



IGAD REGIONAL INFRASTRUCTURE MASTER PLAN

Final IRIMP Report – Water Sector Report



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Foreword by Executive Secretary of IGAD

The Intergovernmental Authority on Development (IGAD) Regional Infrastructure Master Plan (IRIMP) is an ambitious plan, the implementation of which will accelerate the region's growth and structural transformation. The IRIMP consists of policy initiatives and infrastructure investments that will significantly strengthen the process of regional economic cooperation and integration. The IRIMP is aligned with, and furthers the aims of, the Abuja Treaty, the Constitutive Act of the African Union, Agenda 2063, and the national development plans of IGAD Member States.

This Water Sector Report is part of four sector reports picked from the overall IRIMP Report. The other three reports are for energy, ICT and transport. The Sector Reports are intended to be used by IGAD Member States, and in particular the relevant line Ministries, Departments and Agencies responsible for sector development, and their development partners to guide future planning, investment decision-making and funding and financing arrangements.

The process of preparing IRIMP began in March 2006 when the 11th IGAD Summit of the Heads of State and Government, held in Nairobi, recognised the importance of infrastructure projects as a vehicle for the integration of the IGAD region and as a catalyst for the economic growth and development of IGAD Member States.

The following year experts from the European Union (EU), IGAD Member States, and the IGAD Secretariat met in Mombasa (Kenya) to prepare the Horn of Africa Initiative (HOAI). HOAI priority areas were: (i) interconnectivity in transport (focus on transport and trade facilitation) priority road corridors linking region to seaports; (ii) energy; (iii) ICT; and (iv) water resources for food security.

Subsequently, the IGAD Secretariat organised a meeting of Member States, held in Nairobi during December 2010, at which was prepared a comprehensive roadmap for the Minimum Integration Plan which would create a Free Trade Area (FTA) in the IGAD region. The roadmap recommended the preparation of IRIMP, which was cited as crucial to achieving the FTA. The preparation of the IRIMP is very timely as the African Continental Free Area (AfCFTA) has recently been established and all IGAD Member States have signed the Agreement. AfCFTA seeks to accelerate intra-African trade and to boost Africa's trading position in the global market by strengthening Africa's common voice and unified position in global trade negotiations.

In June 2013, IGAD requested support from the African Development Bank (AfDB) to develop the IRIMP. The positive AfDB response culminated in the commencement of the preparation of the IRIMP in May 2018. Support from the AfDB for IGAD initiatives is substantial and includes the Kampala–Djibouti Corridor Studies, and the IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI). The AfDB is also supporting a number of regional projects that are connecting the Member States including the construction of Isiolo–Moyale Highway in Kenya and the rehabilitation of Awassa–Moyale Highway in Ethiopia.





The IRIMP covers infrastructure in Transport, ICT, Energy and Transboundary Water Resources. The IGAD region is unfortunately characterised by the low stock of infrastructure, particularly in transport and energy, and the inadequate development of the ICT sector and digital economy. Coupled with the increasingly severe strain placed on water resources the region's productivity and growth, and regional integration, has fallen short of expectations. Studies have shown that inadequate infrastructure shaves off at least 2% of Africa's annual economic growth. Adequate infrastructure would lead to productivity gains by African firms of up to 40%.

The IRIMP will help facilitate regional integration by bridging the gap in national and regional policies and strategies and addressing infrastructure needs in vital areas, including in remote and pastoralist areas. The IRIMP will guide the process of implementation of priority regional infrastructure projects – constituting the basis for IGAD Member States commitment to a common infrastructure development programme, in the form of a Declaration, as well as the basis for regular review of its implementation. The IRIMP will be implemented over three phases; in the short term (2020-2024); the medium term (2025-2030); and over the long term (2031-2050).

There is an urgent need to scale up regional infrastructure development to accelerate regional integration and development. The IRIMP will help address key regional infrastructure deficits. This includes projects that will address transport and energy needs of the region in a manner that ensures accessible and affordable access by the region's population, and the sustainable development of energy and water resources with a special emphasis on renewable sources. The IRIMP will help to enhance the equitable sharing of water resources amongst competing uses. The IRIMP will also further help the region to make necessary steps to expand and deepen the access to modern, affordable, and reliable ICT technologies and services.

The IRIMP focuses on effective implementation of projects by identifying preferable and practical financing strategies, and by proposing policy and institutional frameworks that will ensure the unfettered and seamless implementation of identified projects and interventions.

H.E. Dr. Workneh Gebeyehu

Executive Secretary





Acknowledgements

The IGAD Regional Infrastructure Master Plan (IRIMP) was prepared by a team from IPE Global and Africon Universal Consulting. Preparation was a collective effort that involved the IGAD Member States, and their respective ministries, departments, and agencies responsible for infrastructure planning, finance, and delivery. The Member States, through the Joint Steering Committee, provided valuable feedback on the IRIMP as it progressed through the preparation process and the reporting milestones.

The support and contributions of the African Development Bank team, led by Mr. Mtchera Chirwa, were invaluable in ensuring the IRIMP was firmly focused on delivering sound infrastructure investments that supported wider continental ambitions of inclusive, resilient, and sustainable growth.

IPE Global and Africon Universal Consulting are grateful to the many officials and experts that shared their time and knowledge with us in order to improve the quality of the evidence, review the findings, and to sharpen the recommendations.

The IGAD Secretariat, under the stewardship of Mr. Elsadig Abdalla (Director Economic Cooperation and Social Development) and Mr. Zacharia King'ori (Project Coordinator), ensured that the interests of the Member States were at the forefront of the analysis and prioritisation processes shaping the direction and recommendations of the IRIMP. Mr. Zacharia King'ori provided much valued day-to-day guidance on project management matters. He was a reliable sounding board on technical issues and how they can best be communicated to ensure the IRIMP can be acted on by Member States.

Throughout the IRIMP preparation process, the driving philosophy was 'plan to implement' and to build on the positive infrastructure initiatives that the IGAD Member States were already developing and implementing. The policy and project recommendations reflect this philosophy.





