

# Managing River Basin Investment Portfolios

Exchanging Experiences across African RBOs



Published by:  
Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH

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## Abbreviations

### *River Basin Organisations*

ABAKIR – Authority for Lake Kivu and the Ruzizi

CICOS - Commission Internationale du Bassin Congo-Oubangui-Sangha

LIMCOM – Limpopo River Commission

LCBC – Lake Chad Basin Commission

LVBC – Lake Victoria Basin Commission

(OMVS) - Senegal River Basin Development Organisation

OKACOM - Permanent Okavango River Basin Water Commission

NBI – Nile Basin Initiative

NBA – Niger Basin Authority

VBA – Volta Basin Authority

### *Other abbreviations*

AfDB – African Development Bank

AU – African Union

CEMAC - Economic and Monetary Community of Central Africa

EC – European Commission

GWP – Global Water Partnership

IFC – International Financing Corporation

NELSAP - Nile Equatorial Lakes Subsidiary Action Program

PIDA – Programme for Infrastructure Development in Africa

PIDACC – Programme for Integrated Development and Adaptation to Climate Change in the Niger Basin

RBO – River Basin Organisation

REC – Regional Economic Community

RRFP - Regional Rusumo Falls Hydroelectric Project

SADC – Southern African Development Community

WRM – Water Resource Management

# Executive summary and recommendations

## Summary

*Sharing best practice around infrastructure investments in river basins*

This paper is the product of a series of webinars facilitated by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and co-hosted by the Programme for Infrastructure Development in Africa (PIDA) and the Nile Basin Initiative (NBI). The webinar series focused on sharing insights and build best practice around facilitating infrastructure investments in the different river basins. The audience for the webinar series was RBO senior staff and AU PIDA, AfDB and GWP senior staff who work with African RBOs.

*The role of RBOs in infrastructure development can be enabling, identifying, or implementing*

The success of River Basin Organisations (RBOs) in contributing to investment in infrastructure development in their river basins builds on both endogenous factors (e.g. organisational capacity and budget) as well as exogenous factors (e.g. the political and economic context). In this paper, we identify three general types of RBOs with regard to their roles in realizing investments in infrastructure development in Africa, namely: enablers, identifiers, and implementers.



Figure 1: Three roles of RBOs in infrastructure development

*When not implementing, RBOs still play an important role in project development*

Most African RBOs do not have an active role in infrastructure development. Only a few of the RBOs that were investigated as part of this study manage an infrastructure investment programme. RBOs are important however, in enabling infrastructure project development by collecting and analysing data as knowledge brokers. The role of implementor is not something all RBOs should aspire to. There can be situations where RBOs can add a lot of value as implementors, for example when there is a clear mandate from national governments and/or projects are transboundary and/or when countries lack the implementation capacity. While the legal basis of an RBO is not a pre-requisite for its ability to contribute to investments in infrastructure development, buy-in of member states is.

*There are different ways to measure the impact of RBOs in project development*

Infrastructure is a key driver for economic development across the African continent. It is crucial in enabling widespread productivity and as such contributes significantly to human development, poverty reduction, and meeting the ambitious targets of the 2030 Sustainable Development Goals (SDGs). The link between infrastructure development and economic growth is well-established;



For implementing RBOs, it is possible to use existing impact measurement tools or develop tools and frameworks to keep track of the impact realised by developing infrastructure projects. Many RBO projects are large hydro projects (E&S sensitive); good ex-ante impact frameworks can increase development partner support. For enablers and identifiers the impact is not so straightforward and mostly indirect. In sum, RBOs are able to have both direct and indirect impact, but without measurement the contribution of the RBOs remains invisible.

*Organisational capacity, budget and political interference can be barriers to become effective implementer*

Not all RBOs are well-placed to become implementors; in fact, many factors, including the legal mandate, geo-political context and implementing capacities of members states, all impact the ability of an RBO to act as an implementor. In order to carry out this role successfully, an RBO needs key skillsets, including in project management, contract management, IPP negotiations, resource mobilization and results management. The example of NBI shows that separating the political and technical tracks can increase effectivity. The legal basis of an RBO is not a pre-requisite for its ability to contribute to investments in infrastructure development.

*RBOs have the opportunity to work with partners in framework contracts on infrastructure*

Regional cooperation is key to successful infrastructure development in river basins, given the numerous overlapping regional bodies (outside of RBOs) which exist in Africa. For RBOs to play a more central role in infrastructure development, they should aim to establish framework arrangements with potential partners, e.g. AfDB, GWP, PIDA and RECs. Some of the reasons why these are currently not in place may be the limited organisational capacity of RBOs and limited effectivity. Organisations working on project development in river basins can also support RBOs by giving them a larger role in project development processes.

## **Recommendations**

One of the conclusions of the webinar series is that that RBOs can sometimes play an important role in infrastructure project development but they are not living up to their full potential. For RBOs to play a more important role in infrastructure development, they should aim to adopt one or more of the core roles identified in this paper, be explicit about this role and mobilise capacity and funds for the role. This section lists the recommendations for RBOs and their partners that have been voiced during the webinar series. The recommendations are focused on strengthening the role, work and impact of RBOs in infrastructure project development. The recommendations are in the categories project selection, resource mobilisation, impact measurement and working with regional partners.

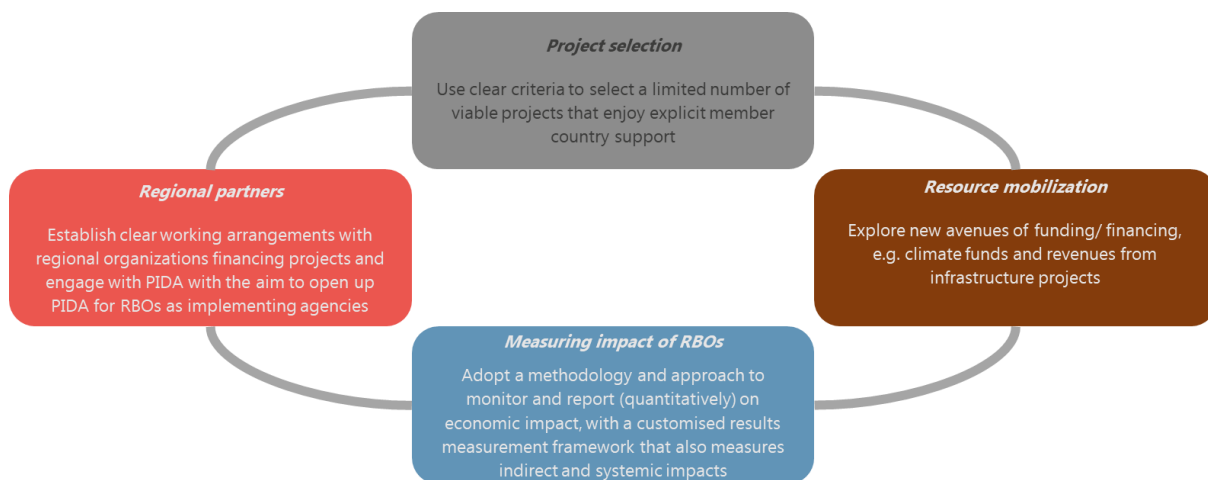


Figure 2: Webinar Recommendations

RBOs need clear criteria and rationale for **project selection**, using a common approach to that is aligned to impact measurement and other technical assistance and development facilities, but that also has sufficient flexibility to be adjusted where necessary for the specific context of a particular RBO. The focus should be on limited number of viable projects, rather than a long list, clearly prioritized by National governments. We see potential for much more co-learning and support between RBOs on best practices and project pipeline development. RBOs could explore using a common approach to project selection that is aligned to PIDA and other TA support / development facilities, but that also has sufficient flexibility to be adjusted where necessary for the specific context of a particular RBO. Other recommendations in this area are:

- Support from different countries must be clearly demonstrated in the case of transboundary projects;
- RBO project identification should be embedded in national development plans and be coordinated with MOF as well as water ministry. Ensure that project appraisal criteria on national and regional level are checked (and preferably harmonized over time). An interesting role as enabler could be to ensure that the 'right' projects are nationally implemented;
- Improve non-technical aspects of FS (social, political, environmental) as these typically form obstacles for project development.

In the context of the African RBOs, **resource mobilisation** opportunities for infrastructure project development are limited. RBOs can explore using revenues from infrastructure projects to contribute to their core funding. They can also explore other new funding avenues (e.g. climate funds) for infrastructure preparation and implementation because of their contribution to climate adaptation / mitigation. Finally, RBOs should collate and circulate resource mobilisation best practices, to be able to learn from each other.

If RBOs do not **measure impact**, it is hard to demonstrate their contribution to infrastructure project development. RBOs can have measurable impact in their upstream (“Enabler”) roles, and in their midstream (“Identifier”) and downstream (“Implementor”) roles. RBOs should adopt a methodology and approach to monitor and report (quantitatively) on their economic impact. A results measurement framework for RBOs can be customized to different roles, making use of PIDA’s Job Creation Tool (for

economic impact assessment with respect to job creation) and monitoring indirect and systemic impacts as well.

Clear working arrangements are needed with **RBOs and regional organizations** financing projects. RBOs can be a conduit for mobilizing financial/technical support to accelerate delivery bankable projects. Forming of dependable partnerships between an RBO and development partners is key to enabling RBO deliver on the new role. RBOs should make more use of PIDA and other regional TA support / development facilities and advocate for opening up PIDA for RBOs as implementing agencies. RBOs should ensure sound involvement of REC-PIDA coordinators in the process of project preparation. Include the RECs and AU/PIDA in the partnership strategies of RBOs. Finally, they should make enhanced use of operational databases developed by African Infrastructure / PIDA.



# Background

## The role of RBOs in infrastructure development

In Sub-Saharan Africa, poor infrastructure cuts national economic growth by 2 per cent every year and reduces productivity by as much as 40 per cent. Currently, only 38 per cent of the African population has access to electricity, less than 10 per cent is connected to the internet and only 25 per cent of Africa's road network is paved. The financial gap to provide these outstanding infrastructure services amounts to 130 to 170 billion US dollars per year. Water resources development projects such as hydropower or storage schemes can contribute to closing the gap. However, the development of water resources infrastructure in one country can affect a watercourse in numerous ways, including the opportunities it provides for neighbouring countries' development. Since most African river basins with a high potential for infrastructure development are transboundary, River Basin Organizations (RBOs) have a key role in infrastructure planning and preparation.

## GIZ supports better management of shared water resources

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) – on behalf of the German Ministry of Economic Cooperation (BMZ) as well as other German and international (co-)financing partners, has supported transboundary water management objectives in African as well as other regions. Among other important objectives GIZ's support has aimed at developing water resources planning and investment for sustainable transboundary water management, and at facilitating the establishment of organisational structures (e.g. RBOs) to coordinate such mechanisms and processes.

Historically, some examples of GIZ supported approaches include:

The Nile Basin Initiative (NBI) Nile Basin Sustainability Framework and related policies, guidelines and strategies;

The Niger Basin Authority (NBA) Water Charter and Annexes;

The Lake Chad Basin Commission Water Charter and Annexes;

The establishment of transboundary water policy framework under SADC Protocol on Shared Watercourses, including a number of specific river basins (e.g. the Orange-Senqu, the Limpopo, the Kunene, the Cuvelai and the Zambezi river basins);

The implementation of the Agreement on the Commission Internationale du Bassin Congo-Oubangui-Sangha (CICOS) regarding inland navigation and water resources management;

The African Ministers' Council on Water (AMCOW) African Water Agenda, including commitments by member States to establish adequate policy frameworks for transboundary water resources management; and

The Mekong River Commission (MRC) Rapid Sustainability Assessment Tool (RSAT), as a comprehensive tool for assessing the basin-wide environmental and social impacts of hydropower projects, facilitating development of integrated basin management plans.

Various negotiation processes and local-level pilot projects in Central Asia, aimed at strengthening the capacity of riparian State representatives in negotiating and implementing effective legal and policy arrangements for transboundary water resources management.

