia. Others include the Mali Solar Rural Electrification Project at a cost of US$39.1 million, and the Yeleen Rural Electrification Project in Burkina Faso to support 50,000 households.[12]

Sovereign Wealth Funds

SADC Member States could create sovereign wealth funds with a specific infrastructure component. This can be a useful way to harness revenues from natural resource commodities that they are endowed with. Some African countries, including Nigeria, have already set up such funds but this is yet to be widely adopted by the SADC region.

Diaspora Bonds

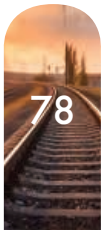
These are long term debt instruments targeted at mobilising the savings of the emigrant population. These bonds provide emigrants with an alternate way of contributing to the development of their home country, as well as a means of saving, as opposed to remittances which are largely used for consumption expenditure. SADC Member states such as Zimbabwe have the potential to leverage diaspora bonds to significant amounts due to the number of Zimbabweans working in the diaspora. This is true for many other SADC countries but this potential is not yet fully tapped.

PIDA Funding

Projects can also be funded through the facilitation of the Programme of Infrastructure Development in Africa (PIDA). The projects are supported by five funding instruments under PIDA – (i) the PIDA Service Delivery Mechanism; (ii) the Continental Business Network; (iii) the Policy & Regulatory Support; (iv) Monitoring, Evaluation and Information Management; and, (v) the Presidential Infrastructure Champion Initiative (PICI). These are further supported by a crosscutting instrument, the PIDA Capacity Building (PIDA CAP). Coupled with PIDA funding is the NEPAD Infrastructure Projects Preparation Facility (NEPAD IPPF), managed by the African Development Bank.

[11] The Global Environment Facility (GEF)

[12] Global Water Partnership Southern Africa, Water and Climate Development Programme (WACDEP), 2019.



CONCLUSIONS AND WAY FORWARD

The overall picture drawn from the assessment of the Regional Infrastructure Development Master Plan (RIDMP) Short Term Action Plan (STAP) is that SADC Member States are lagging behind in the implementation of identified projects. At the close of the first phase of RIDMP, 95 percent of targeted projects remain incomplete, an indication that regional infrastructure projects are going through stagnation. The study attributes this unfavourable position to various factors.

One of the reasons is that there is insufficient spending on infrastructure in the region. For example, infrastructure spending in Africa is about 3.8 percent of GDP, whereas India and China spend 4.7 percent and 8.5 percent of GDP respectively.

In addition, the study observed how there is a funding mismatch between Member States and funding partners. Member States cite the lack of funding for infrastructure projects, whether national or regional, yet the funding institutions are looking for viable projects to invest in. This is because few projects have properly prepared bankable proposals that attract funding.

Further to this, the SADC PPDF, a fund established to capacitate the region with resources to develop bankable project proposals, is inadequately resourced. This explains why just six percent of the projects assessed in terms of this study, have accessed support from this facility.

Another reason why Member States have not been able to mobilise adequate funding for their respective infrastructure projects is that they generally have a skills and capacity challenge where the preparation and implementation of infrastructure projects is concerned. Such competency limitations have resulted in the lack of properly structured and bankable projects, a situation slowing the flow of capital to RIDMP projects.

The region has found it challenging to attract the involvement of the private sector in priority projects. This has been attributed to the lack of a conducive and enabling environment, the absence of cost-reflective tariffs and the challenges of structuring Public Private Partnerships (PPPs). In an environment in which project owners are finding it difficult to raise adequate project funding, the private sector is therefore relevant, subject to the creation of an enabling environment in which PPPs would thrive.

Moreover, there is an unclear delineation of roles between Member States and the Secretariat in that while the SADC Secretariat plays a facilitative and oversight role, some Member States have the misconception that the SADC Secretariat should act as the project sponsor. This has contributed to the inertia around projects, in some instances.

Further to this is the misalignment between regional and national priorities in terms of infrastructure development. Member States may find more value in implementing certain national projects as opposed to those of a regional nature. This explains why the national project priority list does not always mirror regional priorities. Linked to this is the observation that the preparation of regional projects is much more complex in comparison with national projects, due to the involvement of more than one jurisdiction as policy and regulatory frameworks may vary from country to country. Various countries involved in the same project may have different "ease of doing business" indices and credit ratings, factors which combine to complicate the implementation of such projects.