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List of Acronyms

AfDB	African Development Bank
AfCFTA	African Continental Free Trade Area
AFD	Agence Française de Développement (French Development Agency)
AIIM	Africa Infrastructure Investment Managers
AIP	Africa Water Investment Programme
AFESD	Arab Fund for Economic and Social Development
AMCOW	African Ministers' Council on Water
AU	African Union
CMI	Corridor Management Institute
COMESA	Common Market for Eastern and Southern Africa
DWD	Directorate of Water Development
DWRM	Directorate of Water Resources Management
ENTRO	Eastern Nile Technical Regional Office
EPA	Environmental Protection Authority
ESIA	Environmental Social Impact Assessment
EWWCE	Ethiopian Water Works Construction Enterprise
EU	European Union
GDI	Gross Domestic Income
GDP	Gross Domestic Product
GESI	Gender, Environment and Social Impact
GERD	Grand Ethiopian Renaissance Dam
GoK	Government of Kenya
GWP	Global Water Partnership
IDP	Infrastructure Development Programme
IGAD	Intergovernmental Authority on Development
IRIMP	IGAD Regional Infrastructure Master-Plan
IWRM	Integrated Water Resources Management
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
LAPSSET	Lamu Port-South Sudan-Ethiopia-Transport Corridor
LCDA	LAPSSET Corridor Development Authority
MAEM-RH	Ministry of Agriculture, Livestock Production, and Marine Affairs-Water Resources, Djibouti
MoWIE	Ministry of Water, Irrigation and Electricity, Ethiopia
NBI	Nile Basin Initiative
NEPAD	New Partnership for Africa's Development
Nile-SEC	Nile Basin Initiative Secretariat
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NGO	Non-Governmental Organisation
NDP	National Development Plan
NAP-UNCCD	National Action Program under United Nations Convention to Combat Desertification
NEAPG	National Environmental Impact Assessment Procedures and Guidelines
NEPAD	New Partnership for Africa's Development
NWHSA	National Water Harvesting and Storage Authority





NWCPC	National Water Conservation and Pipeline Corporation
OECD	Organisation for Economic Co-operation and Development
ONEAD	National Water and Sanitation Office, Djibouti
PIDA	Programme for Infrastructure Development in Africa
PAP	Priority Action Plan
PPP	Public Private Partnership
PSO	Private Sector Organisation
REC	Regional Economic Community
RWSS	Rural Water Supply and Sanitation
SADC	Southern African Development Community
SDI	Spatial Development Initiative
TRBO	Transboundary River Basin Organization
UWSS	Urban Water Supply and Sanitation
WAB	Water Appeals Board
WASREB	Water Services Regulatory Board
WB	World Bank
WT	Water Tribunal
WSB	Water Services Board
WSTF	Water Services Trust Fund
WRM	Water Resources Management
WRMA	Water Resources Management Authority



Executive Summary

IRIMP Water Sector

The IGAD Infrastructure Master Plan (IRIMP) was developed to guide the IGAD region in identifying its priorities in the development of its infrastructure networks and services and implementing them during the period 2020 – 2050. The IRIMP covers four sectors, namely; Transboundary Water Resources, Energy, ICT and Transport and is to be implemented through a three -phase scheme.

The IRIMP architecture for water sector is based on the transboundary water basins complete with the Surface Water Basin, Groundwater Basin and the Transport Sector Corridor Approach where programmes and projects are structured along the key the seventeen (17) Surface Water Basin, sixteen (16) Groundwater Basin nine (9) IGAD corridors that have been serving the region or are expected to do so in the coming years.

Table A1, A2 and A3 shows the water sector projects portfolio over the three phases and their estimated costs of implementation.

Table ES 1. 1: Summary of IDP Projects: Sector Portfolio Breakdown by Implementation Phase

Sector	Subsector	Short-term (2024)		Medium-term (2030)		Long-term (2050)		Total	
		Projects	Cost \$m	Projects	Cost \$m	Projects	Cost \$m	Projects	Cost \$m
Transboundary Water	Multi-purpose Reservoir	4	662.65	1	2,000	0	0	5	2,663
	Water Aquifer Management	1	2.7	0	0	0	0	1	2.7
	Grand Total	5	665.35	1	2,000	0	0	6	2,665

Table ES 1. 2: Infrastructure Development Programme: Short-term Plan (2020-2024)

Project ID	Project	Value (in million USD)	Corridor	Sector	Sub-Sector
WMRN17	Kocholia Trans-boundary Multipurpose Water Storage	55	Northern Corridor	Water	Multi-purpose Reservoir
WWAP07	Assessment and Management of Bagara Transboundary Groundwater Aquifer	2.7	Port Sudan	Water	Water Aquifer Management
WMRMo02	Dawa River Multi-purpose Dam	604	Mogadishu Corridor	Water	Multi-purpose Reservoir



Table ES 1. 3: Infrastructure Development Programme: Medium-term Plan (2025-2030)

Project	Value (in million USD)	Corridor	Sector	Sub-Sector
WMRL19 High Grand Falls Multi-Purpose Dam	2,000	LAPPSET Corridor	Water	Multi-purpose Reservoir

The projects prioritised include those in physical infrastructure and others in basin management facilitation through the development of policy, legal and regulatory instruments; and in the development of capacity covering institutional and human capital development.

In order to effectively implement the IRIMP, instruments have been developed to guide in project identification, prioritisation and in advancing projects preparation from concept to financial closure where investment is undertaken by the appropriate off-taker depending on its economic and financial rates of return.

Table below shows the IRIMP Implementation Plan including institutional structure to be undertaken by IGAD, Member states corridor management institutions:

Table ES 1. 4: IRIMP Implementation Plan

FOCUS AREA	ACTION	ACTIVITIES	RESPONSIBLE PARTIES	TIME FRAMES
Coordination of Implementation of the IRIMP through a unified platform at IGAD and country levels	<p>Establishment of a Project Coordination Unit (PCU) based at the IGAD Secretariat.</p> <p>PCU to consist of a Programme Coordinator and 4 sectoral experts (Transport, ICT, Energy and Water) – with support staff and office space.</p>	<p>Coordinating member states in the development of transboundary projects</p> <p>Convening meetings, workshops and organising other events;</p> <p>Conducting awareness and sensitisation on project issues and procedures (Public and Private sector)</p> <p>Preparing work plans and working documents and maintenance of projects databases;</p> <p>Coordination of the mobilisation of resources for implementation of projects.</p> <p>Promotion/ coordination of establishment and operation of Corridor Management Institutions (RBMI)</p> <p>Enhancing awareness and sensitisation of IGAD's programmes</p>	IGAD Secretariat	Within Six months of IRIMP endorsement