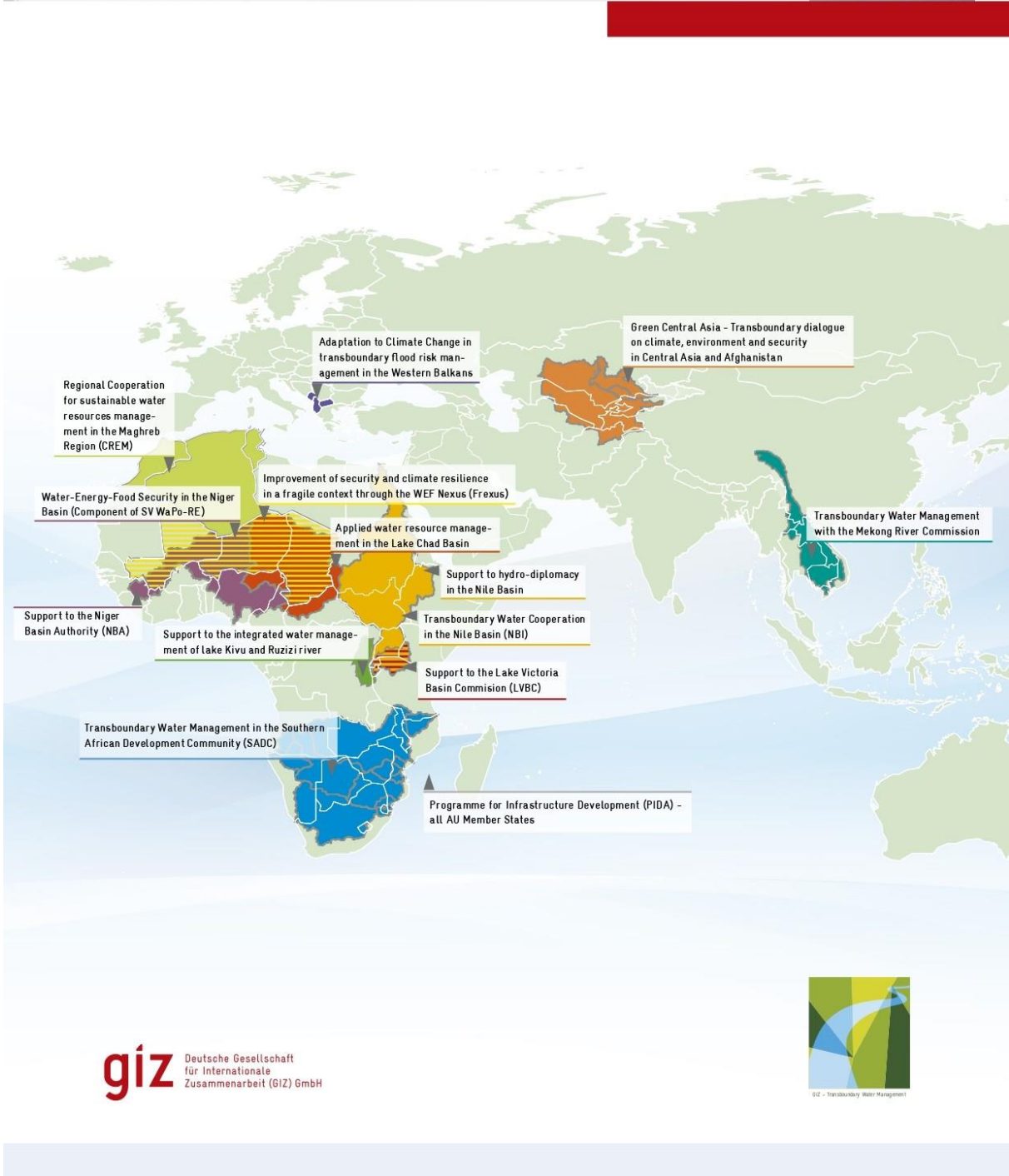
During the last decade, RBOs as well as other forms of institutionalized cooperation over shared watercourses have achieved considerable successes and learned important lessons on how to establish, maintain and development cooperation across national boundaries for the sustainable development and management of international waters.

GIZ strengthens the capacity for transboundary water management with regional organizations and regional economic communities, river and lake basins organizations as well as national riparian states and their national communities. Capacity building targets water cooperation and governance, water resources management and water resources development. This includes support to promoting international dialogues on transboundary waters, strengthening institutional frameworks and basin organizations, harmonizing water laws and policies, building knowledge-based water resource planning and management systems, planning, preparing and operating infrastructure on transboundary basins, adapting to climatic risks and climate change as well as establishing inter-sectoral linkages between water, food, energy and the environment.

As shown in the map below, GIZ currently implements more than 14 programs on cooperative water management across Africa, Asia and south-eastern Europe. Moreover, GIZ supports several regional organizations and regional economic communities in developing and implementing transboundary water policies. Direct outcomes of GIZ's support are improved cooperation and strengthened capacity for transboundary resources management and development. This contributes to increased water security with regards to water availability, the provision of water-related services, the development of water infrastructure, the protection of ecosystems and adaptation to climate change, as well as the reduction of water-related risks to people, economies and the environment. The Transboundary Water Management (TWM) working group in the GIZ sector network "Services on Sanitation and Water" (SOWAS) brings together experts from GIZ programs on cooperative water management to learn from each other, discuss innovative approaches and jointly develop solutions for the challenges in transboundary water management.



# Transboundary and Regional Water Resources Management Projects



## Transboundary water management and infrastructure development

Africa has more than 60 transboundary river basins, of which the majority are shared by three or more countries. Therefore, regional coordination in water management is essential, for the simple reason that what happens upstream can benefit or harm African nations downstream. This is particularly true when it comes to infrastructure development on the continent. Hydropower and water storage infrastructure, for example, can provide cheaper electricity and balanced water flows, but excessive extraction or pollution upstream can damage agriculture and contaminate (drinking) water (AfDB, 2020). Within basins, the potential infrastructure development impact is immense, due to the sheer number of people living within them. For example, 280 million people were living in the Nile Basin in 2006, with this amount is expected to increase to 590 million in 2025.

An overview of the basins and some of the institutions is presented below (drawn from the African Water Facility, 2018).

River Basin	Basin Area (km <sup>2</sup> )	Countries • <i>Basin Institutions</i>
<b>Congo</b>	4 million (or 13 percent of the entire African landmass)	Angola, Burundi, Cameroon, Central African Republic, Democratic Republic of the Congo, Republic of the Congo, Rwanda, South Sudan, Tanzania, Zambia • <i>Congo Basin Commission (CICOS)</i>
<b>Niger</b>	2.2 million	Burkina Faso, Benin, Cote Ivoire, Guinea, Mali, Niger, and Nigeria, Cameroon, Chad • <i>Niger Basin Authority (NBA)</i>
<b>Nile</b>	3.4 million	Tanzania, Uganda, Rwanda, Burundi, the Democratic Republic of the Congo, Kenya, Ethiopia, Eritrea, South Sudan, Republic of the Sudan, Egypt • <i>Nile Basin Initiative (NBI)</i>
<b>Senegal</b>	300,000	Guinea, Mali, Mauritania, Senegal • <i>Senegal River Basin Development Organisation (OMVS)</i>
<b>Zambezi</b>	1 39 million	Angola, Zambia, Namibia, Zimbabwe, Mozambique, Botswana, Malawi, Tanzania • <i>Zambezi River Authority</i> • <i>Zambezi Watercourse Commission (ZAMCOM) is yet to be established to include all Riparian States</i>
<b>Orange</b>	973,000	South Africa, Namibia, Botswana • <i>Orange-Senqu River Basin Commission (ORASECOM)</i>
<b> Limpopo</b>	415,000	South Africa, Botswana, Mozambique, Zimbabwe • <i>Limpopo River Commission (LIMCOM)</i>
<b>Okavango</b>	530,000	Angola, Namibia, Botswana • <i>Permanent Okavango River Basin Water Commission</i>
<b>Volta</b>	407,093	Burkina Faso, Cote d'Ivoire, Benin, Togo, Ghana • <i>Volta Basin Authority (VBA)</i>
<b>Gambia</b>	77,000	Guinea, Senegal, Gambia • <i>Gambia River Authority (OMVG)</i>
<b>Lake Chad</b>	2.39 million	Chad, Niger, the Central African Republic (CAR), Nigeria, Algeria, Sudan, Cameroon, and Libya • <i>Lake Chad Basin Commission (LCBC)</i>

Table 1: Overview of African river basins and RBOs

Transboundary water resource management requires strong institutional commitment and coordination regarding infrastructure investments that cross the borders of different countries. A way to bring this institutional commitment and coordination into practice is by establishing River Basin Organisations (RBOs). In essence, RBOs are bilateral and multilateral committees, commissions, and authorities intended to facilitate agreements for infrastructural investments, management of water flows (quantity and quality), and response to disasters, especially floods. RBOs have played an important role in realizing trust and confidence building, conflict avoidance, knowledge base development, information dissemination, awareness raising, stakeholder involvement, capacity building, joint and integrated river



basin management, development planning, and creating an enabling environment for investment (WEF Nexus Platform, 2018). But what about their role in infrastructure development specifically?

**A webinar series to exchange experiences on infrastructure development**

This paper reports on the webinar series that was organised between November 24 and December 10 2020, as part of the GIZ RBO Workshop series. The RBO Workshops have been an internal forum for GIZ and RBO senior staff partners to share experiences and reflect about directions, areas of common interest and work across the RBOs and/or Regional Economic Communities (RECs). The webinar series was a joint initiative of the SOWAS<sup>1</sup> and the Working Group on Transboundary Water Management. The following workshops have been conducted so far:

- 1st: “Transboundary Water Policies”- hosted by the Nile Basin Initiative (NBI) | 2015 in Entebbe
- 2nd: “State of Basin Reporting and Basin Planning” - hosted by Southern African Development Community (SADC) and Orange-Senqu River Commission (ORASECOM) | 2016 in Pretoria
- 3rd: “Basin Monitoring” - hosted by SADC and Okavango River Basin Water Commission (OKACOM) | 2017 in Maun

The 4th African RBO workshop has been hosted by NBI-NELSAP, GIZ and AU-PIDA as a webinar series due to the Covid-19 situation. The goal of the webinars was to increase understanding of the work of RBOs in the field of investments in infrastructure development. The webinar series comprised four sessions. The audience for the webinar series was RBO senior staff and AU PIDA, AfDB and GWP senior staff who work with African RBOs.



Figure 3: The Webinar Series

The aim of this paper – which is based on the findings of the webinar series – is to assess the role of RBOs in transboundary water infrastructure development. What do the investment portfolios of the RBOs look like? How do RBOs select projects and how do they work together in project development with other organisations? What can they learn from each other and what – ultimately - is their economic and development impact? The results of the webinars will increase the understanding of the work of

<sup>1</sup> Services on Water and Sanitation

RBOs in this field through the exchange of ideas amongst key stakeholders. In addition, the webinar series led to a series of actionable in relation to the role of RBOs in infrastructure development.

# 1. Introduction: defining RBOs

The more than 60 transboundary river basins in Africa are managed by 36 River Basin Organizations (RBOs). Forty-two of the countries in Africa are involved in one or more RBOs. Many of the RBOs in Africa were established during the last two decades. There is a great variety in terms of organisational structure and financing mechanisms between African RBOs. While the political context differs in the different basins, water management remains a constant negotiation around conflicting interests and competing claims between upstream and downstream countries.

Box 1: River Basin Organisations (RBOs) in Africa

## Key take-aways from this chapter:

1. The success of RBOs in contributing to investments in infrastructure development in their river basins builds on both endogenous factors (e.g. organisational capacity and budget) as well as exogenous factors (e.g. the political and economic context)
2. We identify three general types of RBOs regarding their roles in realizing investments in infrastructure development in Africa, namely: enablers, identifiers, and developers
3. The legal basis of an RBO is not a pre-requisite for its ability to contribute to investments in infrastructure development, member states buy-in is

For this paper, existing literature was combined with interviews with experts and an analysis of RBO investment portfolios, strategies and policies. In the table below, an overview is presented of the RBOs that were engaged to gain a better understanding of their work.

RBO	Core activities
Nile Basin Initiative (NBI)	Supports identification, negotiation, and implementation of cooperative infrastructure investment projects in the Nile Basin.
Niger Basin Authority (NBA)	Supports coordination and identification of infrastructure investment projects in the Niger Basin.
International Commission of the Congo-Sangha-Oubangi Basin (CICOS)	Supports coordination and facilitation of decision-making on transboundary water management in the Congo Basin.
Lake Kivu and River Rusizi Basin Authority (ABAKIR)	Supports data collection and analyses in the Lake Kivu and River Rusizi Basin.
Lake Chad Basin Commission (LCBC)	Supports the coordination of natural resource development projects and research in the Lake Chad Basin.

Table 2: RBOs interviewed and their core activities

## Typologies of RBOs

In order to understand how RBOs contribute to infrastructure development and economic growth, it is important to understand how their organizational structure and the (political economy) context of their work as an organisation relate to their ability to have impact and fulfil their mandates.

Schmeier (2015) offers a review of the organisational structures of RBOs as well as the various mechanisms they employ for governing water resources. Acknowledging that the activities of RBOs (in developing countries) have been relatively understudied, her work has allowed for a comparison of different typologies of RBOs as well as a closer look at what works in certain contexts. A specific and valuable result of the research of Schmeier is the International River Basin Organization Database: a searchable database that provides detailed institutional design data for a wide range of RBOs.

A central research question of Scheimer (2013; 2015) is: why are some RBOs successful in ensuring the long-term cooperative and sustainable governance of shared water sources, while others fail?

- *Exogenous* factors, such as political stability in member states, the constellation and power relations of riparian states, and the type of problems the basin is facing, are crucial to understanding the relative likelihood of success of RBOs.
- *Endogenous* factors also matter for achieving results in a transboundary river basin setting (Wingqvist, 2016). Schmeier (2015) for example, concludes that the institutional design of an RBO, including the organisational set-up and the various governance mechanisms, is important for the effectiveness of an RBO. Key aspects of this institutional design that are important in understanding the role of RBOs when it comes to investment agendas and infrastructure development include the functional scope, funding mechanisms, decision-making mechanisms and dispute resolution mechanisms, amongst others (Schmeier, 2015).

Huitema and Meijerink (2017) also note that the actual performance of RBOs is understudied. They present an additional typology of (national) river basin organizations, which helps to differentiate between various kinds of entities that are all referred to as river basin organizations, but that are quite different in nature.

We propose a typology for the different RBOs in Africa based on their role in infrastructure development. This classification is developed and drawn from key characteristics of the RBOs, such as their organisational capacity and role in project development and implementation.