Regional projects are also being affected by institutional challenges, which manifest at the level of Member State, Secretariat, Subsidiary Organisation and PPDF. For example, the reliance of the PPDF on grant funding is not sustainable in its current form. Furthermore, most SADC Subsidiary Organisations lack the capacity to discharge their coordinative roles in project implementation as well as in project monitoring and evaluation.

Apart from this, projects are being stifled by the lack of political will. This is typified by shifting priorities due to changes in political administrations and would explain why in some instances, projects would have numerous feasibility studies, yet remain stagnant.

The effects of climate change and variability on regional infrastructure cannot be ignored, given the frequent and increasingly intense climatic events such as droughts, floods

and cyclones. The adverse impacts of Cyclone Idai and Cyclone Kenneth on infrastructure and human life, within affected Member States, are clear examples. Evidently, this calls for greater investments in climate resilient infrastructure.

With priority projects stalling, southern Africa's infrastructure gap is widening even further, a situation which does not augur well for the region's developmental and poverty eradication goals. To mitigate these challenges, it is clear that greater capacity support would be required to strengthen existing weaknesses and enable the full realisation of the SADC Infrastructure Vision by 2027.

9.1 Lessons Learnt

A number of lessons have been derived from the review of the implementation of the SADC RIDMP Short Term Action Plan. The region has made some concerted efforts towards the implementation of STAP projects, but has faced some constraints in the process. These constraints entailed, among others, a limited pipeline of bankable projects coupled with limited resources and capacity for project preparation; limited investment funding; a complex and weak institutional framework at national, regional and continental levels sometimes with limited clarity of the mandates for the key role players; changing priorities over the duration of the STAP phase largely at national levels; differences in priority by different states on cross-border projects; donor fatigue in respect of support to infrastructure projects. There is therefore an expectation that the lessons learnt can inform the next phase of priority projects.

9.2 Proposals for the Way Forward

Prioritisation of Projects

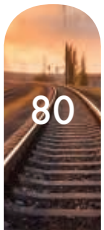
The region undertook a prioritisation of projects as part of the development of the Revised RISDP 2015 – 2020, whose main criteria was to identify those projects that have a strong regional impact and would catalyse industrialisation as per the RISDP 2015-2020 priorities. In this regard, out of the 397 infrastructure projects in the RIDMP, 239 high-impact priority projects were identified, with corresponding indicative coordination costs amounting to US$253 million and total indicative investment costs amounting to US$398 billion for the period 2015-2020. Given that the implementation of the RISDP 2015-2020 is due to come to an end in 2020, there is need to re-craft a new Short Term Action Plan covering the period 2020-2025 or some kind of a compendium of priority projects as a successor to the projects prioritised for the RISDP 2015-2020. In addition to the development of this plan, there is need to re-affirm the criteria for priority projects as well as undertake a due diligence to confirm that these projects display the necessary attributes as defined by the agreed criteria.

Institutional Arrangements

Given the challenges encountered with implementation of the RIDMP STAP between 2012 and 2017, there is need to ensure re-alignment and strengthening of the institutional framework for the implementation of the next phase of the RDMP. This process would entail strengthening the capacity of the Secretariat to facilitate and coordinate regional infrastructure projects with the member States, as well as the mandated officials at the level of member States through provision of tailored capacity building programmes. This would reduce the cost of implementation as well as the timeframes for the project cycle value chain.

RIDMP Monitoring and Evaluation Framework

Given the need to strengthen regular review of projects, there is a critical need for the Secretariat and Member States to put in place a robust Monitoring and Evaluation Framework for regional projects, which would enable the project owners to proactively address challenges and bottlenecks arising with project implementation from time to time. Monitoring and Evaluation is an integral part of the RIDMP implementation framework. It is critical for the Secretariat to establish a Project Coordination Unit that provides a real time facilitator role to ensure prompt and continuous support to Member States. A Virtual Information System that was put in place by SADC, supported by NEPAD, provides a real time reporting system for regional projects. It is proposed that Member States begin to use this platform to periodically report on and communicate issues relating to regional infrastructure projects implementation.