FOCUS AREA	ACTION	ACTIVITIES	RESPONSIBLE PARTIES	TIME FRAMES
Institutional set up for management of programmes/projects in Member States	Establishment of a National Multi-Sectoral Coordination Committee comprising all sectors (Transport, ICT, Energy, Water)	<p>Reviewing / aligning national IRIMP projects and national development plans</p> <p>Sectoral Coordination Committees to review and update project budget and funding information</p> <p>Enhancing awareness and sensitisation of IGAD's programmes</p>	Member States	Within Six months of IRIMP endorsement
	Establishment of Sectoral Steering Committees of Senior Officials.	<p>Steering the implementation of the IRIMP</p> <p>Providing regular reports on programme/project implementation progress</p> <p>Maintenance of national project databases</p> <p>Link to IRIMP PCU M&E systems</p>	Member States	(Six Months)
	Establishment of Technical Task Teams/Working Groups	<p>Reviewing Terms of Reference for studies</p> <p>Handling specific programmes/projects requirements</p>	IGAD Secretariat	Continuous
Harmonisation of national policies, regulations and procedures on cross border and transit trade among member states to enable the development of transboundary projects	Addressing areas where policy and regulatory instruments; and technical standards and procedures need to be harmonised in the IGAD region	<p>Identify key areas where policy and regulatory instruments; and technical standards and procedures need to be harmonised in the IGAD region;</p> <p>Prepare Model policy, legislative and regulatory instruments for adoption by Member State;</p> <p>Coordinate the states in concluding Multilateral Agreements where necessary;</p> <p>Undertake corridor diagnostics of trade facilitation constraints and develop reform action plans for the corridors drawing lessons on international best practices in trade facilitation; and</p>	IGAD Secretariat	(Initiate review / gap analysis within 3 months of setting up of National Multi-Sectoral Coordination Committee-complete within 12 months after the review / gap analysis)





FOCUS AREA	ACTION	ACTIVITIES	RESPONSIBLE PARTIES	TIME FRAMES
		Creation of awareness in the private sector in the members states.		
Resource mobilisation for projects preparation and implementation	Develop a database of potential sources of funding for categories of projects and document their requirements for access to funds	<p>Prepare IRIMP project inventory on the basis of potential sources of funding projects.</p> <p>Undertake research mobilisation through structured fora such as Infrastructure Investment Forum, missions to development partners and cooperating partners</p> <p>Promote projects for attraction of interest by private sector including potential PPP off-takers</p>	IGAD Secretariat	Continuous
Capacity Building for Projects Implementation	Development of capacity building at national and IGAD Secretariat	<p>Identification of capacity gaps at human and institutional levels</p> <p>Identification of training instruments and institutions</p> <p>Develop the training curriculum and materials (including online) for the stakeholders.</p> <p>Enhance communication with all relevant stakeholders</p>	IGAD Secretariat	Continuous
Monitoring and Evaluation of programmes and projects implementation	Development of a Monitoring and Evaluation (M&E) Mechanism	<p>Data collection systems on project implementation and trade flows along the corridors to be developed and adopted</p> <p>National and regional fora established to review performance</p> <p>Monitoring the progress of developed work plans and projects</p> <p>Assessment of the wider economic benefits of the corridor investments for impact monitoring</p>	IGAD Secretariat / IRIMP Programme Coordination Unit (PCU)	Long-term and continuous



Chapter One: Introduction to the IRIMP Water Sector



Chapter 1: The IRIMP Water Sector

1.1 Objectives

The objectives of the IGAD Regional Infrastructure Masterplan (IRIMP) are to:

- i. Develop a strategic framework for infrastructure development and investment in the transport, energy, ICT and water resources sectors;
- ii. Facilitate intra-regional and inter-continental trade, and the flow of goods, services, and the movement of people across borders of the region;
- iii. Support regional economic growth that is inclusive, resilient, and sustainable; and
- iv. Reduce isolation and promote regional integration and stability.

The IRIMP aims to catalyse investments in infrastructure in the IGAD region, as outlined in the Terms of Reference (TOR): “[the] infrastructure master plan will provide an opportunity for Member States, development partners, investors and other stakeholders to **pick regionally accepted and bankable infrastructure projects to fund, invest and support.**”

The IRIMP not only focuses on projects but, equally important, highlights the need to invest in building sustainable institutional capacity to improve the delivery and management of investments in the long-term. The IRIMP is also about improving the *quality of growth and investment* by ensuring climate change, social inclusion (bringing vulnerable groups, women, and youth into the development process from design to implementation) and conflict sensitive investment choices are mainstreamed in decision-making and project execution.

The focus of this report is to outline the water sector plans and investments that form an integral part of the IRIMP.

1.2 The IRIMP Strategic Framework

The key institutional and policy drivers of the IRIMP Strategic Framework are:

- The IRIMP is a key tool to *operationalise* the African Continental Free Trade Area (AfCFTA) and Vision 2063 through the Regional Economic Communities (REC) institutional arrangements;
- The IRIMP will contribute to the PIDA-PAP 2 planning process, the underlying concept of which is: “*To promote an integrated, multi-sectorial corridor approach that is employment-oriented, gender-sensitive, and climate-friendly and that connects urban/industrial hubs with rural areas*”; and critically,
- The expression of IGAD Member State priorities as expressed through *National Development Plans*.

The IRIMP maps out the provision of trans-border physical infrastructure and the implementation of related policy, regulatory and institutional strengthening (economic infrastructure) initiatives over the 2020-2050 period, with three phases of development:

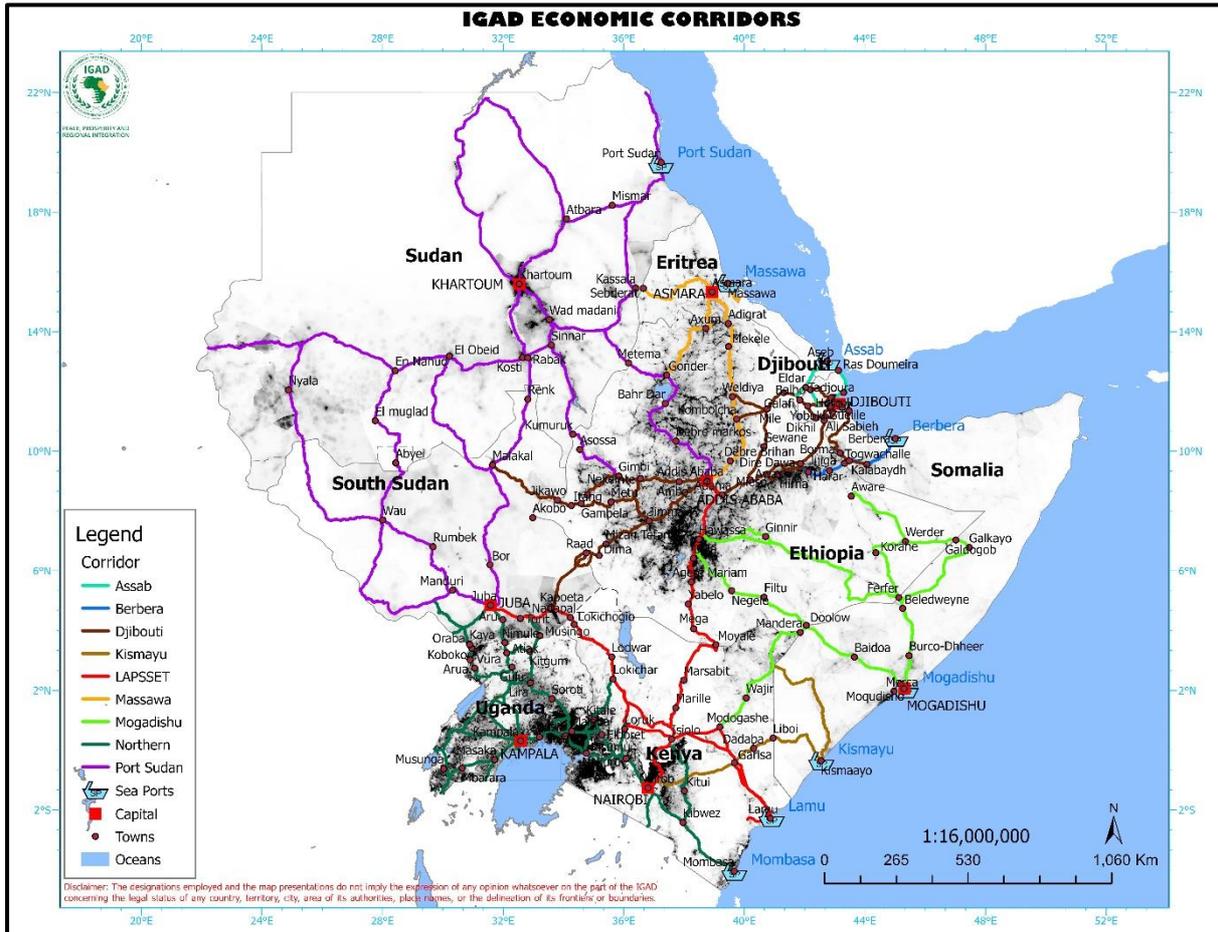




- Short term: 2020-2024
- Medium term: 2025-2030
- Long term: 2031 - 2050

The primary principle guiding the selection of trans-border infrastructure projects for the IRIMP is the degree to which a project promotes the development of the nine economic development corridors that traverse the IGAD region – Figure 1.1.

Figure 1. 1: Potential IGAD Economic Corridors



The objective of the IRIMP is to develop these potential economic development corridors to maximise job creation, are resilient to climate change, are people-driven and strengthen the role of women through gender-sensitive infrastructure development. A balanced and inclusive approach adopted, with all countries and corridors included in the Infrastructure Development Plan and Action Plan. The sector profile of the IRIMP / Infrastructure Development Programme is given in Table 1.1.

The contribution of the water sector to development of the respective economic development corridors is subject of this report. The rationale, investment priorities, financing, implementation and safeguards of the water sector are described in the sections that followed





Table 1. 1 Summary of Infrastructure Development Programme Projects: Sector Portfolio Breakdown by Implementation Phase

Sector	Subsector	Short-term (2024)		Medium-term (2030)		Long-term (2050)		Total	
		Projects	Cost \$m	Projects	Cost \$m	Projects	Cost \$m	Projects	Cost \$m
Transport	Roads	23	9,312	23	13,179	7	8,224	53	30,715
	Railways	4	8,442	5	9,668	21	47,960	30	66,070
	Inland Container Depots (ICDs)	3	209	2	200	0	0	5	409
	Border Posts	11	129	2	14	2	40	15	183
	Inland Waterways	4	61	6	3,337	0	0	10	3,398
	Sea Ports	6	5,041	4	4,200	5	4,680	15	13,921
	Aviation	11	4,737	10	2,734	1	600	22	8,071
	Subtotal	62	27,931	52	33,331	36	61,504	150	122,766
Energy	Petroleum/Gas Pipeline	3	5,214	5	7,235	0	0	8	12,449
	Power Interconnector	6	2,342	6	675	6	2267.5	18	5,285
	Subtotal	9	7,556	11	7,910	6	2267.5	26	17,734
ICT	Fibre Optic Links	10	396	4	264	0	0	14	660
	Data Centre	1	173	1	70	0	0	2	243
	Internet Exchange Point (IXP)	2	7	0	0	0	0	2	7
	Subtotal	13	576	5	334	0	0	18	910
Transboundary Water	Multi-purpose Reservoir	4	662.65	1	2,000	0	0	5	2,663
	Water Aquifer Management	1	2.7	0	0	0	0	1	2.7
	Subtotal	5	665.35	1	2,000	0	0	6	2,665
Grand Total		89	36,728	69	43,575	42	63,772	200	144,075





1.3 Scope

The Sector Reports *complement* the IRIMP Strategic Framework and Infrastructure Development Plans which are centred around the core economic development corridors in the IGAD region. The sector plan and related investments have been developed in collaboration with the Member States to ensure alignment with national development plans. In parallel, the sector investments have been developed to align with the African Union PIDA PAP II process. The sector plans and risks have been “tested” through consultations with the IGAD Joint Steering Committee and consultations with civil society and private sector organisations through a series of workshops to ensure inclusion, resilience and environmental and social safeguards are fully considered and incorporated into the IRIMP.

1.4 Users

The Sector Reports are intended to be used by IGAD Member States, and in particular the relevant line Ministries, Departments and Agencies responsible for sector development, and their development partners to guide future planning, investment decision-making and funding and financing arrangements.



Chapter Two: Strategic Context and Situational Analysis



Chapter 2: Strategic Context and Situational Analysis

Introduction

Water supply and sanitation activities are crucial parts of IGAD's transboundary water basin's programs. The mutual agreement on usage of a transboundary water basin has many benefits. These are mainly ensuring: -

- The bilateral agreements on water resources sharing for domestic and other economic activities, sanitation improvement, food security, environmental protection, social development, economic cooperation, regional integration, peace and security.
- Formation of basin block to manage the water resources. Basin block will harmonise member state's vision, mission and strategic plans for common goal achievement.
- Increased resilience of the populations in the basin. This resultantly leads to a significant reduction in aid dependence.
- Mitigation of environmental pollution by adaption of safe wastewater treatment and use of improved sanitation system.
- Reduction of border crisis/ conflicts that are likely to arise due to water resource usage.