Typology	RBO Type		
	Enabler	Identifier	Developer
<i>Key characteristics</i>	Contributes to enabling environment through knowledge basis and data collection	Plays a role in project origination, but does not play a role in actual development of projects (convening power)	Capacity to actually develop projects and structure project pipelines
<i>Example of RBO</i>	CICOS	NBA	NBI

Typology	RBO Type		
	<u>Enabler</u>	<u>Identifier</u>	<u>Developer</u>
<i>Political economy (exogenous)</i>	Often un-supportive	Differs, often challenging	Differs, often challenging
<i>Organisational capacity (endogenous)</i>	Small staff and high staff turnover	Relatively more staff available, often also specific infrastructure development expertise	Large number of staff, specific personnel for project expertise and management
<i>Role in project identification</i>	Very limited	Yes	Yes
<i>Role in project development</i>	None	Limited	Yes
<i>Role in project implementation</i>	None	None	Yes

Table 3: A typology related to the role of RBOs in infrastructure investment

In practice, the different types of RBOs obviously overlap and the differences between the three are not always incremental (an *Identifier* does not, per se, have to play a significant role in enabling environment, although it is often the case).

All of these typologies build on the strong and explicit support of their respective governments and other layers of authority such as regional organisations. As Huitema & Meijerink (2017: 23) emphasize: “*The levels of authority that governments grant to RBOs are obviously critical to their ability to manage their respective basins. The most successful RBOs have strong bases of support among basin governments, and high levels of authority through formal instruments like legislation*”. We acknowledge that explicit support from member states is crucial, but we have not found any evidence that a strong legal basis is a pre-requisite for playing any of the roles described.

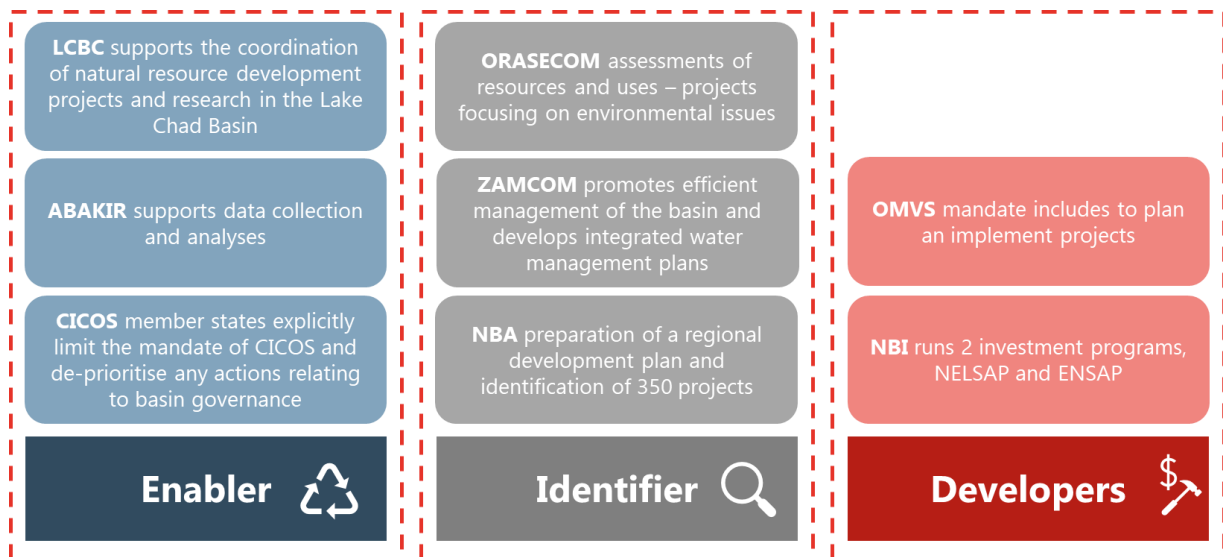


Figure 4: Examples of Enablers, Identifiers and Developers

## Linking organisational design to investment agendas

In this paper we look more closely at the links between RBO governance structures, organisational design, and the mechanisms and structures that are in place to initiate, coordinate and realize investment agendas. Aspects investigated to better understand the role of RBOs include:

- Design process and criteria for developing and agreeing on pipelines of regionally significant investment projects;
- Organizational capacity requirements;
- Experiences and strategies for mobilization of funding, innovative funding mechanisms (IPPFs windows, PPP screening, revolving funds, etc.);
- Governance, including basin-wide steering and national cross-sector coordination;
- Monitoring and reporting on basin pipeline progress;
- Support of instruments/services to pipeline project preparation.

In order to fulfil their mandate, govern their respective water basins and realize their investment agendas, RBOs obviously require sufficient financial resources: both for their own operations as well as specifically in terms of realizing investments in infrastructure development. This requires a closer look at the financing mechanisms. The private sector will display more investment interest if the investment climate is right: RBOs are central to creating the right investment environment in these African basins. Being well-positioned to leverage concessional finance from public institutions, RBOs can use this to attract funding for projects. They are also in a position to strengthen their legal and institutional base, and access a range of financial instruments, such as revolving funds, Public Private Partnerships (PPPs) and joint finance mechanisms (One World, 2019).

## 2. Contribution of RBOs to economic development

Recent estimates by the African Development Bank (AfDB) suggest that Africa's infrastructure needs amount to USD 130–170 billion a year, with a financing gap in the range USD 68–108 billion. To achieve both 100 percent urban and rural electrification as well as universal access to water supply and sanitation, would require realizing an annual cost of up to USD 116 billion. Infrastructure investments in river basin areas are highly relevant in this context, as they contribute to electrification and water supply. This creates direct and indirect jobs and contributes to economic development.

*Source: African Development Bank, 2018*

Box 2: Africa's infrastructure needs

### Key take-aways from this chapter:

1. RBOs can have both direct and indirect impact, but without measurement the contribution of the RBOs is not visible
2. Very few RBOs currently measure their economic impacts; many are struggling with basics of operating their organisation, establishing project pipeline, etc.
3. NBI / NELSAP is one example of an RBO estimating their economic impact consistently through projects
4. Many RBO projects are large hydro projects (E&S sensitive); good ex-ante impact frameworks can increase development partner support

### Infrastructure development and economic growth

Infrastructure is a key driver of economic development across the African continent. It is crucial in enabling widespread productivity and as such contributes significantly to human development, poverty reduction, and meeting the ambitious targets of the 2030 Sustainable Development Goals (SDGs). The link between infrastructure development and economic growth is well-established; in fact, investment in infrastructure accounts for over half of the recent improvement in economic growth in Africa, and has the potential to achieve even more (AfDB, 2020).

Although little quantified research on the economic effects of African RBOs exists, we can assume their vital role as broader economic development of the African continent is heavily dependent on joint activity in its various river basins. To take the example of just one aspect of river basin cooperation, sustainable Water Resources Management (WRM) is a critical contributor to socio-economic development, not least as a source of drinking water and for agriculture, but additionally as a source of transport and energy. The largely undeveloped, or sub-optimal (uncoordinated) WRM infrastructure potentially exposes the economy of African countries to water stress and scarcity: cooperation in the development and management of the shared resources is essential to gain win-win benefits (PIDA, 2018). This became especially evident when (due to drought) hydropower production from the Kariba Dam on the Zambezi (which supplies the majority of the electricity consumed in Zimbabwe and Zambia) almost ceased in early 2016 when the volume of water in the reservoir dropped to about 12 percent of capacity.

RBOs contribute inter alia to SDG 7 - affordable and clean energy. Between 2000 and 2016, the number of people globally with electricity increased from 78 to 87 percent. However, in Sub-Saharan Africa two out of three people lack access to energy (USAID, 2020).<sup>2</sup> As populations continue to grow, so too does the demand for cheap energy. Economies that are reliant on fossil fuels to meet this demand will impact negatively on climate change. Expanding infrastructure and upgrading technology to provide clean and more efficient energy in all countries will encourage growth and help the environment (UNDP, 2020).<sup>3</sup>

Energy is the main contributor to climate change, producing some 60 percent of greenhouse gases.<sup>4</sup> As such, investments in hydropower contribute also to climate change mitigation, in cases when hydropower replaces the use of other sources.

### Box 3: The impact of investments in energy

Although some authors have made the step towards mapping the contribution of African RBOs to economic growth, the lack of impact measurement is preventing RBOs from having visibility of their own impact. . We can point to direct and indirect effects, but without stronger measurement and reporting, the quantified economic benefits remain elusive.

In the case of RBOs that are responsible for the implementation and management of joint infrastructure projects, direct effects - including job creation, lower costs for electricity, etc... - can be more easily identified.

Other RBOs may be affecting change indirectly. These effects include, for example:

- Using convening power – it was mentioned during the interviews that although most RBOs may not actually develop projects, confirming the regional importance and support of projects is important for attracting (financing) partners. RBOs are the ideal platform to confirm regional importance and to gain regional support – buy-in for the project.
- Triggering projects – RBOs can play a role in developing a project pipeline, without doing actual project development themselves.
- Cost of inaction – in the literature this has been one of the most mentioned contributions of RBOs. Without working together in an RBO, there is no obvious platform for basin countries to discuss interventions and as a result less may happen in the basin.
- Enabling environment – an RBO can play a role in for example stimulating regional trade by improving the enabling environment (e.g. river navigation). This also relates to facilitating and supporting basin level planning, which contributes to a better managed basin and as such allows for identification of trans-boundary and national level projects.

If we look at different project phases and the indirect roles, the first three contributions – in relation to the project development cycle – are summarized in the graph below.

<sup>2</sup> <https://www.usaid.gov/powerafrica>

<sup>3</sup> <https://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-7-affordable-and-clean-energy.html>

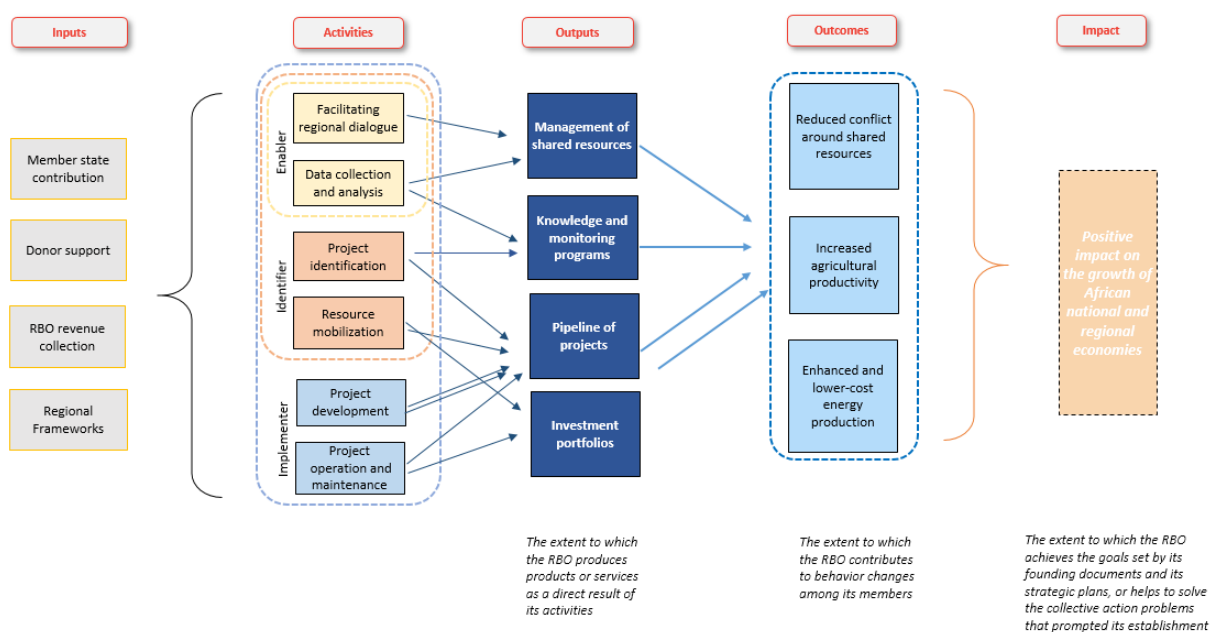
<sup>4</sup> <https://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-7-affordable-and-clean-energy.html>





Figure 5: Project Development Cycle

The indirect effects, which include for example include increased regional trade and access to finance for projects, are more difficult to quantify, but are still crucial to discuss, as they demonstrate that the value of water cooperation is broader and deeper than just the direct economic effects of projects. To give an impression of the diverse ways in which the work of RBOs is linked to their potential impact on economic growth, we present a simplified Theory of Change below.



One of the few examples of RBOs consistently measuring their economic impact is NBI/NELSAP - whose mandate as a regional coordinating platform for sub-basin planning lends itself to stimulating and coordinating regional project development, and which is developing an acceleration/advisory unit to better serve projects in riparian regions. Since NBI/NELSAP's inception it has mobilised pre-investment projects of \$92 million and an additional \$980 million of investment capital. An example of this is the Regional Rusumo Falls Hydroelectric Project (elaborated on in the box below).

The Regional Rusumo Falls Hydroelectric Project (RRFP) is a hydropower project under joint development by the Governments of the Republics' of Burundi, Rwanda and Tanzania through a commonly-owned Rusumo Power Company (RPCL). The project is located at Rusumo Falls, at the common border of Rwanda and Tanzania on the Kagera River. The power production facilities are located entirely on the south side of the bank of the Kagera River in Tanzania, while the substation is located on the northern side of the bank of the river in Rwanda.

In line with work done by NELSAP and PIDA, it is foreseen that relatively inexpensive electricity will be provided to the three countries which will for example contribute to foreign exchange savings and improved balance of payments since the power generated will replace imported petroleum products. Additionally, the project has provided 778 additional jobs. However, project implementation has not been without hurdles, including complicated layer of project implementation management, the free movement of materials, blasting constraints and tax exemption issues.