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APPENDIX 1 Respondents to RIDMP STAP Questionnaires

	Name of Respondent	Job Title	Ministry/ Agency	Country	Projects Submitted
1.	Lutina Mulongo Gabriel	Focal Point - Office of Road Transport	Ministry of Infrastructure, Public Works and Reconstruction	DRC	• Rehabilitation and construction of Kisantu-Ngidinga-Kindopolo road to Angolan border Mbazasosso (117 km) • Rehabilitation and construction of the Lubumbashi-Bukavu road (1402 km) • Rehabilitation and construction of the Tshikapa-Kananga-Kisangani road (1524 km)
2.	Jules Basubi	Economic advisor to the Minister of Transport	Ministry of Transport and Communication	DRC	• Rehabilitation of Kalemie Harbour • Rehabilitation of the Kolwezi-Dilolo Railway • Project to Rehabilitate the Sakania And Tenke Railway
3.	Bayete Mahlala	Assistant Economic Planner	Ministry of Communications, Science and Technology	Lesotho	• Digital Migration/ Transforming Broadcasting Mode
4.	S. Seelochun	Director Port Development	Mauritius Ports Authority	Mauritius	• Bunker Jetty at Fort George, Port Louis
5.	Eng. Gabriel M. Kalinga	Head of Interim Secretariat of Songwe River Basin Commission (IS-SRBC)	Songwe River Basin Development Programme	Tanzania	• Lower Songwe Dam and Hydropower Plant Project • Lower Songwe Irrigation Scheme Project (6,200Hectares) • Water Supply for Kasumulu (Tanzania) and Songwe (Malawi) Small Towns and Communities Downstream of Lower Songwe River
6.	Eng. A. Chinemba	Energy Engineer	Ministry of Energy	Tanzania	• Tanzania-Mozambique Interconnector • ZTK Interconnector • Kikonge Hydro-electricity project • Fufiji Hydro-electricity project • Ruhuji Hydro-electricity project • Rumakali Hydro-electricity project • Songwe Hydro-electricity project
7.	Manga Gametousy Gassayah	Principal Planning Officer	Tanzania Ports Authority (TPA)	Tanzania	• Kisarawe Freight Station
8.	Nzeyimana Dyegula	Planning and Investments Manager	Tanzania Railways Corporation	Tanzania	• Construction of standard gauge railway from Isaka-Keza- Kigali-Musongati railway line • Construction of Standard Gauge Railway from Mtwara-Mbamba railway with spurs to Liganga and Mchuchuma
9.	Elizabeth Tagora	Director of Policy and Planning	Ministry of Works, Transport and Communication	Tanzania	• Manyni- Tabora-Kigoma Road Rehabilitation • Makamboko-Songea Road Rehabilitation • Dar es Salaam- Chalinze Expressway
10.	Bornwell N. Sinkala	Technical Manager – Batoka North Bank Project	ZESCO / Batoka North Bank Power Corporation Limited	Zambia	• 2400MW Batoka Hydroelectric Scheme
11.	Clement Chiwele	Chief Engineer Senior Manager – Renewable Energy	Office for Promoting Private Power Investment, Ministry of Energy	Zambia	• Kalungwishi Hydropower Project (247mw) • Lufubu Hydropower Project (326mw) • Mulembo-Lelya Hydropower Project (100mw)
12.	Mundia Simainga	Senior Manager – Renewable Energy	ZESCO Limited	Zambia	• Luapula Hydro-electric Power Project
13.	Kennedy Mwanza	Project Manager – Transmission Projects – North	Ministry Of Energy/Zesco	Zambia	• Solwezi - Kolwezi Interconector • Zambia - Mozambique Interconector • Zambia - Tanzania- Kenya Interconector (Ztk)
14.	Arnold Mulenga	Senior Planner	Ministry of Housing and Infrastructure Development	Zambia	• Rehabilitation of Great East Road from Lusaka to Luangwa bridge road • Kafue - Lion's Den Feasibility Studies and Engineering Designs (Approx. 200Km) • Construction of Livingstone – Sesheke Railway Spur (Approx. 200 Km) • Rehabilitation of Livingstone - Kazungula - Sesheke Road • Upgrade and modernisation of Mpulungu Port • Construction of Mwami/Mchinji One Stop Border Post(OSBP) • Construction of Nseluka – Mpulungu railway spur (175Km) • Construction of Chipata – Petauke - Serenje Greenfield Railway Spur (Approx. 388km)