Water and sanitation are mainly an integral part of health, education, natural resources management, economic growth, and democracy and governance programs. These are clearly reflected in the specific strategic development priorities of each member state and the region as enshrined in the Goals and Priority Areas for the First Ten Years of Agenda 2063.

2.1: Sector Development Drivers

While the need for improved access to clean water and sanitation facilities is felt in every country, IGAD will focus strategically with the transboundary water basins that require transboundary interstates agreement of the water resources sharing for mutual social and economic benefits to the member state's communities and the entire state at large. This will ensure the achievement of a high standard of living, quality of life and well-being for all the citizens.

The principle of responding to the greatest need has been the determining factor in the geographic selection of most of IGAD's water and sanitation activities. IGAD will apply additional criteria to set priorities for its future water-related activities in the regional and country level planning. These priority setting criteria address both the water and sanitation need of the countries and the likely effectiveness of the interventions to achieve results. A systematic consideration of these factors will help enhance the strategic impact of any interventions.

- Level of Need in Water Supply and Sanitation Coverage: This is defined as the percentage of population without access to improved drinking water supply and improved sanitation facilities. This facilitates achieving sustainable access to potable water and reduce the distance to the nearest public/communal outlet to a reasonable distance.
- Countries Enabling Environment to Support Sustainable Impact: The likelihood of successful interventions in the water sector can be partially assessed by considering the legal,





policy and institutional context for water resources management or water supply and sanitation delivery in any given country. Transboundary investments will have the greatest impact in countries where governments are committed to providing water and sanitation in a cost-effective manner.

- Historic and Existing Investments in the Water Sector: Across its development portfolio, IGAD will consolidate the gains made in various countries in different development sectors, and building on the successes already achieved. The strategic approach adopted will be to complement existing programming (including adding new water subsectors of intervention to strengthen what is already in place).
- Opportunities to Integrate Water Investments with IGAD Overall Regional Portfolio: Integration of water and sanitation activities into the core strategic framework will help to ensure that water investments contribute to other priority development areas, and promotes greater programmatic sustainability as well as the impact on the ground. For example, introducing a water supply, sanitation and hygiene component into a large, ongoing regional or national health or education program is more likely to have far-reaching impacts and to be a sustainable intervention than a stand-alone and localised activity with no connection to other programs.

2.2 Current Projections and Trends

The water sector currently shows little progress compared to the other infrastructure projects like ICT, Energy, and Transport. Several factors like low capacity for project preparation; lack of financing; lack of clear institutional arrangements for implementing the projects and lack of clear understanding of the role of the RECs, LRBOs, and Member States. Information on the current status of some of the water sector projects is not readily available.

PIDA Water: A joint collaboration between NEPAD Agency, AMCOW and GWP through the Africa Water Investment Programmes (AIP) is currently addressing the lack of progress in implementation on water project and focusing attention to ensure the sector experiences significant growth as infrastructure along the proposed regional and continental corridors is rolled out.

The PIDA Water is expected to pick up many of the IRIMP water projects by providing the necessary visibility for their uptake and speed up their implementation. This will be achieved by mobilising partners across the continent, accelerating project preparation and catalysing investments for job creation. The program will further promote innovation, stronger project transaction advisory support service and capitalise on delivering Regional Integration, Infrastructure and Trade Programme (RIITP) instruments.

2.3 Challenges

The IGAD region is prone to recurrent droughts and dry spells and is one of the most vulnerable regions in the world to climatic variations. The region is affected by a high degree of variability in rainfall patterns, and most likely will increasingly suffer the adverse impacts of climate change. Water resources are scarce across the IGAD region, particularly in Djibouti, Eritrea, Kenya, and Somalia, where water consumption is less than 1,000m³ per person per year or less. Other countries





such as Ethiopia and Uganda, which presently have adequate water, will be water stressed by the year 2025. Access to water by some member states is especially limited; in South Sudan only 25-30% of the rural population has access to safe potable water, and only 4% of the rural population have piped water on their premises. A high percentage of the population of the IGAD region (42%) still uses unimproved drinking water sources.

A lack of water will significantly limit sustainable development in the IGAD region. This underscores the need for policies and programmes that will enhance the ability of the region to optimise the use of water resources for residential, agricultural, and industrial uses. This task is ever more urgent given the continuing population growth of the region which has contributed to increasing pressure on water resources and the environment, often resulting in food insecurity, famine, and poverty, and more generally, social, economic and political tensions and disputes. The effective and sustainable management of the trans-boundary surface and ground water resources is required urgently.

IGAD Member States must strengthen strategies and institutional frameworks necessary to effectively manage these depleted transboundary resources. This has hindered economic development and calls for concerted inter-State cooperation creating and implementing transboundary water basin legal and regulatory frameworks. Furthermore, although national policies have been enacted related to biodiversity, environmental and water resources protection, many are not implemented or poorly enforced. There is need for coordination amongst IGAD member states to ensure member states are committed to implementing relevant national and inter-State policies. More specifically accelerated technological transfer is required which will enhance the capacities of individuals, communities and businesses to utilise water resources in the most optimum manner by, for example, extending rain-water harvesting, and by improving agricultural practices and management, thereby reducing dependence on rain-fed agriculture, and relieving stress on the currently limited use of irrigation.

The following are some of the main challenges that face the water sector and its various subsector:

Table 2. 1: Main challenges facing water sector

Challenges
<ul style="list-style-type: none"> • Ensuring the available scarce transboundary water resources is successfully share via the adaption of the best international practice in development and utilisation of the transboundary water resources. • Financing infrastructure projects. • Multiple and overlapping memberships and expedite the regional and continental integration processes. • To attract investors for trans-border infrastructure projects, region is currently facing the challenge of: - <ul style="list-style-type: none"> ○ <i>Macroeconomic stability</i>, often termed 'country risk' i.e. macroeconomic characteristics, political dynamics, resource bases, export and import profiles, fiscal and monetary policies. ○ <i>Political stability</i>, resulting from a change in leadership can create a degree of uncertainty about honouring existing contracts and bring about potential radical changes over the full spectrum of the policy and the legislative framework.