Box 4: The Regional Rusumo Falls Hydroelectric Project - direct and indirect impacts,

## Turning it around: the costs of inaction and benefits of water cooperation

RBOs may add value not solely through helping to realize infrastructure investments, but by mitigating the costs of different forms of inaction. The costs of inaction comprise both the direct and indirect negative impacts of limited and insufficient cooperation in water management in the region.

Pohl et al. (2016) have emphasized when analysing the situation in Central Asia that it is important not to neglect the indirect costs of suboptimal water management. They demonstrate that the true value of water cooperation also contributes greatly as compared to the direct economic benefits that can be derived from better water management. The authors note that real quantification of these costs of inaction is difficult, especially if analyses attempt to incorporate the comparatively more substantive indirect costs that cannot directly and unambiguously be attributed to transboundary water governance. Other studies (UNDP 2005, World Bank 2016a, Jalilov et al. 2015) have however calculated monetary values of proxies for three cost categories: agricultural losses, inefficient electricity trade and lack of access to finance due to non-cooperation, issues related to challenges in infrastructure development. Using this, Pohl et al (2016) conclude from their research that the resulting costs of insufficient cooperation add up to more than USD 4.5 billion per annum (!) for the Central Asian region.

Direct economic costs	Indirect economic costs	Political costs	Social and environmental costs
Reduced agricultural productivity	Higher energy prices and energy insecurity	Increased political instability and conflict	Stress and degradation of eco-systems
Damage from floods and mudslides	Limited regional trade	Reduction of influence	Threats to loss of livelihoods
	Limited access to international finance		Health costs due to pollution

Table 4: Costs of inaction resulting from limited cooperation in African river basins

Such an analysis of the situation in one of the African basins has not yet been performed, but could produce valuable insights that contribute to better understanding the added value of RBOs. A first look at some of the direct and indirect economic costs that could also be identified for the African river basins, as illustrated above, gives an impression of some of the costs of inaction resulting from limited cooperation. Below, we go into depth with regards to some of the costs mentioned.

- Reduced agricultural productivity: losses in agricultural production due to inadequate seasonal availability of water for irrigation.
- Damage from floods and mudslides: losses and damages from for example wet season flooding.
- Higher energy prices and energy insecurity: water and energy security are inextricably linked in Africa and limitations on water cooperation therefore imply costs for the energy sector, including in terms of energy insecurity.
- Limited regional trade: evidence from other regional economic integration projects suggests that economic integration would likely generate substantial additional economic activity.
- Limited access to international finance: political agreement on integrated water resource management could unlock significant (public) finance from outside the region to invest into for example hydropower.

Overall, it is important to strongly consider the costs of inaction and limited cooperation between actors that are engaged in activities in river basin organisations, in addition to the direct benefits that RBOs create by playing their role in infrastructure development in Africa.

A more specific angle of considering RBOs and their support to African economic development is by looking at how they contribute to job creation. One of the examples of methodologies that are used is the PIDA Job Tool. This tool estimates the direct, indirect and induced labour market effects during the planning, construction and operation and maintenance phases, as well as secondary job effects, which are those jobs that are being created in other sectors of the economy due to the operational infrastructure in service, such as improved energy access.

The PIDA Job Tool has been applied to the Batoka Gorge Hydro Project. The analysis shows that the project has the potential to create more than 2,500 direct jobs annually up to completion of its construction, and up to 24,000 secondary jobs annually over its 50-year lifetime. The project is being implemented by the Zambezi River Authority. Calculating the estimated results of an infrastructure project with the PIDA Toolkit is a straightforward and intuitive process (see **Fehler! Verweisquelle konnte nicht gefunden werden.**). That makes it useful for organisations that have relatively limited experience in infrastructure development.

The screenshot shows the PIDA Job Creation Toolkit interface. At the top, there are buttons for 'Hide Instructions', 'Benchmark Estimates', and 'Detailed Survey'. The form fields are as follows:

- Name:** PIDA Job Creation Toolkit
- Regional Economic Community(ies):** (empty)
- Sector:** Select a sector (dropdown) and Select a subsector (dropdown)
- Host Countries:** Select a country (dropdown) and Add Country (button)
- Beneficiary Countries:** Select a country (dropdown) and Add Country (button)
- Phase** table:
 

Phase	Cost (US\$MM)	Duration (Years)*	Start Date
Preparation TOTAL COST	[input] ⓘ	[input] ⓘ	[dropdown] Use Benchmark
Construction TOTAL COST*	[input] ⓘ	[input] ⓘ	[dropdown] Use Benchmark
Operation & Maintenance AVERAGE ANNUAL COST	[input] ⓘ	[input] ⓘ	[dropdown] Use Benchmark

At the bottom right, there are buttons for 'Benchmark Estimates' and 'Detailed Survey'.

Box 4: The PIDA Job Creation Toolkit.

## **Enabling infrastructure project development by collecting and analysing data**

Data collection has been one of the areas in which RBOs have been able to prove their added value in terms of infrastructure development programmes in Africa. Even when RBOs do not actively work on development of infrastructure project, they can have a role as an enabler by ensuring relevant data in different areas is available for future project development. In this section, we will describe three examples drawn from the practices of the different RBOs.

### The Decision Support System of DSS

NBI has, for example, been able to fill a critical knowledge gap with the development of a Decision Support System (DSS), an analytical and modelling tool developed between the NBI and member states. With its focus on data collection and management as part of a wider monitoring and evaluation structure, NBI continues to profile itself as "a knowledge broker and has been able to carve out a trusted and legitimate place for itself in the extremely tense environment that is the Nile basin" (Medinilla, 2018). NBI recently for example launched the USD 5.5 million Nile Basin Regional Hydro-Met System. This is a network that will enable member states to share reliable data for monitoring of the Nile Basin resources as well as collect data to inform planning to prevent potential conflicts over the use of scarce water.

### Understanding obstacles to traffic flows in the Congo River

Although the Congo River is vital for the economic development of Central Africa, the traffic flows along the Brazzaville – Kinshasa – Bangui – Kisangani corridor are facing numerous non-physical obstacles, such as too many checkpoints, taxes, and illegal fees, resulting in longer hours of navigation and many inefficiencies.

To achieve the goal of facilitating trade, as per in the regional cooperation agreement that established the International Commission of the Congo Oubangui Sangha River (CICOS), decisive interventions are required to remove obstacles and facilitate sustainable development of the river corridor and its economy.

The main task of the CICOS-led river observatory is to collect and process data from the river corridor, creating a database with a set of 25 indicators that will be utilized for decision-making and implementation monitoring. The goal is to remove all non-physical barriers by 2025. The European Commission (EC) will cover half of the operational costs of this river observatory, while CICOS will be responsible for the other half (European Union, 2015).

### The NBA as a knowledge hub for regional cooperation

Other RBOs have also taken up a role as institution for monitoring and gathering data on the activities in its river basin. The NBA has gradually established itself as a knowledge hub. Member states increasingly recognize its added value, particularly in analytical tools (modelling, observatory), for information sharing, and for coordinating possible corrective measures and critical impact assessments. When developing a shared vision for the basin in the last two decades, the role of the NBA as a knowledge broker was key in bringing the discussions to a concrete level, with detailed projections of guaranteed low water period discharge, profitability, and environmental impact. These experiences strengthened the NBA as sub-regional forum for member state coordination, creating a certain level of political momentum.

## **Making sure (potential) impacts are being measured and reported**

An important part of gaining a stronger understanding of the (potential) contribution of different RBOs to economic development in Africa is linked to the extent to which impacts are being measured: an aspect that is related to the role of RBOs as knowledge broker in the river basin (for example in evaluating upcoming feasibility studies or impact assessments).

The NBI publishes an annual report in which it discusses its progress and key results. With regards to their impact on energy security, NBI illustrated for example how it identified and prepared bankable investment projects in power infrastructure; in special cases such as the 80 MW Regional Rusumo Falls Hydro-electric Project, extend implementation support to the countries; identify and prepare bankable projects in power transmission, interconnection and trade with the aim of increasing availability, accessibility and stability of power, minimising loss and reducing costs (NBI Corporate Report of 2019).

Not all of the monitoring work of RBOs is directly geared towards the impact of infrastructure projects. CICOS for example is playing this brokerage role in the Congo basin by further strengthening its knowledge and analytical functions. A number of key initiatives were taken in that area (Congo HYCOS, AMESD), and in 2015, an integrated hydrological modelling tool was developed to aid with decision-making, facilitate planning of large infrastructure and evaluate impact at the basin level. As infrastructure and possible basin transfer plans become more concrete, demand for credible and reliable data and analysis will increase considerably.

### 3. Infrastructure programme management by RBOs

Most of the RBOs in Africa do not seem to have an active role in infrastructure development but focus on coordination. This also contributes to infrastructure development. Some RBOs have recently become more engaged in infrastructure development and are setting up facilities to support this function. Overall, RBOs aim to play an increasing role when it comes to creating a stronger enabling environment for the realization of investments in cross-boundary infrastructure.

*Source: Interviews*

Box 5: African RBOs and their role in infrastructure development

#### Key take-aways from this chapter:

1. Most African RBOs do not seem to have an active role in infrastructure development
2. Only a few of the RBOs that were investigated have a clear infrastructure investment program
3. RBOs seem well-positioned to draft investment strategies (e.g. Shared Vision of the Niger Basin)
4. RBOs are important in enabling infrastructure project development by collecting and analysing data as knowledge brokers
5. An organisational structure in which there are separate political and technical tracks can contribute to successful portfolio management
6. Having a national project feature in an RBO plan or programme helps with fundraising, which is relevant since the majority of these investments are externally funded

#### RBOs and their basin development investment programmes

Different views are held on the precise role of RBOs and the contribution of their basin development investment programs. It has been argued, for example, that RBOs should play a greater role in securing strategic investments that would deliver the benefits of transboundary water cooperation and contribute to water, energy and food security (Global Water Partnership, 2018). In addition, different stakeholders have explained that tailored sustainable funding models – spelling out the role of each of the funding sources for RBOs and their programmes – should be defined for each transboundary basin (UNECE, 2018). Others have noted that the main contribution of RBOs lies in their coordination of the (political) interests of basin countries and overseeing basin-level planning, rather than in the delivering infrastructure projects (based on our interviews with stakeholders).

Overall, these debates call for a renewed discussion on the role of (African) RBOs in realizing their investment agendas and contributing to economic growth through infrastructure development. RBOs have in common that the majority of them have at least the ambition to initiate, stimulate and/or coordinate infrastructure investments. Their precise role, internal design process and criteria for

developing and agreeing on pipelines of regionally significant investment projects differs however for each RBO.

In this chapter, we will analyse infrastructure programme management of three specific RBOs - the Nile Basin Initiative, Niger Basin Authority and the International Congo-Ubangui-Sangha Commission.

### The Nile Basin Initiative (NBI)

The Nile Basin Initiative (NBI) is an intergovernmental partnership of ten Nile Basin countries, namely Burundi, DR Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, The Sudan, Tanzania and Uganda. NBI provides a platform for the various member countries to discuss how to collectively take care of and jointly use the shared Nile Basin water and related resources, particularly in the fields of power, agriculture, watershed management and flood preparedness.

The potential economic benefit from the cooperative use of the Nile's water is estimated to be worth well over USD 11 billion and there is a growing need for infrastructure investments to attain the full potential of this resource. Many of these infrastructure investments need to be coordinated between the basin's ten countries to ensure they are creating mutual benefits and are not causing harm to neighboring countries (World Bank, 2018).

According to their own data, NBI has assisted its member states to prepare more than 30 investment projects of regional significance worth more than USD 6 billion. NBI emphasizes the characteristic low ratio of preparation cost to investment cost of the projects it has helped prepare. Furthermore, NBI has achieved a leverage ratio of 1:10 (leveraging about USD 1 investment in member state capital contribution to worth USD 10 in total investment). As a part of their role in promoting and preparing investments for their basin area, NBI has also outlined the strong conviction that mobilizing resources for the implementation of projects is more effective when compared to unilateral efforts.

### The Niger Basin Authority (NBA)

The Niger Basin Authority (NBA, or Autorité du Bassin du Niger) was founded in 1964 to promote coordinated cooperation in the management of resources in the Niger Basin. Its member states are Niger, Burkina Faso, Côte d'Ivoire, Guinea, Cameroon, Mali, Benin, Nigeria and Chad. The river basin organization works to ensure integrated development of the Niger Basin in the fields of energy, water resources, agriculture, animal husbandry, fishing and fisheries, forestry, transport, communications and industry (African Great Lakes Information Platform, 2020).

The Niger River Basin has tremendous potential for infrastructure development in hydropower and irrigation, and the potential to create millions of jobs. Cooperative management and development of water resources infrastructure can both boost growth, and transform the livelihoods of its people, including vulnerable and poor communities in rural, remote parts of the basin (World Bank, 2018). The NBA recently successfully guided the preparation of a regional development plan, identifying 350 development measures in the form of projects with cross-border impacts, including 246 climate-relevant projects (NBA, 2020).

### International Congo-Ubangui-Sangha Commission (CICOS)

The International Congo-Ubangui-Sangha Commission (CICOS) was set up in 2000 as a specialized agency of the Economic Community of Central African States (CEMAC). As a River Basin Commission, it facilitates navigation on the shared sections of the Congo-Ubangui-Sanga basin as it brings together the following countries: Angola, Gabon, Cameroon, Democratic Republic of the Congo, Republic of the Congo and the Central African Republic.

The Congo Basin is the world's second largest river basin after the Amazon Basin, and in theory, the river could provide enough hydropower to cover the entire demand in sub-Saharan Africa. Currently, the main perceived added value of CICOS seems mostly to lie in facilitating or supporting sub-basin or bilateral arrangements, particularly in supporting the management of shared navigable waters. Their role in infrastructure development in the basin area is however limited.