Respondents to RIDMP STAP Questionnaires

	Name of Respondent	Job Title	Ministry/ Agency	Country	Projects Submitted
14.					• Rehabilitation of T1 from Kafue (Turnpark) to Mazabuka Road • Lobito Development Corridor- TAH9 Beira-Lobito Corridor: Lobito Roads • Serenje- Mpika Road
15.	Tatenda Mawokomatanda	Chief Engineer Water Resources Planning	Ministry of Environment, Water and Climate	Zimbabwe	• Beitbridge Cross Border Water Supply project • Chirundu -Cross Border Water Supply Project • National Matabeleland Zambezi Water project

APPENDIX 2 List of Original RIDMP STAP Projects

ENERGY SECTOR PROJECTS

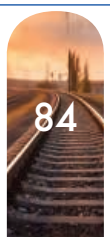
Project	Benefiting Member States	Region	Project Cost Estimate ($ million)	Expected Completion Year
Mozambique Backbone Transmission Lines Phase I and II	Mozambique	SADC	1,700.00	2016
ZIZABONA 400kV transmission lines, 408 km	Zimbabwe, Zambia, Botswana, Namibia	SADC	223.00	2015
ZTK Interconnector 400 HVAC transmission line, 700 km	Zambia, Tanzania, Kenya	SADC/ COMESA/ EAC/ PIDA PAP	860.00	2016
Central Transmission Corridor Network (CTC) Phase II To strengthen power transmission capacity, particularly the 280 km Alaska – Sherwood line	Zimbabwe	SADC/ PIDA PAP	100 .00	2016
DRC-Zambia Interconnector 330 kV Transmission Line from Solwezi to Kolwezi	DRC, Zambia	SADC/ PIDA PAP	94.00	2016
Namibia – Angola Interconnector	Angola, Namibia	SADC/ PIDA PAP	250.00	2016
DRC – Angola Interconnector	Angola	SADC/ PIDA PAP	95.00	2016
2nd South Africa – Zimbabwe Interconnector	South Africa, Zimbabwe	SADC/ PIDA PAP	280.00	2017
2nd DRC – Zambia Interconnector	DRC and Zambia	SADC/ PIDA PAP	80.00	2017
Mozambique – Malawi Interconnector	Mozambique – Malawi	SADC/ PIDA PIDA	93.00	2015
Cahora Bass North Bank Power Station	Mozambique	SADC	800.00	2017
Mpanda Nkuwa Hydro Power Station – Phase 1	Mozambique	SADC/PIDA PAP	2,000.00	2016
Hwange Power Station 7 and 8 Expansion Project	Zimbabwe	SADC	1,080.00	2017
Gokwe North Power Station	Zimbabwe	SADC	2,240.00	2017
Inga III Hydro Power Project	DRC	SADC	1,730.00	2018
Kudu Gas power Station	Namibia	SADC	640.00	2016
Total			**12.27 billion**	

TOURISM SECTOR PROJECTS

Project	Benefiting Member States	Region	Project Cost Estimate ($ million)	Expected Completion Year
Upgrading of the Sani Pass road from Himeville to Mokhotlong (Maloti/Drakensberg TFCA)	Lesotho, South Africa	SADC	62.50	2014
Relocation of Sani Pass Border Post (Maloti/Drakensberg TFCA)	Lesotho, South Africa,	SADC	6.20	2014
Limpopo River Crossing(GLTFCA) – Kruger and Gonarezhou	South Africa, Zimbabwe	SADC	2.40	2014
Upgrading of the Barberton to Piggs Peak road (Lubombo TFCA)	Swaziland	SADC	10.00	2014
Construction of the Dinosaur Interpretative Centre at Golden Gate National Park (Maloti – Drakensberg TFCA)	South Africa	SADC	28.00	2014
Upgrading of Joel's Drift to Monontsa Pass Road and Border Post (Maloti –Drakensberg TFCA)	Lesotho	SADC	42.00	2016
Upgrading of Ha Mpiti to Sehlabathebe National Park via Ramatseliso's Border Gate (Maloti – Drakensberg TFCA)	Lesotho	SADC	112.50	2016
Upgrading of Ongeluksnek Pass and establishing the One Stop Border Post (Maloti – Drakensberg TFCA)	Lesotho	SADC	36.00	2016
Upgrading of Aliwalskop to Telebridge Road (Maloti – Drakensberg TFCA)	Lesotho	SADC	7.20	2016
Usuthu Gorge (Mambane) Community Conservation Area Fencing (Lubombo TFCA)	Swaziland	SADC	7.00	2016
Construction of access bridge between Mooiplaas and Doorhoek Gate, Songimvelo Nature Reserve (Lubombo TFCA)	South Africa	SADC	3.00	2017
Development of a tourist link road alongside the Komati River, linking the Songimvelo and Malolotja game reserves (Lubombo TFCA)	South Africa, Swaziland	SADC	1.50	2017
Policy harmonisation, institutional strengthening and strategy development	All SADC Member States	SADC	1.20	2017
Development of marketing tools and systems, as well as building capacity to create awareness for the UniVisa	Pilot members: Angola, Mozambique, Namibia, Swaziland and Zimbabwe	SADC	1.50	2017
Development and marketing of trans-national tourism products for the Vanilla Islands States	Mauritius and Seychelles	SADC	3.00	2017
			324 million	