- *Lack of bankable projects*, despite high demand for infrastructure and no shortage of project ideas, many projects in national pipelines are often at a conceptual stage with a lack of ability and resources to nurture the projects to bankability level.
- *Tariff regimes* in fragile states also tend to be below cost-reflective levels, therefore not allowing the private sector to enjoy an appropriate reward on their investments considering the risks over relatively long periods of time.
- *Availability of long-term debt* at reasonable interest rates is vitally important to the efficient financing of infrastructure.
- *Population densities* in the IGAD region are relatively low by global standards and this increases the cost of the provision of infrastructure.
- *Lack of reliable data* makes projections on demand and the nature of demand difficult, which is not only a problem for national planners but also an obstacle for private sector operators considering PPP projects.
- *Limited human resource capacity* has implications at three levels. Government officials are overloaded and stretched just coping with everyday tasks so that little capacity exists to conceptualise and prepare bankable projects.
- *Lack of reliable local partners* to implement projects with is a barrier to investment as few international players are prepared to launch operations without acceptable local partners.

2.4 Demand and Supply Analysis

The demand for water in the IGAD region is expected to increase significantly (see **Error! Reference source not found.2.2**)¹. For example, irrigation water requirements become increasingly significant; a four-fold increase from around 38km³ in 2019 to some 146km³ in 2050. Furthermore, total annual water withdrawals for the industrial sector in the region are projected to increase from about 1.9km³ in 2019 to 2.3km³ in 2024 to reach about 3.1km³ in 2030, with an increase of 64% the base year 2019. Between 2030 and 2050, withdrawals are projected to reach 7.3km³, an increase of 288%.

The water demand analysis also shows the trans-boundary basins that will become stressed. In the Juba-Shebelle Basin, for example, water demand for agriculture will grow from 62.5% in 2019 to 77.9% in 2024, 108% in 2030 and 125% in 2050 causing serious demand deficit in 2050 as this would require more water than is available in the basin surface water resources. Clearly whichever way one looks at the situation, the pressure on water resources in the IGAD region likely will be immense in the coming years.

¹ Details of water demand and supply projections are given in *Volume 2: The Evidence Base*





Table 2. 2: IGAD total projected water demand

	2019	2024	2030	2050
Domestic demand (km ³)	4.6	5.2	5.7	8.0
Livestock (km ³)	4.4	5.0	5.6	8.9
Irrigation (km ³)	37.7	46.4	62.0	146.3
Others (industry, tourism, etc.) (km ³)	1.9	2.3	3.1	7.3
IGAD total (km³)	48.6	58.8	76.4	170.5

Source: IRIMP Volume 2: The Evidence Base

2.5 Framework for Water Demand Management

A strong institutional and legislative framework at all levels of transboundary water resources management is key to successful implementation of integrated water resources management and can help to promote political and economic cooperation between riparian states, transparency and create trust. It is also clearly demonstrated that the role of the river basin organisations is crucial to ensure the proper design, planning, management, and development of transboundary water resources. However, cooperation on transboundary water management is a long process that needs strong political commitment and should include the collection of reliable data and monitoring

Although the existing trans-boundary water basins are often seen as a source of conflict and tension between and among riparian countries, in reality the development of trans-boundary water basins can also serve as a unique vehicle for promoting sub-regional and regional co-operation and thus promote peace, harmony and social and political stability across the region. Transboundary water management is a great opportunity to promote and implement the great objectives and ideals of regional initiatives like the NEPAD or the Millennium Challenge account.

Policies, strategies, and objectives of cooperation and how to achieve them shall be set out in the proposed IGAD Regional Water Resources Protocol (legal instruments) to be signed by the riparian Member States of IGAD to the agreement. This will include agreements on: (a) the Status of the water resources; (b) exchange and sharing of information and data; (c) investment policies; (d) establishment of transboundary organization(s) for water resources development and management; (e) service providers and IWRM; (f) regulations for water quality; (g) regulations for water quantity; and (h) regulations on environmental standards. The success of the proposed institutional framework will depend upon the Member States' enactment of legislative and policy changes, approval and refining the frameworks, provision of political support, involvement of stakeholders, and guiding the provision of support by development partners.

2.6 Gap Analysis/Assessment

Institutional arrangement fragmentation and unclear responsibilities makes it very difficult as different bodies are responsible for the monitoring and oversight of hygiene and sanitation services. Basin management with different water services providers, water services board, county





governments and different national government ministries with mandated to operate and maintain the water services makes it very hard for harmonization of the works. This has led to uncoordinated implementation of integrated water resources management system.

Availability and reliability of data is another gap that face any proper planning. There is no comprehensive data available on water resources, be it that face any proper planning or groundwater occurrence, abstractions or respective safe yields in the transboundary water resources basins. The mechanisms of groundwater recharge are not known, but infiltrations associated with the river flows are thought to be the main component of inflows. Local population densities are used to provide information on the quantity and quality of groundwater existence, though this unreliable prediction of ground water occurrence makes acquisition of information regarding the local groundwater resources a priority action in future considering the projected reduction in surface water availability.

Most development plans for the transboundary water resources basin remains unclear, with new projects being commissioned as others are either suspended or abandoned, making it very hard to get a working data on the number of projects being implemented.

Majority of the area within the transboundary river basins where irrigation potential had been identified lacks clear policy on land ownership and is occupied by the pastoral communities, making coordination between the project implementation and day to day running of the irrigation schemes remains unclear. This make determination of the agricultural water demand very difficult as all that can be done is speculate what can be the situation.

Lack of clear population census presents the transboundary water resources river basins with no reliable demographic data for future planning for domestic water supply, livestock demand and municipal supply.

Biodiversity data is greatly not captured. This makes it hard to estimate the environmental demand and only estimate can be done.

The water sector infrastructure gap analysis assesses the capacity of infrastructure to meet forecast water sector demand in each section of the IGAD transboundary water basins during the three phases. Gaps arose where demand from existing water sector infrastructure plus the already planned projects could not cope with the forecast water resources demand over any of the three phases.

Where gaps were identified, and there was no existing project in the inventory to address the gap, a new project was proposed and assigned to the relevant phase. The gap assessment covered mitigation measures for each of the IGAD transboundary water basins.

2.7 Intervention Priorities

In order to implement the IRIMP projects successfully, interventions will be necessary at various levels among states, IGAD Secretariat. There may be interventions at by other RECs and the AU that may accelerate the projects development. Interventions may be made through under IGAD should be exercised in line with the proposed Implementation Plan and will cover the following areas:





- i. Formation and strengthening of a Transboundary Basin Management Unit;
- ii. These need for the Hydro-meteorological data to be documented, assessed and rectified to give a working basis to enable merging with radar altimetry data for modelling purpose.
- iii. Document and update the basin population complete with the existing economic activity.
- iv. Sharing of the hydro-meteorological, river flows, population, biodiversity and economic activities data of the basins;
- v. Understanding the cultural practices of the basin population; and
- vi. Technological transfer of the international best practice in river basin management.