Developing transboundary infrastructure is known to have challenges. These include increasing pressures from various stakeholders on the project; management and policy that has not kept pace with a broadened set of actors; the influence of climate change; and the politics of reconciling political borders and basin boundaries (Zeitoun, 2013). In addition are the difficulties of organising project financing and implementation involving different jurisdictions and, in some cases, legal systems (Dauskardt, 2014).

Overall, cross-boundary and regional infrastructure projects involving two or more countries, such as those undertaken by RBOs, face specific challenges. These include:

- Alignment of planning, at least regarding the project concerned, in the countries involved;
- Coordinating and aligning political and administrative decision-making;
- Aligning budget and financial planning;
- Different economic conditions and repayment levels between countries, affecting tariff setting;
- Implementing a project in different countries with different legal jurisdictions, potentially with different legal systems and provisions;
- Arranging debt and funding (e.g. grants) involving multiple countries and legal jurisdictions.

Addressing these challenges has required different solutions depending on the various contexts in which RBOs work. The NBI has for example been quite successful in aligning the planning of infrastructure projects in the Nile basin, while CICOS has - due to the more complicated nature of its transboundary projects (largely dominated by the Democratic Republic of Congo -) seen more difficulties in this area. The capacity of an RBO to deal with these issues and play a more active role in coordinating projects is obviously dependent on other variables related to its capacity such as financing structures for its operational expenditures or legal basis.

#### Box 6: The challenges of developing transboundary infrastructure

At the request of the member countries of the NBA, the AfDB in 2012 initiated the preparation of the Programme for Integrated Development and Adaptation to Climate Change in the Niger Basin (PIDACC), the overall objective of which is to contribute to improving the resilience of the people and ecosystems of the Niger River Basin through sustainable natural resource management.



The programme comprises nine national projects implemented by the countries and a regional project carried out by the NBA to ensure synergy. It is structured around three components:

- Building the resilience of ecosystems and natural resources;
- Building the people's resilience;
- Ensuring programme coordination and management.

The main expected outcomes are (AfDB, 2018):

- The recovery of 140,000 ha of degraded land;
- The construction of 209 water infrastructure systems for agro-pastoral and fish farming activities;
- The implementation of 450 projects for agricultural chain development and 184 youth SMEs;
- Climate change (CC) adaptation capacity building for 1 million households;
- The operationalization of a sustainable financing mechanism for sustainable natural resource management activities.

The programme will cost USD 205 million and will be implemented over a six-year period (2019- 2024). In the 9 countries, the programme will directly benefit 4 million people, 51 percent of whom are women. The direct beneficiaries also include smallholder farmers and vulnerable groups.

During the webinar series, it was brought to the attention that there is a tool for collection, compilation, validation, storage and sharing of infrastructure project information in Africa in a central location. This is the African Infrastructure Database (AID), developed by NEPAD.<sup>5</sup> This tool is for use by regional institutions and project owners/implementing agencies. They can use the tool to:

- Manage their infrastructure projects information and disseminate to their stakeholders using their own platform;
- Share their experiences with other regions and learn from others;
- Increase the visibility of their projects to a wider target audience and attract interested parties.

The African Infrastructure Database (AID) captures project information like project status, stakeholders and beneficiaries, a location map, project risks, economics and financing and links to project documents.

<sup>5</sup> <https://aid.nepad.org>

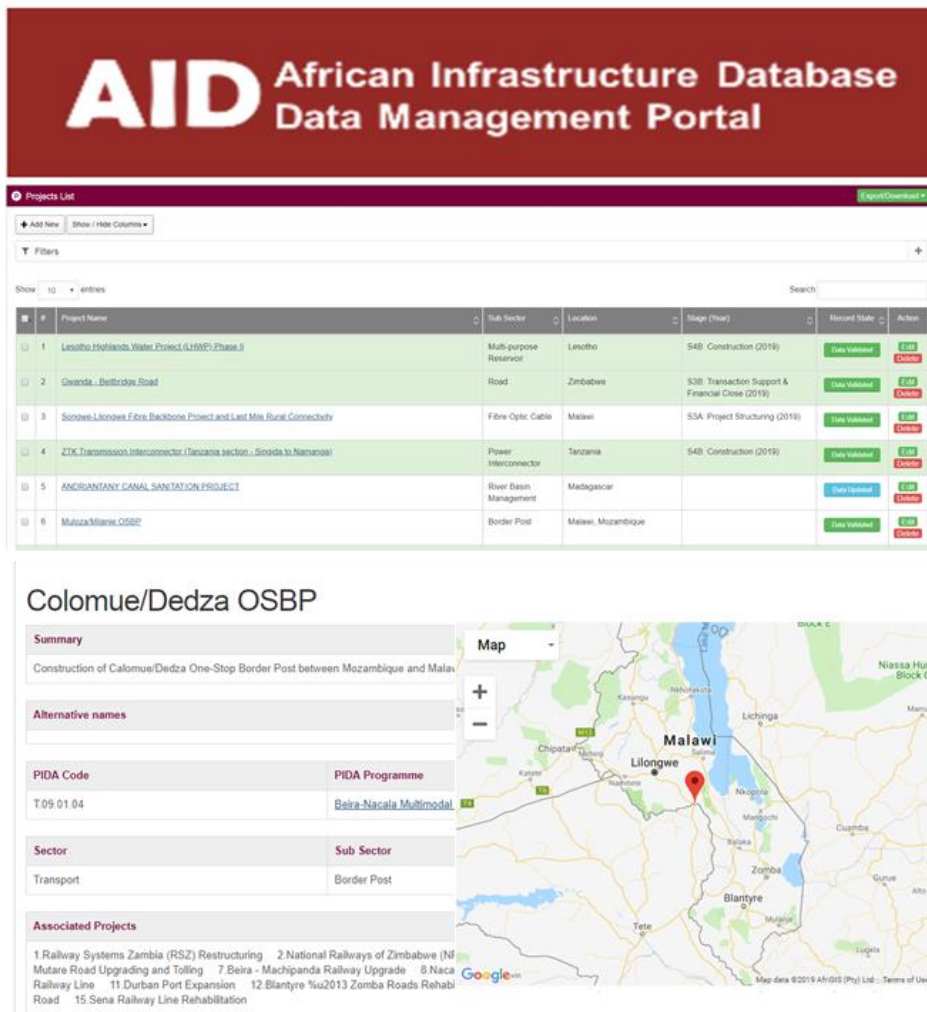


Figure 6: African Infrastructure Database screenshot

## Mapping the infrastructure programmes of the RBOs

One of the key theoretical *raison d'être* for RBOs is their contribution to coordinating transboundary infrastructure projects. Overall however, looking at the three RBOs that are discussed to a greater extent within this paper, it is clear that RBOs in Africa play quite different roles when it comes to managing infrastructure programmes in their basins. The precise role they play depends on a number of variables.

NBI runs two investment programmes, of which a large part focusses on infrastructure development. The Nile Equatorial Lakes Subsidiary Action Program (NELSAP) is one of two investment programs under the Nile Basin Initiative (NBI). The other is the Eastern Nile Subsidiary Action Program (ENSAP). Both programmes promote investments in power development and trade, river basin management and development, agricultural trade and productivity and fisheries and watershed management. In sum, as Medinilla (2018) outlines, these programmes and their active offices have developed an impressive portfolio of transboundary projects, which have the potential to build trust and momentum from bottom-up, even if political processes remain in a deadlock: cases that clearly illustrate the added value of the existence of an RBO. And because these programs have evolved independently of each other, they

resulted into differing and more adapted sets of policies and procedures (Belay et al., 2010) with NELSAP for example extending into energy transmission, in order to share the benefits from hydroelectric dams.

NELSAP has particularly played a significant role when it comes to promoting infrastructure development in the Nile basin area.

- NELSAP is currently in the process of developing the Nile Equatorial Lakes Investment Program (NEL-IP).
- During the roll-out phase of NEL-IP, the member countries prioritized a total of 96 projects in all sectors including irrigation, energy, navigation, fisheries, watershed management and water supply and sanitation that could all be considered useful projects with the potential to contribute to economic development and poverty reduction.
- As it was deemed unrealistic to develop all projects simultaneously, a pre-screening exercise was performed to narrow the scope of projects with a special consideration for socio-economic and environmental factors regarding implementation including energy security, food security, employment, beneficiaries, investment cost, revenue from irrigation and hydropower projects and downstream flows.
- The pre-screening exercise came up with 21 projects: a relevant illustration of how an RBO can contribute to selecting projects for transboundary cooperation.

The role of an RBO in transboundary infrastructure projects can range from identifying possible projects for transboundary cooperation to actually coordinating the implementation of projects. The project process can be roughly divided into four main stages, including creating a separation of Project Implementation into an ‘Initial’ and ‘Post Financing’ stage, as follows:

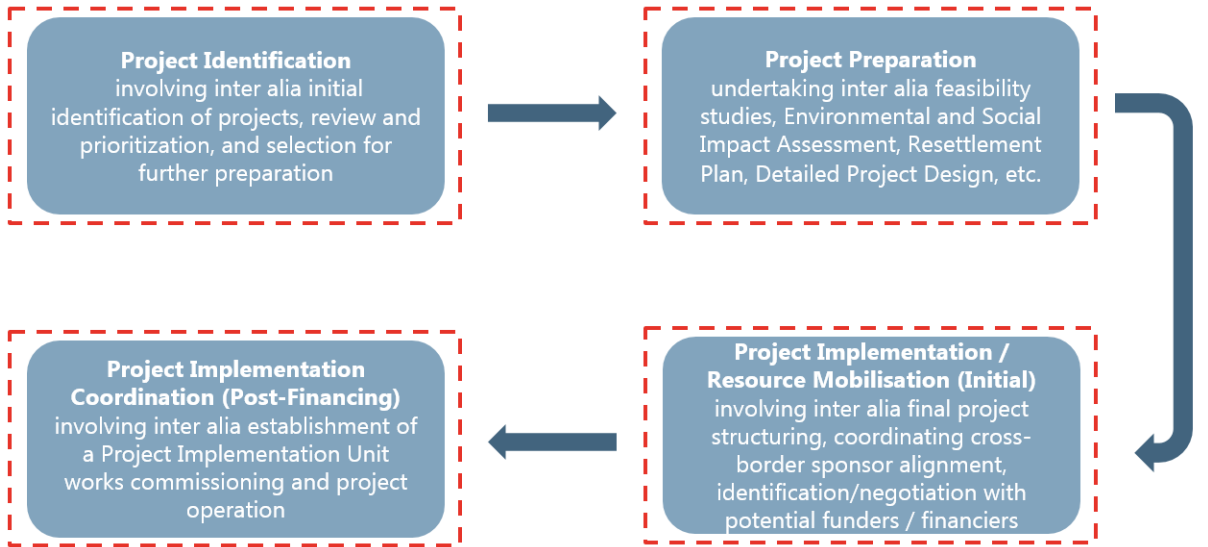


Figure 8: Four stages of the project process

These stages directly link back to the different typologies of RBOs that we have proposed. On the African continent, we see for example few RBOs that have an active role in project implementation, resource mobilisation or coordination. On the other hand, quite a number of RBOs have a role when it comes to some form of project preparation, although their exact role differs. Many are involved in environmental

and social impact studies, while fewer are active in the field of undertaking feasibility studies. Daniel Malzbender, one of the speakers during the webinar series, has identified good practice within the NBI and outside the region to improve project uptake and implementation. Overall, there is already considerable project development expertise available in the region, predominantly at the regional level. It is important that NBI demonstrate clearly to the Member States (beyond the immediate NBI governance structure) what contribution they are already making to project development in the region and could make in the future. At the same time, national governments are encouraged to streamline their efforts to build commensurate capacity and enabling environments at the national level and work closely with the NBI to upscale project development and implementation.

CICOS does not currently have an active infrastructure programme. However, the establishment of a 'Blue Fund' could provide an opportunity for CICOS to become more engaged in infrastructure development, see box).

In 2016, Congolese president Denis Sassou-Nguesso announced plans for a Blue fund for the Congo basin. The Fund would seek contributions for an annual renewable window of EUR 100 million in grants with long term commitments for annual renewal and would focus on facilitating investment by providing guarantees, paying interest rates and other costs on private loans. The Fund would target (through a regional Blue Economy Investment Plan) amongst other things small hydro-electric infrastructure and dams, strengthening irrigation in view of modernization and increased productivity and sustainable fisheries, pisciculture and aquaculture development (Brazaville Foundation, 2018).

The annual renewable window could be designed to cover the following:

- Interest rate subsidies - can be applied in flexible ways to reduce the total amount of debt payable by the borrower;
- Technical assistance (TA) - preparatory work for eligible projects, project supervision and targeted capacity building;
- Direct grants - to finance project components with social or environmental benefits;
- Insurance premia - Payment of early-stage premia for launching infrastructure projects- project implementation units run by experienced technical teams to support governments in the implementation of projects;
- Payment of Project Implementation Units - for the provision of experienced technical and management staff to support the public administrations in the implementation of projects.

The targeted areas of the Blue Fund fall under the expanded mandate of CICOS, and while they have been associated or at least consulted in the process, it remains unclear what the exact role could or should be of CICOS.

Box 7: The Blue Fund for the Congo Basin: a serious role for CICOS?

## Investment policies and guidelines

The role of an RBO in infrastructure development is not always clearly laid out within an infrastructure programme. Quite often, their position is defined more within investment policies and guidelines that

explain how in their basin (in the context of a broader multi-actor framework) investments in infrastructure development are realized.