WATER SECTOR PROJECTS

Project	Benefiting Member States	Region	Project Cost Estimate ($ million)	Expected Completion Year
Inga Hydro-power	DRC-shared regional electricity	SADC	8.0	2017
Lesotho Highlands Phase II	Lesotho, South Africa	SADC	1.0	2017
Batoka Gorge Hydo-power	Zambia, Zimbabwe	SADC	3.5	2015
Songwe River Basin	Malawi, Tanzania	SADC	0.22	2017
Okavango Multi-sector Investment	Angola, Botswana, Namibia	SADC	0.015	2016
Limpopo Joint Water Monitoring	Botswana, Mozambique, South Africa, Zimbabwe	SADC	0.007	2016
Lomahasha/Namaacha Water Supply and Sanitation	Mozambique, Swaziland	SADC	0.250	2017
Institutional capacity enhancement, policy reform and harmonisation projects	All Member States, River Basin Organisations and Water Utilities	SADC	0.490	2013 – 2017
Total			**13.48 billion**	



ICT SECTOR PROJECTS

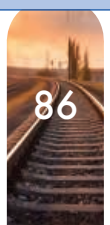
Project	Benefiting Member States	Region	Project Cost Estimate ($ million)	Expected Completion Year
Digital Terrestrial Television (DTT) migration support to SADC Member States	All SADC Member States	SADC	0.77	2012 – 2016
SADC Region Information Infrastructure (SRII) Phase II	All SADC Member States	SADC	125.155	2012 – 2016
Ensuring confidence in, and security of networks and services	All SADC Member States	SADC	0.830	2012 – 2017
Regional/National Internet Exchange Points (IXPs)	All SADC Member States	SADC	0.211	2012 – 2015
SADC Regional and National Integrated Broadband Infrastructure	All SADC Member States	SADC/PIDA	21,000.00	2013 – 2017
Development of a shared satellite network to connect remote research centres, schools, meteorology stations, wildlife conservation posts, border posts, clinics, emergency services and postal branches	All SADC Member States	SADC	0.94	2013 – 2017
Implementation of postal code addressing systems	All SADC Member States	SADC	110.00	2012 – 2016
Extension of national postal branch networks to more locations, especially in rural areas	All SADC Member States	SADC	0.085	2012 – 2016
Improving the use of ICT in postal systems	All SADC Member States	SADC	140.07	2013 – 2016
Regional Global Monitoring System (GMS) for mail QOS measurement	All SADC Member States	SADC	10.00	2012 – 2014
Establishing a Regional Centre of Excellence for ICT and postal systems	All SADC Member States	SADC	1.50	2013 – 2015
Development and review of the enabling policy and regulatory environment to maximise ICT infrastructure deployment	All SADC Member States	SADC	1.766	2012 – 2017
Development of the SADC ICT Observatory	All SADC Member States	SADC	0.301	2012 – 2015
ICT Capacity Building and Content (broadcasting and universal ICT education programme)	All SADC Member States	SADC	0.784	2013 – 2017
Community Empowerment Programme	All SADC Member States	SADC	1.84	2013 – 2017
Regional/national e-services and applications development (e-commerce and e-post)	All SADC Member States	SADC	6.988	2012 – 2017
Promote improved collaboration, information and knowledge sharing between research centres	All SADC Member States	SADC	5.135	2013 – 2015
Development of ICT equipment manufacturing, software and applications	All SADC Member States	SADC	0.375	2013 – 2016
Total			**21.40 billion**	