Chapter Three: Strategic Framework

Chapter Three: Strategic Framework

Section 3.1 Sector Vision and Strategy

The overarching vision is to ensure *the provision of adequate water for the growing economies of IGAD in a manner which is environmentally sustainable and directly and positively contributes to the water, energy, and food security nexus*. While the need for improved access to clean water is felt in every member state, the IRIMP will focus strategically on the *transboundary water basins that require transboundary interstate agreements concerning shared use of water resources for mutual social and economic benefit*.

It is envisaged that the water sector in the IGAD region will progressively evolve from a state characterised by deficits, and vulnerabilities and stresses to one that is able to provide adequate water for all future demands and in a manner that is environmentally sustainable and fully takes into account possible adverse impacts of climate change.

The Vision for the three time-periods is given below:

Table 3. 1: Water Sector Strategic Objectives

Short term (2020-2024) Strategic Objectives	Medium term (2025-2030) Strategic Objectives	Long term (2031-2050) Strategic Objectives
Inter-state agreements concerning the sharing and use of water related to trans-boundary water resources are agreed and enshrined in related policies, regulations and laws of the relevant member states.	At least half of all trans-boundary water basins are internationally recognised as being managed sustainably and are providing sufficient water for the relevant members' states.	All trans-boundary water resources are managed in a sustainable and regenerative manner, and able to provide adequate water for each member state.

The groundwork for achieving the vision has been laid. The IGAD region is moving towards good water governance which is a key underpinning for sustainable development. The IGAD member states have been progressively taking practical steps towards improving water governance systems at both the national and regional levels by strengthening relevant institutions in all water subsectors by improving institutional coordination, integrating policies, minimizing duplication of efforts and wastage of resources, and by strengthening institutional capacities and capabilities.

The policies of the member states promote industrial development, including irrigation, and aim to increase access to safe drinking water. This makes freshwater, whether surface or underground, a focal issue in government strategies. The IGAD region Water Resources Policy has proposed measures to be undertaken and investments to be targeted to reduce the problems in the deficit areas of Ethiopia, Kenya, Somalia, Djibouti, Eritrea, Sudan, and Uganda. The private sector will become a key player in the water sector as realistic values are attached to freshwater.





3.2 Infrastructure Implementation Programme

It is recommended that IGAD member states commit to water policy reform that will ensure adherence to the Integrated Water Resources Management (IWRM) principles, and which would facilitate private sector participation. This is in-line with the outcome of the IGAD first Meeting of the Ministers of Water Resources on 21 January 2015 in Addis Ababa, Ethiopia, at which approval was given for the adoption of IGAD Regional Water Resources Policy. Further the ministers urged the IGAD Secretariat to take the necessary steps for the development of the Water Protocol for the implementation of the regional policy, and it was recommended that the IGAD Secretariat establish a Unit to follow up the implementation of the regional water resources policy, and to ensure the development of the Water Protocol and sustainable water resources management in the region.

The IGAD Regional Strategy Implementation Plan entails funding and institutional arrangements of the programmes; transitioning from medium-term to annual action plans; and monitoring and evaluation framework that will avail the required policies, legal and institutional frameworks for the successful implementation of the Plan.

Progress has been made. At the time of writing, IGAD member states were seeking to harmonise national laws and policies with the national development agenda on Water Resources. Impact assessment need to be completed, however, to ensure that policy interventions meets the national development agenda on Water Resources with respect to taking appropriate steps to sustain and manage water resources, in conjunction with other resources, and to ensure that there is public participation in programmes. The specific recommendations of IRIMP are as follows:

- Formation and strengthening of a Transboundary Basin Management Unit;
- Sharing data, including: hydro-meteorological; river flows; population; biodiversity; and economic activities data of the basins;
- Understanding the cultural practices of the basin population;
- Technological transfer of the international best practice in river basin management.

3.3 Funding Requirements and Financing

Funding for water infrastructure is available from many sources ranging from national capital budget allocations, loans and grants. The private sector may also fund infrastructure projects either directly or through PPP arrangements depending on the expected project yields and risk profiles.

Conventionally, governments have funded projects with positive economic returns but where the private sector has no appetite because of low commercial returns. The projects that are funded by governments are eventually financed through a mixture of user charges and public budgets. Most water projects are funded by governments through own resources or through borrowing.





In cases where the water demands are high and hence returns are high enough, funding may be made through governments and the private sector while the revenue streams from user charges will finance the repayments of the funds utilised. This is possible with large irrigation projects, urban water supply and ranches that the private sector may invest in directly or through PPPs and levy users through water tariffs charges or product sales as appropriate.

3.4 ESIA, Climate Resilience and Safeguards

Water projects may cause challenges to the environment including pollution and climate change due to the construction of infrastructure and the energy used in powering the construction and operational equipment. The choice of modes between gravity or pump feed is the gravity feed system in terms of pollution is desirable as gravity systems emits less or no pollution.

Water sector also brings in challenges in safety especially on the storage where injuries and mortalities arise due to drowning risk. Issues of safety need to be addressed through at design and through effective oversight during the operational phases.

It is therefore important that in the development of infrastructure, the ESIA's, climate change impacts and safety are taken into account during feasibility studies so that the negative externalities can be mitigated.

3.5 Risks

The success of implementation of IRIMP projects may be encumbered by various risks that may arise prior to, during or after their execution. The risks could be internal or external to the projects. Internal risks may be related to faults or omissions made during the preparation of technical designs, financial structuring and procurement of incompetent contractors for construction and supervision.

These internal risks could be mitigated by ensuring that project studies and designs take into account all the necessary areas of potential externalities including environmental and social impacts, resettlements, compensation. Further, procurement of contractors for design, construction and supervision need to be rigorously done with the necessary due diligence. Finally, capacity building should be provided for client's personnel that undertake procurement and project administration coupled with elaborate quality control systems put in place.

External risks arise due to various factors and are external to a specific project. Such risks include country risks predominantly due to political, economic or financial states of countries. External risks could be due country noncompliance with agreements or instruments adopted at bilateral or multilateral levels which may include failure in meeting their regulatory obligations such as the issuance of licences, permits and tax exemptions where provided for in projects implementation.





External risks can be mitigated by countries ensuring peace through preservation of law and order, honouring of regulatory obligations and compliance with commitments made at bilateral and multilateral levels which enhance predictability in business climate.