One of the key process underpinning the investment planning ambitions of the NBA for example, is the Shared Vision of the Niger Basin: a vision that was the result of a series of negotiations between member states and partners to strengthen cooperation in the Niger Basin from 2002 to 2008. The Vision also forms the basis for the Operation Plan for the next years of the NBA.

Overall, this process, supported by development partners, resulted in a message summarized by the member countries as follows: “*The River Niger Basin, a common space of sustainable development through an integrated management of water resources and related eco-systems, for the enhancement of the living conditions and prosperity of the population by 2025*” (Shared Vision Statement, 2008). Some noticeable achievements as a result of the Shared Vision Process include:

- a 20-year Sustainable Development Action Plan for the Basin 2007 that was approved by the Council of Ministers of the NBA;
- the Water Charter (which outlines priorities for water use in the basin) that was signed in 2009 and ratified in 2010;
- a 20-year investment programme for the Basin and the Water Charter that was approved in 2008 by the Heads of State and Government Summit.

More than 300 projects form part of the Operational Plan 2016- 2024 of the NBA. Projects cover a wide range of investments: infrastructure development, such as large dams; irrigation equipment and navigation routes for socioeconomic development; the preservation of the basin’s ecosystems, such as the Inner Niger Delta; and interventions geared toward strengthening the governance and management of the shared natural resources in the basin.

There are plans for the development of three large dams that are now being implemented.

- Fomi Dam – Guinea, under preparation, with Chinese funding and at a new site;
- Taoussa Dam – Mali, currently suspended due to security situation;
- Kandadji Dam – Niger, under construction, scheduled for completion in 2022/23.

Box 8: The 2016 – 2024 Operational Plan of the NBA and its investment agenda

What makes investment policies or guidelines such as the shared vision particularly relevant is that it also appears for example that both the AfDB and the World Bank seek to pledge substantial resources to develop the basin’s natural resources in support of the Shared Vision of the Niger Basin, to “[make] the Niger Basin a common space for sustainable development through integrated management of water resources and associated ecosystems, for the improvement of living conditions and prosperity of the populations by 2025” (Ringler, 2018: 8).

Other RBOs have different ways of introducing investment policies. Within its specific investment programmes, NBI has drafted several investment guidelines to streamline its work and infrastructure investment agenda. The question is how investment guidelines and criteria are used: one can imagine that they are useful in justifying towards various stakeholders and specifically funders for the selection of projects that an RBO facilitates. The majority of these criteria and their weighting appear to be fairly

straightforward: shared benefits, inclusion in regional plans and improved water supply are important in terms of the investment agenda of any RBO.

Some criteria appear more susceptible to discussion. When it comes to involving the private sector and catalyzing private investment, it is for example interesting to see cost and return on investment as a variable has been allocated a relatively low weighting. In contrast, 'Financial attractiveness for Private Sector Investment' is one of the most highly weighted criteria in the PIDA PAP 2 Action Plan selection system developed by the African Union.

Overall, our workshop highlighted the need for support from different countries to be clearly demonstrated in the case of transboundary projects, as well as the need to concentrate on a smaller number of clearly-viable projects going forward.

In the table below, agreed NEL-IP screening criteria have been provided.

Importance	Criteria	Weighting
1	Regional / transboundary impact / shared Benefits	1
2	Equity and Balance of countries	1
3	Enhanced livelihoods (Employment, No. of Beneficiaries, Sanitation, etc.)	1
4	Must in national Priority	1
5	Must be in the regional plans	1
6	Addresses multi purposes (Nexus – Food, water, energy)	1
7	Minimize impact on water resources & environment	1
8	More Energy generated and distributed	1
9	Improved water supply	1
10	Display resilience to climate change	0.7
11	Improved food security	0.7
12	Cost and Return on Investment (ROI)	0.5
13	Has private sector participation (e.g. PPP)	0.5
14	Sector balance	0.5
15	Improved Watershed & Water Quality	0.5

Table 5: Example of agreed NEL-IP projects screening criteria

## Organisational capacities needed

There are different ways to strengthen the organizational capacities of RBOs. In addition to the straightforward investments in staff, specific expertise and experience is required. Large infrastructure, especially large scale hydropower projects, require teams that have conducted comparable projects before: staff that functions as a mobile RBO project development team or perhaps close cooperation

with national ministries that can contribute teams of expertise in different areas for specific infrastructure project development initiatives. Not all RBOs are well-placed to become implementors; in fact, many factors, including the legal mandate, geo-political context and implementing capacities of members states, all impact the ability of an RBO to act as an implementor. In order to carry out this role successfully, an RBO needs key skillsets, including project management, contract management, IPP negotiations, resource mobilization and results management.

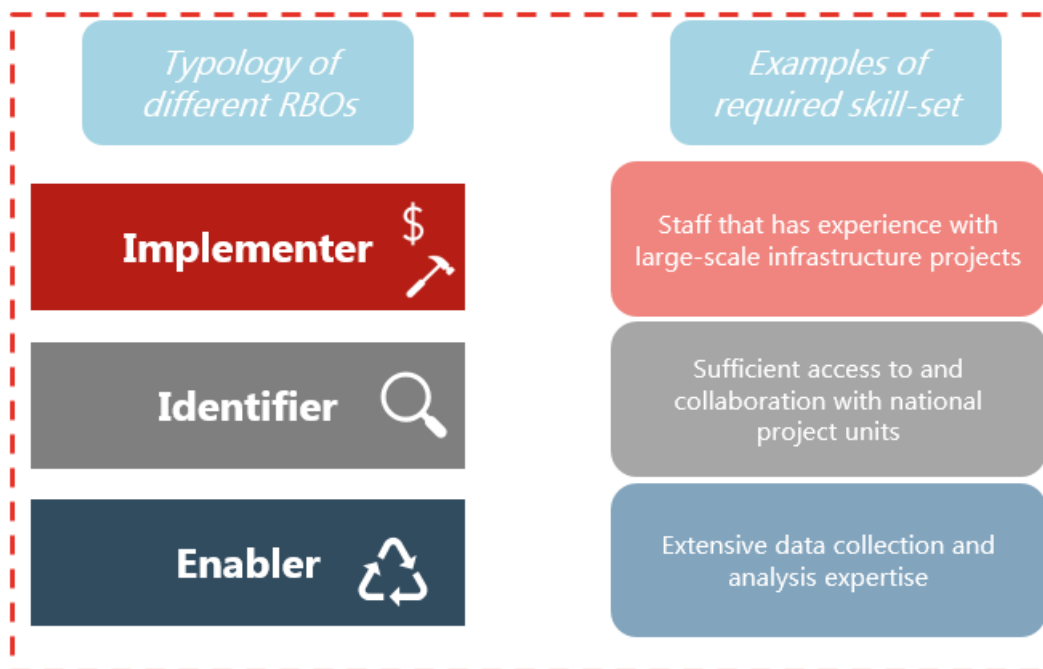
Our workshop discussions showed that the costs of setting up an implementation unit for infrastructure projects can be upwards of USD 1 million (for four initial projects) with costs increasing overtime as projects are taken on and overlap. A typical RBO infrastructure project might take 2-3 years to prepare (including multi-country coordination, feasibility studies, financial coordination, and contract design stages) and cost USD 2-4 million. Clearly financial resources play a key role in RBO capacity.

An example of an RBO that plays a role as coordinator and facilitator of investment in its basin even though it has no legal basis for its existence is the NBI. Since inception, the RBO and in particular NELSAP-CU has gained regional experience, strengthened its capacity and emerged as a reliable regional institution for facilitating key in-country and regional investment projects in the Nile Equatorial Lakes Region and beyond. When it comes to the organizational capacities needed for the program, the focus has been specifically on:

- Project pre-investment feasibility studies;
- Regional project coordination support;
- Regional strategic analysis & integrated planning;
- Environmental & social safeguards integration;
- Social economic development;
- Stakeholders' engagement, development communication & program visibility;
- Financial and procurement management;
- Results based monitoring and evaluation (NBI website, 2020).

One of the reasons that NBI has been able to take up this role in terms of organizational capacities is that the technical and political tracks of transboundary water management cooperation for the Nile basin are explicitly separated, with the technical cooperation aspect dealt with through the NBI, and the political negotiations, dealt with by heads of state in a separate process (Knaepen and Byiers 2017). This has allowed for relatively limited political interference and a stronger focus on evidence-based policy-making and participatory planning using technical hydrological modelling as a basis for planning investments for interventions at scale. As such, having a strong technical skillset has helped build political relevance for NBI as a regional institution.

But many challenges remain for other RBOs in terms of organizational capacity. CICOS for example has suffered from a high-turnover of management staff, which complicates consistency in terms of policy direction and operational management. In order to successfully operate as an implementor, the RBO needs a strong and diverse skillset, as well as cooperation in project development with regional bodies. National governments and other partners.



Box 9: Examples of required skillsets for different types of RBOs

## Financial structures and sources for the work of RBOs

In terms of looking at the financial structures of RBOs and their role in investment planning, it is important to make a distinction between the funding of the RBO operating budget itself and their role when it comes to the financing of project investments.

Once built, infrastructure can generate income, which can be used to finance a basin organization. The Organization pour la Mise en Valeur du Fleuve Sénégal (OMVS) is an organization grouping Guinea, Mali, Mauritania and Senegal for the purpose of jointly managing the Senegal River and its drainage basin. OMVS operates (via private parties) a number of hydroelectric plants and uses the proceeds from the sale of electricity to finance its operations, among others.

Recognizing that their capacity to implement large-scale infrastructure projects was limited, Member States decided to pool their resources by mandating the OMVS to implement projects such as the construction of dams. Using this approach, the Diama and Manantali dams were built in the 1970s and 1980s, providing benefits to all member states in the areas of irrigation, hydro and navigation.

In order to fulfill this implementation mandate, OMVS has significant powers through its fundamental legal instruments:

- It owns on behalf of the Member States the infrastructure it develops and manages;
- OMVS is also responsible for administering finances; the necessary investments and income being shared jointly on the basis of an elaborate profit-sharing mechanism.
- As such, the OMVS has broad powers in financial decisions for all members since it de facto prevails over the decisions of the national finance ministers (OMVS, 2019)



#### Box 10: OMVS as joint operator of transboundary infrastructure to finance its operations

The costs for NBI are financed by the Nile basin member states through annual dues and contributions from development partners. The Nile Basin Member States also provide counterpart funds for all NBI projects and contribute additional funds to the Secretariat of the RBO. Of the two action programmes, ENSAP is funded by the participating countries but NELSAP is funded through an institutional development grant from international donors.

Nowadays, the NBI benefits a lot from the Cooperation in International Waters in Africa (CIWA) Trust Fund, receiving 32 percent of its overall funding (Knaepen & Byiers, 2017). One of the components of the *Nile Cooperation for Results Project for Africa*, an initiative within CIWA, will for example provide support in the efforts of NELSAP to identify and prepare potential strategic cooperative investment opportunities.

#### Financing the operations of the NBA

NBA financial resources are mainly composed of annual contributions from member states and resources from development partners. Member states' contributions finance the operational costs of the institution. The total contributions expected each year are of the amount of FCFA 500 million or about USD 1 million. Of this amount, 30 percent is expected from Nigeria, 20 percent from Mali, 18 percent from Niger, 10 percent from Guinea, 7 percent from Cameroon, 5 percent from Cote d'Ivoire and from Benin, 4 percent from Burkina and 1 percent from Chad. This sharing arrangement was adopted at the 2000 Summit of Heads of States of NBA. Before that all contributions were equal.

Despite efforts in recent years, there are still problems with the payments of contributions by member states. Currently, the total arrears amount to FCFA 785 million or USD 1.5 million. Investment costs are entirely covered by donor loans or grants. NBA only signs grants while loans and payment agreements are only signed by states. In the current budget of FCFA 11 billion (or about USD 22 million) per year, investments represents 95 percent with only 5 percent for the operational budget.

The external financing environment of the NBA also constitutes an important pull factor for regional cooperation. The NBA operates on a regional level and therefore offers new fundraising opportunities for member states and their water management investments. The NBA's multiannual investment planning consists to a large extent of nationally identified projects and programmes that are compiled at the regional level. Fundraising takes place at both levels. As such, the NBA level increases the fundraising profile of nationally initiated projects by providing access to regional funding for activities and programmes in the Niger basin and recently also climate finance.

Research by ECDPM (2018) suggests that member states see the NBA level as a form of accreditation. Having a national project feature in an NBA plan or programme helps with fundraising, which is especially relevant since the majority of these investments are externally funded. Several interlocutors mentioned that this gives member states a clear political incentive to deepen cooperation at the political level at the NBA (ECDPM, 2018).

The international community closely observes developments in the severely water-stressed Sahel and in the Niger Basin countries. In recent years, the NBA performed a critical function as a regional fund-raising vehicle for climate finance. This reiterates the point that the external funding environment constitutes an important pull factor for cooperation under the NBA header: it could be a very relevant reason for its existence as a regional organization. As such, climate finance may present an opportunity for the NBA to expand its role as a regional player. However, this is a crowded field and much depends on the role member states are prepared to give to the NBA.

Box 11: Climate finance: a potential opportunity for the NBA to expand its role as regional player?

#### Financial structures / sources for CICOS

CICOS has a relatively low operating budget (USD 2.27 million in 2014), intended to cover a small number of staff (12 experts and administrative staff) and overhead for its operations. Sustainable financing therefore remains a challenge, and arrears (particularly from the Democratic Republic of Congo) have led to positions not being filled.