TRANSPORT SECTOR PROJECTS

Project	Benefiting Member States	Region	Project Cost Estimate ($ million)	Expected Completion Year
Mtwara - Liganga - Muchuchuma - Songea - Mbamba Railway	Tanzania, Zambia, Malawi and Mozambique	SADC Mtwara Corridor	1,386	2012 – 2017
Manyoni - Tabora - Kigoma Road Rehabilitation	Tanzania, Rwanda, Burundi and DRC	SADC Tripartite Central Corridor	450	2012 – 2017
Kisarawe - Dar-es-Salaam construction of ICD	Tanzania, Rwanda, Burundi, DRC, Malawi and Zambia	SADC Dar es Salaam and Central Corridors	120	2012 – 2017
Kolwezi - Dilolo Road (Angola border, SADC Route 20, 426 km) Rehabilitation	DRC, Zambia and Angola	SADC Lobito Corridor	2	2012 – 2017
Kinshasa - Inkisi - Ngindinga - Mbanza Sosso Road (Angola border, 120 km) Rehabilitation	Angola, DRC	SADC Malanje Corridor/PIDA TAH 3	120	2012 – 2017
Kisangani - Niania - Bunia - Beni- Kasindi (Uganda border, 845 km) Rehabilitation	DRC, Rwanda, Uganda, Tanzania and Kenya	SADC Tripartite Northern and Central Corridors	700	2012 – 2016
Tshikapa - Angola border (117 km)	Angola and DRC	SADC Malanje Corridor	118	2012 – 2016
Kolwezi - Dilolo railway Rehabilitation	DRC, Zambia and Angola	SADC Lobito Corridor	250	2012 – 2016
Kinshasa - Ilebo Railway Link Construction	DRC, Zambia, Zimbabwe, South Africa, Botswana, Tanzania	SADC NSC, Trans-Caprivi, Beira and Maputo Corridors	8	2012 – 2016
Ponta Techobanine, Mozambique - Heavy Haul Railway Line And Port	Mozambique, Botswana, Zimbabwe, South Africa, Swaziland	Maputo Corridor, North-South Corridor	1.7	2012 – 2019
Sena Line Railway Rehabilitation and Upgrade	Mozambique, Zambia, Zimbabwe	Beira Corridor	200	2013 – 2015
Nacala Line And New Coal Terminal	Mozambique, Malawi	Nacala Corridor	1.5	2012 – 2015
Nacala Port Modernisation And Expansion	Mozambique	Nacala Corridor	200	2012 – 2014
Mbinga – Mbaba Bay Road Upgrade	Tanzania	Mtwara Corridor	53	2013 – 2016
Institutional projects: road user charging systems (RUCS), harmonisation of corridors, standardised Commercialised Road Management (CRM) assessment study, establish regional transport competition authority, coordination and facilitation of air transport	All SADC Member States	SADC/COMESA/EAC	38	2012 – 2017
Institutional initiatives: continue the commercialisation of regional airports, ANS, withdrawal of government participation in national airlines, continue commercialisation, including land loading of ports	All SADC Member States	SADC/ COMESA/EAC		2012 – 2017
Total			**16.65 billion**	

METEOROLGOY SECTOR PROJECTS

Project	Benefiting Member States	Region	Project Cost Estimate ($ million)	Expected Completion Year
AMESD Project	Angola, Botswana, Namibia, Lesotho, Malawi, Mozambique, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe	SADC	1.95	May 2013
Institutional Support to African Climate Centre Institution Project (ISACIP)	All Member States	SADC	4.00	March 2013
Strengthening of Observation Network in the SADC Region	All Member States	SADC	85.60	2013 – 2017
ClimDev-Africa	All Member States	SADC	68.70	2014 – 2017
Improvement of meteorological telecommunications and communication systems	All Member States	SADC	4.23	2013 – 2017
Improvement of technical capacity levels	All Member States	SADC	5.65	2013 – 2015
Improving the understanding of applying climate information to socio-economic benefits	All Member States	SADC	2.16	2013 – 2015
Strengthening the institutional capacity of the NMSs institution	All Member States	SADC	10.77	2013 – 2015
Strengthening the capacity of the regional climate and meteorological units of SADC (CSC, MASA, and RIC)	All Member States	SADC	8.97	2013 – 2015
Total			**192.00 million**	



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