The CICOS financial mechanism is directly linked to its relationship with the Economic and Monetary Community of Central Africa (CEMAC). As CICOS has learned the hard way over the years, direct contributions from member states tend to be relatively unreliable, making TCI (Community Integration Tax) funding from CEMAC the primary source of funding for CICOS. While there are other sources of funding, few, if any, are as reliable as TCI's current funding for CICOS (ECDPM, 2018).

As such, member states will have to decide whether to keep the existing CICOS funding mechanism (and probably its current institutional set-up), or to replace it with direct contributions from member states, or to develop innovative funding mechanisms (but uncertain). As part of plans for institutional reform, member states should also address the issue of how to settle the arrears accumulated by member states.

NELSAP has built quite some experience in attracting and facilitating public financing for projects, but has not attracted much private financing. As such, the option of Public-Private Partnerships (PPP) was explored to take advantage of private sector technology and innovation as well as to supplement limited public-sector resources with support of the World Bank.

The Public-Private Infrastructure Advisory Facility (PPIAF) assisted in reviewing NELSAP's pipeline of projects and advancing the projects that could be implemented as PPPs. While a short list of 15 projects was developed to be considered for PPP structuring, PPIAF provided a pipeline screening methodology. From 15 projects, two projects were identified - the Kakono and Nsongezi Hydropower projects - that were most ready to move forward as PPPs.

This process can strongly be considered in the context of contributing to (local) economic growth). The proposed 39 megawatts Nsongezi "micro" hydropower project for example would be located on the Kagera River along Uganda's border with Tanzania and help ease power problems and improve livelihoods of local citizens.

Box 15: The role of NELSAP in attracting and facilitating financing for projects

## 4. The role of RBOs in the regional infrastructure development frameworks; Governance and the Enabling Environment

### Key take-aways from this chapter

1. The legal basis of an RBO is not a pre-requisite for its ability to contribute to investments in infrastructure development
2. Regional cooperation is key to successful infrastructure development in river basins, but numerous overlapping regional bodies (outside of RBOs) exist in Africa
3. For RBOs to play a more important role in infrastructure development, they should aim to establish framework arrangements with potential partners, e.g. AfDB, GWP, PIDA and RECs
4. Some of the reasons why these are currently not in place may be the limited organisational capacity of RBOs and limited effectivity

Organisations working on project development in river basins can also support RBOs by giving them a more important role in project development processes

### **Governance: basin-wide steering and national cross-section evaluation**

Institutionally, NBI is not a commission – it is ‘in transition’, awaiting an agreement (Cooperation Framework Agreement) on Nile water usage – so has no legal standing beyond a headquarters agreement with Uganda, where it has its Secretariat in Entebbe. As such, NBI currently has no legal basis, reducing its authority to that of providing guidelines, but also limiting its financial autonomy. As Knaepen & Byiers (2017) put it, the NBI is therefore something of “a hybrid organization, with many of the trappings of a formal river basin authority but without the legal underpinning; a strong organization with a weak mandate” (Knaepen & Byiers, 2017: 16).

At the same time, while this might be seen as a weakness, it has also forced the organization to take a more iterative, adaptive approach to building country interest in cooperation through the initiative, as Byiers (2017) emphasizes. This also is a lesson in terms of the work of other organisations and a message that has for example been echoed in other work where it is argued that the approach towards RBOs should go from best practice to best fit: a problem-driven approach to transboundary water management can perhaps provide a stronger drive in terms of the agendas of RBOs.

### **Governance, including basin-wide steering and national cross-section evaluation for CICOS**

The current institutional structure of CICOS is unique. It is a specialized institution of CEMAC (Economic and Monetary Community of Central Africa) but also an independent international organization. Institutionally, CICOS follows the now standard model for a River Basin Commission (RBC) with a three level structure comprising a decisional body, advisory body and executive agency. Unlike the Niger Basin Authority (NBA) and Senegal River Organization (OMVS), there is no heads of state summit level, suggesting a lower degree of political investment (Medinilla, 2018).

It appears that the primary reason for making CICOS a specialized CEMAC institution was to provide CEMAC with a means of funding CICOS. At present, member states see little to no interest in empowering the regional or basin level any more than is strictly necessary to maintain the organization. Member states are adamant in rejecting any form of transnational authority, which would give CICOS more than a coordinating or facilitating role (Medinilla, 2018). This was clearly illustrated during the development of the *Shared Vision Process and Programme of Measures (SDAGE)*: a water management masterplan for the Congo basin developed with the member states and in close cooperation with a range of stakeholders. This shared vision underpins nine areas of intervention and a corresponding programme of measures, all of which are structured around three axes (governance, management and infrastructure) and three strategic objectives (economic development, social inclusion, and environmental preservation). The programme was budgeted to reach around USD 40 million in the 2016 to 2020 period.

The outcome document of the SDAGE process however, explicitly limited the role of CICOS as a regional organization to coordinate and mediate the use of water in relation to the SDAGE: although infrastructure development was seen as an area for 'proper coordination and facilitation of the regional process by CICOS', the process also stressed that it remains a national prerogative to design and implement investment in water resource management and mobilization, and that the majority of (future) measures foreseen under the SDAGE would be implemented at member state level (Medinilla, 2018).

## **Cooperation between RBOs and other organisations**

The Global Water Partnership (GWP) has worked extensively in the last decade to enhance cooperation and reduce conflict over transboundary waters, specifically by building partnerships among all actors. GWP has made several efforts to establish regional dialogues in different African regions and strongly include the different RBOs as key stakeholders in these discussions.

Building on this, RBI commissioned a desk study in August-September 2020 to map investment projects of regional economic communities that could contribute to an emerging Nile Basin Investment Agenda. The study showed that several REC's (EAC/LVBC, COMESA etc) have geographic mandates which overlap with areas of integrated water resource management, however their projects tend to be concentrated in few areas, leading to little overlap between the two types of organisations. From a basin-wide perspective, project-spread tends not to be optimised. In fact, information-sharing between the different organisations is low, with information on investment projects not being made readily available for fear that other organizations 'steal project ideas'.

Despite its challenges when it comes to establishing structural cooperation between the different actors in its river basin, NBI enjoys high support of development partners and the RBO also got the attention of the African Union and different Regional Economic Communities (RECs). Its shared regional projects such as the Regional Power Trade and power grid interconnectedness got the attention of the regional organization, as they fed into the African continent's plan to regional integration through infrastructure and energy (Seide, 2016).

RBOs make limited use of PIDA and other regional TA support / development facilities. Currently, PIDA is not open for RBOs as implementing agencies; PIDA works mostly on project development with RECs in framework arrangements (PIDA, 2019). However, this might change towards the future. For PIDA

PAP1 only nine transboundary projects have been selected. For the PIDA PAP2 engagement process two thematic webinars took place in 2020 with participation of GWP, RECs and some participation from RBOs. For PIDA PAP2 40 transboundary water projects have been submitted. The next table shows the eligibility and selection criteria for PIDA PAP2. These are a mix of knock-out and quantifiable criteria.

Table 6: PIDA PAP2 eligibility and selection criteria

Category	Criteria	Weight
Regional Integration	Regional project	Pass/fail
	Clear agreement from concerned countries	Pass/fail
Inclusiveness & Sustainability	Gender Sensitivity	10%
	Rural Connectivity	5%
	Climate Friendliness	10%
Economic & Financial Impact	Corridor Planning	15%
	Job Creation	10%
	Economic Impact	25%
	Financial Attractiveness for Private Sector Investment	20%
	Smart/innovative technologies	5%

**Obstacles towards a stronger role of RBOs in regional infrastructure frameworks**

There seem to be various reasons why RBOs do not play a larger role in regional infrastructure frameworks. These range from obstacles such as the challenging political and economic context in which they operate to the mandate and institutional capacity of the RBOs themselves.

Overall, no single African country can resolve the regional development challenges of a continent made up of 54 member states. At the same time, most nations do not directly value the existence of platforms for structural regional collaboration and efforts towards integration. The reasons for this from a political and economic point of view have been discussed to in the literature: regional integration is for example often seen as less relevant for resource-rich countries, since demand for commodities typically comes from the global market rather than from regional demand. Political support for regional collaboration is also limited, as domestic political dynamics and priorities inhibit the ability to make collective decisions at the regional level: the current discussion around the Grand Renaissance Dam in Ethiopia (at the centre of the dispute are plans to fill up the mega dam as Egypt fears the project will allow Ethiopia to control the flow of Africa’s longest river) is one of the most striking examples.

The Lake Kivu Basin and Ruzizi River Authority (ABAKIR) is a river basin organisation that is involved with coordinating efforts in the basin of Lake Kivu and Ruzizi river. Lake Kivu and the Ruzizi River are situated in East Central Africa and both lie on the border of its riparian countries: Burundi, the Democratic Republic of the Congo (DRC), and Rwanda.

Regional cooperation matters. ABAKIR – which is still in the first phases of its operations – regularly engages with CEPGL (the Economic Community of Great Lakes Countries): its offices are even physically located in CEPGL. Because of these efforts, despite its limited operational capacity and little resources, it has been able to influence policy and contribute to management of the basin. Concretely, the two organisations (ABAKIR and CEPGL) are working on a Memorandum of Understanding to increase their joint efforts regarding coordination of the basin.

Box 12: Pursuing regional coordination: the case of ABAKIR

Our research showed that levels of REC involvement in water management, and RBO-REC relationships with respect to infrastructure development varies from REC to REC, and are in general not strong. This may be a key factor in RBOs ability to effectively create project pipelines. Despite this, reflections on REC-RBO relations during the workshop were broadly positive, with Dr Nicholas Azza reporting that "RECs and the AU view transboundary RBOs as a critical tool for promoting regional peace, cooperation and integration, and for achieving the African Water Vision 2025 and Agenda 2063". We can point to exceptions to the rule which show the potential of REC-RBO relations; for example, NELSAP presents a unique example of how RECs and RBOs can cooperate to advance regional infrastructure project preparation and implementation. COMESA and EAPP recognize NELSAP's comparative strengths in investment project preparation and promotion, and have 'delegated' this function to NELSAP. They help to endorse and give priority to NELSAP infrastructure projects and support NELSAP efforts at resource mobilization.

Conversely, the lack of coordination and linkages with other regional institutions was identified by Belay et al. (2010) as a key challenge for the work of NBI in terms of facilitating and realizing investment for infrastructure in the region. With the establishment of the NBI, other regional institutions have since evolved like the Lake Victoria Basin Commission but NBI's coordination with such institutions is not clearly established. However, it is hoped that NBI-ISP will strengthen the Nile National Focal Point Offices and NBI regional linkages with other institutions and stakeholders (Belay et al, 2010). It is also likely that the amount of regional organisations and the extent to which they are geographically overlapping undermines their roles. For example, not only does NBI cut across several Regional Economic Communities, but also regional structures like the East Africa Power Pool (EAPP) and the Lake Victoria Basin Commission (LVBC). Related to this and concerning NBA, organisational capacity and lack of overall coordination are another two major obstacles towards a stronger role of the NBA in regional infrastructure frameworks (Medinilla 2018).

## 5. The way forward: conclusions and recommendations

### Conclusions

The goal of the webinar series was to increase understanding of the work of RBOs in the field of investments in infrastructure development. Participants agreed that RBOs in Africa could be important players when it comes to facilitating a consensual and cooperative approach to infrastructure development. The success of River Basin Organisations (RBOs) in contributing to investment in infrastructure development in their river basins builds on both endogenous factors (e.g. organisational capacity and budget) as well as exogenous factors (e.g. the political and economic context).

Most African RBOs do not have an active role in infrastructure development. Only a few of the RBOs that were investigated as part of this study manage an infrastructure investment programme. RBOs are important however, in enabling infrastructure project development by collecting and analysing data as knowledge brokers. The role of implementor is not something all RBOs should aspire to. There can be situations where RBOs can add a lot of value as implementors, for example when there is a clear mandate from national governments and/or projects are transboundary and/or when countries lack the implementation capacity. While the legal basis of an RBO is not a pre-requisite for its ability to contribute to investments in infrastructure development, buy-in of member states is.

Infrastructure is a key driver for economic development across the African continent. It is crucial in enabling widespread productivity and as such contributes significantly to human development, poverty reduction, and meeting the ambitious targets of the 2030 Sustainable Development Goals (SDGs). The link between infrastructure development and economic growth is well-established. For implementing RBOs, it is possible to use existing impact measurement tools or develop tools and frameworks to keep track of the impact realised by developing infrastructure projects. Many RBO projects are large hydro projects (E&S sensitive); good ex-ante impact frameworks can increase development partner support.

Not all RBOs are well-placed to become implementors; in fact, many factors, including the legal mandate, geo-political context and implementing capacities of members states, all impact the ability of an RBO to act as an implementor. In order to carry out this role successfully, an RBO needs key skillsets, including in project management, contract management, IPP negotiations, resource mobilization and results management. The example of NBI shows that separating the political and technical tracks can increase effectivity.

Regional cooperation is key to successful infrastructure development in river basins, given the numerous overlapping regional bodies (outside of RBOs) which exist in Africa. For RBOs to play a more central role in infrastructure development, they should aim to establish framework arrangements with potential partners, e.g. AfDB, GWP, PIDA and RECs. Some of the reasons why these are currently not in place may be the limited organisational capacity of RBOs and limited effectivity. Organisations working on project development in river basins can also support RBOs by giving them a larger role in project development processes.

## Recommendations

The recommendations from the webinar series are in the categories project selection, resource mobilisation, impact measurement and working with regional partners.

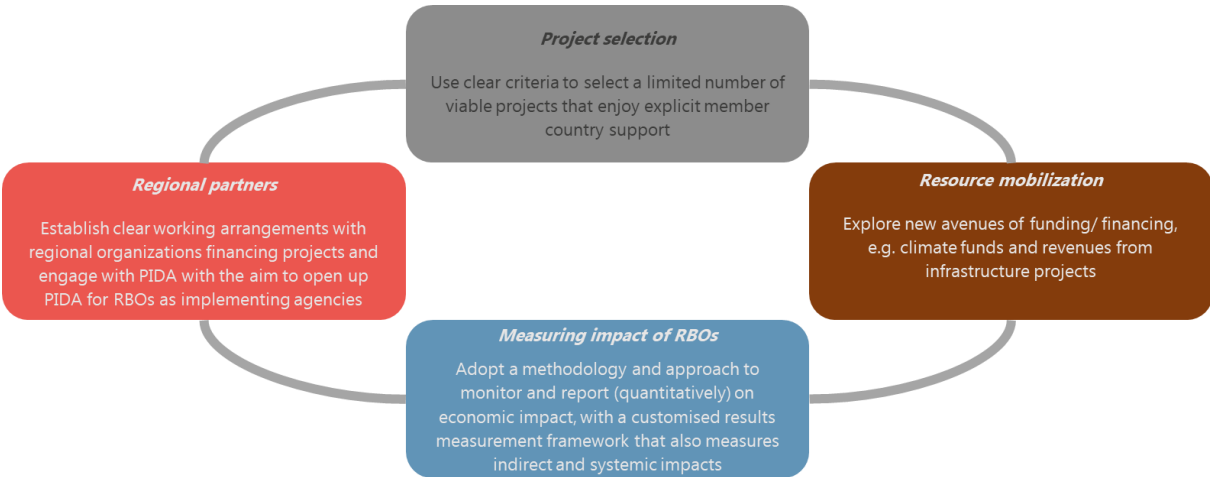


Figure 7: The webinar series resulted in recommendations in four areas

### Project selection by identifiers and implementors

RBOs need clear criteria and rationale for **project selection**, using a common approach to that is aligned to impact measurement and other technical assistance and development facilities, but that also has sufficient flexibility to be adjusted where necessary for the specific context of a particular RBO. The focus should be on limited number of viable projects, rather than a long list, clearly prioritized by National governments. There is potential for much more co-learning and support between RBOs on best practices and project pipeline development.

- Use clear criteria and rationale to select projects - RBOs could explore using a common approach to project selection that is aligned to PIDA and other TA support / development facilities, but that also has sufficient flexibility to be adjusted where necessary for the specific context of a particular RBO;
- Make sure support from different countries for selected projects is clearly demonstrated in the case of transboundary projects;
- Place a focus on limited number of viable projects, rather than a (too) long list of projects that are all priorities of national governments. An interesting role as enabler could be to ensure that the 'right' projects are nationally implemented;
- RBO project identification should be embedded in national development plans and be coordinated with MOF as well as water ministry. Ensure that project appraisal criteria on national and regional level are checked (and preferably harmonized over time);
- Improve non-technical aspects of FS (social, political, environmental) as these typically form obstacles for project development.



### **Resource mobilization by implementors**

In the context of the African RBOs, **resource mobilisation** opportunities for infrastructure project development are limited. We offer some suggestions for future resource mobilisation practice.

- Explore using revenues from infrastructure projects to contribute to core funding;
- Aim for the establishment of new funding avenues (e.g. climate funds) for infrastructure preparation and implementation because of their contribution to climate adaptation / mitigation;
- Collate and circulate resource mobilisation best practices.

### **Measuring impact of RBOs**

If RBOs do not measure their impact, it is hard to demonstrate their contribution. RBOs can have measurable impact in their upstream (“Enabler”) roles, and in their midstream (“Identifier”) and downstream (“Implementor”) roles.

- RBOs should adopt a methodology and approach to monitor and report (quantitatively) on their economic impact. A results measurement framework for RBOs can be customized to different roles, making use of PIDA’s Job Creation Tool (for economic impact assessment with respect to job creation) and monitoring indirect and systemic impacts as well.

### **Regional partners**

Forming of dependable partnerships between RBOs and development partners is key to enabling RBO deliver on the new role. RBOs should aim to work together with these partners and establish robust relations with partners that might open up opportunities for funding.

- Clear working arrangements are needed with RBOs and regional organizations financing projects. RBOs can be a conduit for mobilizing financial/technical support to accelerate delivery bankable projects;
- RBO projects should be included in portfolios of relevant regional programs and vice versa;
- Make more use of PIDA and other regional TA support / development facilities. RBOs can advocate for PIDA to open up for RBOs as implementing agencies;
- Ensure sound involvement of REC-PIDA coordinators in the process of project preparation. Include the RECs and AU/PIDA in the partnership strategies of RBOs;
- Make enhanced use of operational databases developed by African Infrastructure / PIDA.

For the short term actions the webinar’s audience has discussed organisations that could take responsibility for taking up the action. These have been summarized in the next table.

Table 7: Short term actions and responsible organisation

	Action	Responsible organisation
Impact measurement		
1	Develop an approach to monitor impact by RBOs as a result of enabling project development and/or playing a role in project selection	RBOs/ GIZ
2	Develop economic impact measurement methodology that can be used by RBOs – for their impact through managing infrastructure portfolios as an implementor	RBOs/ GIZ
3	Prepare economic impact reporting framework for RBOs individually, and collectively (in wider regions)	RBOs
Partnerships		
4	Identify specific areas of cooperation between RBOs in the area of managing infrastructure portfolios and strengthening cooperation and mutual support between RBOs on operational challenges	RBOs
5	Regular exchange between RBOs/ AUDA/ RECs and more importantly that RBOs make use of the PIDA instruments to move their projects forward – e.g. the PIDA Infrastructure database (see chapter 3)	AUDA/ RBOs/ RECs
Project selection		
6	Prepare general RBO project selection manual, including criteria and process. Aligned with regional organisations, but capable of being tailored to specific RBO circumstances	AUDA/ RBOs/ RECs (and national governments)
7	Initiating process to strengthen connection of RBOs to Ministries of Finance in member countries	GIZ



## Appendix 1 Webinar Programme

Webinar Series - Exchanging Experiences on Managing River Basin Investment Portfolios: 4th African RBO Workshop				
Session	Details	Program	Timeframe	Speaker
<b>Session 1:</b> Contributions of RBOs to infrastructure development and their impact on economic growth	<b>Lead question:</b> What different models / experiences of RBOs role in infrastructure development and investment programming are there?  Arguing the case: what impact do RBOs have on economic development in Africa?  <b>Date:</b> Tuesday the 24 <sup>th</sup> of November  <b>Time:</b> 10.00 to 12.00 CET	Opening Remarks of hosts	20 min	NBI: Eng. Elicad Elly Nyabeeya GIZ: Dr. Malte Grossman GIZ: Anna Waldman
		<b>Part A: role of RBOS</b> Roles of RBOs and investments – introduction	10 min	Rebel: Rolf Dauskardt
		Case 1/ History of NELSAP, Joint owned infrastructure, Rusumo and NELIP	15 min	NBI: Eng. Elicad Elly Nyabeeya
		Case 2/ “An evolving role for RBOS in SADC” by ORASECOM	15 min	ORASECOM: Lenka Thamae
		Q&A	10 min	Rebel
		<b>Part B: Economic impact: what is the evidence?</b> Introduction: Economic impact, findings from the study	15 min	Rebel: Rolf Dauskardt
		Evidence for effects of infrastructure on economic growth in Africa and a perspective on the role of RBOs in this	15 min	AUDA-NEPAD: Dr. Christine Razanamahandry / Dr Towela Nyirenda
		Discussion	10 min	Rebel
		Closing remarks - Drafting of actionable recommendations and resolution of first workshop	10 min	Rebel: Rolf Dauskardt
<b>Session 2:</b> Selection of projects for regional project portfolios: criteria and selection	<b>Lead question:</b> What is the process and the criteria for selection of projects into regional / RBO infrastructure portfolios?	Opening remarks	10 min	GIZ/ NELSAP
		NBAs program with a focus on “NBA annex to the water charter”	10 min	NBA: Abdou Guero
		PIDA Service Delivery Mechanism	10 min	AUDA-NEPAD Mr. Wahabou Ibrah

processes	<b>Date:</b> Tuesday the 26 <sup>th</sup> of November  <b>Time:</b> 10.30 to 12.00 CET	PAP PAP 2 project selection process	10 min	AUC Dr Krishna Heeramun
		Q&A	10 min	Rebel
		NELIP/MSIOA process, selection and criteria	10 min	NBI: Maro Andy Tola
		ORASECOM: identifying projects – selection criteria	10 min	TBD (ORASECOM)
		Discussion	10 min	Rebel
		Closing remarks - Drafting of actionable recommendations	10 min	Rebel: Rolf Dauskardt
<b>Session 3:</b> The practical side of things: Management of Infrastructure Programs & Financing	<b>Lead question:</b> What services/ functions do RBOs need to have in place to be able to effectively deliver on an infrastructure programs? What are good practices – for example with regards to staff and organizational requirements?  <b>Date:</b> Thursday the 3 <sup>rd</sup> of December  <b>Time:</b> 10.30 to 12.00 CET	Opening remarks	10 min	GIZ NELSAP
		Monitoring and Information: the AIDA (African Infrastructure Database)	10 min	AUDA-NEPAD: Mr. Ephrem Getahun
		Q&A	10 min	Rebel
		Good Practices/Challenges Resource Mobilization for regional investment	10 min	Daniel Malzbender
		Overview on how much resources, staff etc. are required to set up investment function in an RBO	10 min	Rebel: Rolf Dauskardt
		Discussion	10 min	Rebel
		Panel discussion: - What are challenges when setting up the investment function? - Are there any other best practices on resource mobilization that can be shared?	20 min	OMVS Mekong AfDB/ AWF
		Closing remarks - Drafting of actionable recommendations	10 min	Rebel
<b>Session 4:</b> RBOs and the regional economic communities and the AU: working together on the African infrastructure	<b>Lead question:</b> How to strengthen the linkages between RBO – REC and AU to deliver on the RBO, REC and African Infrastructure Agenda?  <b>Date:</b> Thursday 10 <sup>th</sup> of December	Opening remarks	10 min	GIZ NELSAP
		Study on REC architecture in the Nile Basin	10 min	Dr. Nicholas Azza
		Q&A	10 min	Rebel
		RBOs and REC in the SADC Investment agenda	15 min	SADC Water Secretariat:
		Discussion	10 min	Rebel
		PIDA 2 Water Strategy	15 min	Dr. Rashid Mbaziira

agenda	<b>Time:</b> 10.30 to 12.00 CET	Workshop resolution - how to move forward on (a) RBOs/ RECs/ AU agendas (b) GIZ and BMZ agendas	15 min	Rebel
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## Appendix 2 Webinar participants

Participant	Organisation
Kristine Herbomel	ABAKIR
Jochen Rudolph	Autorité du Bassin du Niger
Sophie Erfurth	Autorité du Bassin du Niger
Abdou Guero	Autorité du Bassin du Niger
Dr. Krishna Heeramun	African Union
Anna Waldmann	AUDA NEPAD
Dr. Lovasoa Christine Razanamahandry	AUDA NEPAD
Dr. Towela Nyirenda	AUDA NEPAD
Ephrem Hailu	AUDA NEPAD
Christine Razanamahandry	AUDA NEPAD
Wahabou Ibrah	AUDA NEPAD
Ali Matano	East African Community (EAC)
Daniel Däschle	GIZ
Tobias Mohn	GIZ
Athenkosi Pono	GIZ
Sinalo Lande	GIZ
Niklas Malchow	GIZ
Anika Amelung	GIZ
Nora Brown	GIZ
Chitapi Simbarashe	GIZ
Eyoel Bezayit	GIZ
Hanno Fuehren	GIZ
Robert Kranefeld	GIZ
Arumugam Pillay	GIZ
Rasmus Precht	GIZ
Assia Saidi	GIZ
Svea Wragge	GIZ
Kossi Toulassi	Independent Expert
Simbini Tichakunda	Independent Expert
Ibrahim Wahabou	Independent Expert
Jean-Luc Frerotte	Independent Expert
Dr. Nico Azza	Independent Expert

Dr. Loreen Katiyo	Global Water Partnership Southern Africa (GWP)
Daniel Malzbender	Independent Consultant
Fred Mwangi	Intergovernmental Authority on Development (IGAD)
Bertrand Meinier	Mekong River Commission (MRC)
Dr. Anoulak Kittikhoun	Mekong River Commission (MRC)
Abdulkarim Seid	Nile Basin Initiative (NBI)
Prof. Seifeldin Abdalla	Nile Basin Initiative (NBI)
Fekahmed Negash	Nile Basin Initiative (NBI)
Dr. Ana Cascao	Nile Basin Initiative (NBI)
Dr. Malte Grossmann	Nile Basin Initiative (NBI)
Sarah Bebb	Nile Basin Initiative (NBI)
Andy Maro Tola	Nile Basin Initiative (NBI)
Elicad Nyabeeya	Nile Basin Initiative (NBI)
Lenka Thamae	ORASECOM
Alexander Erich	South Africa Development Community (SADC)
Dr. Patrice Kabeya	South Africa Development Community (SADC)
Rolf Dauskardt	Rebel Group
Rob Winters	Rebel Group
Jeroen Trimpe Burger	Rebel Group



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