Countries have different macroeconomic characteristics, political dynamics, resource bases, export and import profiles, fiscal and monetary policies, all of which determine the risk associated with investment in a particular country – such as exchange risk, economic risks (GDP evolution and inflation risk), transfer risks (difficulties in repatriation of distributions and cash flow to the investor), political risks, social risks, regulatory and legal risks, corruption and sovereign risk. For investors, especially long-term ones, macroeconomic stability is a major factor as it plays a significant role in foreign exchange, inflation and interest rates.



Chapter Four: The Action Plan and Implementation Plan

Chapter Four: The Action

Section 4.1 Action Plan Projects

The detailed IRIMP Action Plan which comprises projects selected according to the prioritisation criteria is presented below. Each of listed projects is profiled in the project fiche.

Table 4. 1: Summary of IDP Projects: Sector Portfolio Breakdown by Implementation Phase

Sector	Subsector	Short-term (2024)		Medium-term (2030)		Long-term (2050)		Total	
		Projects	Cost \$m	Projects	Cost \$m	Projects	Cost \$m	Projects	Cost \$m
Transboundary Water	Multi-purpose Reservoir	4	662.65	1	2,000	0	0	5	2,663
	Water Aquifer Management	1	2.7	0	0	0	0	1	2.7
	Grand Total	5	665.35	1	2,000	0	0	6	2,665

Table 4. 2: Infrastructure Development Programme: Short-term Plan (2020-2024)

Project ID	Project	Value (in million USD)	Corridor	Sector	Sub-Sector
WMRN17	Kocholia Trans-boundary Multipurpose Water Storage	55	Northern Corridor	Water	Multi-purpose Reservoir
WWAP07	Assessment and Management of Bagara Transboundary Groundwater Aquifer	2.7	Port Sudan	Water	Water Aquifer Management
WMRMo02	Dawah River Multi-purpose Dam	604	Mogadishu Corridor	Water	Multi-purpose Reservoir

Table 4. 3: Infrastructure Development Programme: Medium-term Plan (2025-2030)

Project ID	Project	Value (in million USD)	Corridor	Sector	Sub-Sector
WMRL19	High Grand Falls Multi-Purpose Dam	2,000	LAPPSET Corridor	Water	Multi-purpose Reservoir

4.2 Implementation Plan

An IRIMP Implementation Plan was prepared proposing the coordination mechanisms including resource mobilisation and institutional arrangements. The following are key assumptions are made on the implementation of the IRIMP:

- (i) The physical infrastructure projects in the IRIMP will be implemented by member states;
- (ii) Coordination will be at the corridor level by a Corridor Management Institution (RBMI); and





(iii) The IGAD Secretariat will provide oversight, advocacy and act as a facilitator for discussions with donors, IFIs and multilateral institutions including other RECs, AU and building consensus among member states

Table 4.4 below contains the proposed IRIMP Implementation Plan

Table 4. 4:IRIMP Implementation Plan

FOCUS AREA	ACTION	ACTIVITIES	RESPONSIBLE PARTIES	TIME FRAMES
Coordination of Implementation of the IRIMP through a unified platform at IGAD and country levels	<p>Establishment of a Project Coordination Unit (PCU) based at the IGAD Secretariat.</p> <p>PCU to consist of a Programme Coordinator and 4 sectoral experts (Transport, ICT, Energy and Water) – with support staff and office space.</p>	<ul style="list-style-type: none"> Coordinating member states in the development of transboundary projects Convening meetings, workshops and organising other events; Conducting awareness and sensitisation on project issues and procedures (Public and Private sector) Preparing work plans and working documents and maintenance of projects databases; Coordination of the mobilisation of resources for implementation of projects. Promotion/ coordination of establishment and operation of Corridor Management Institutions (RBMI)s) Enhancing awareness and sensitisation of IGAD's programmes 	IGAD Secretariat	Within Six months of IRIMP endorsement





Institutional set up for management of programmes/projects in Member States	Establishment of a National Multi-Sectoral Coordination Committee comprising all sectors (Transport, ICT, Energy, Water)	<ul style="list-style-type: none"> Reviewing / aligning national IRIMP projects and national development plans Sectoral Coordination Committees to review and update project budget and funding information Enhancing awareness and sensitisation of IGAD's programmes 	Member States	Within Six months of IRIMP endorsement
	Establishment of Sectoral Steering Committees of Senior Officials.	<ul style="list-style-type: none"> Steering the implementation of the IRIMP Providing regular reports on programme/project implementation progress Maintenance of national project databases Link to IRIMP PCU M&E systems 	Member States	(Six Months)
	Establishment of Technical Task Teams/Working Groups	<ul style="list-style-type: none"> Reviewing Terms of Reference for studies Handling specific programmes/projects requirements 	IGAD Secretariat	Continuous
Harmonisation of national policies, regulations and procedures on cross border and transit trade among member states to enable the development of transboundary projects	Addressing areas where policy and regulatory instruments; and technical standards and procedures need to be harmonised in the IGAD region	<ul style="list-style-type: none"> Identify key areas where policy and regulatory instruments; and technical standards and procedures need to be harmonised in the IGAD region; Prepare Model policy, legislative and regulatory instruments for adoption by Member State; Coordinate the states in concluding Multilateral Agreements where necessary; Undertake corridor diagnostics of trade 	IGAD Secretariat	(Initiate review / gap analysis within 3 months of setting up of National Multi-Sectoral Coordination Committee - complete within 12 months after the review / gap analysis)





		<p>facilitation constraints and develop reform action plans for the corridors drawing lessons on international best practices in trade facilitation; and</p> <ul style="list-style-type: none"> • Creation of awareness in the private sector in the members states. 		
Resource mobilisation for projects preparation and implementation	Develop a database of potential sources of funding for categories of projects and document their requirements for access to funds	<ul style="list-style-type: none"> • Prepare IRIMP project inventory on the basis of potential sources of funding projects. • Undertake research mobilisation through structured fora such as Infrastructure Investment Forum, missions to development partners and cooperating partners • Promote projects for attraction of interest by private sector including potential PPP off-takers 	IGAD Secretariat	Continuous
Capacity Building for Projects Implementation	Development of capacity building at national and IGAD Secretariat	<ul style="list-style-type: none"> • Identification of capacity gaps at human and institutional levels • Identification of training instruments and institutions • Develop the training curriculum and materials (including online) for the stakeholders. • Enhance communication with all relevant stakeholders 	IGAD Secretariat	Continuous

4.3 Prioritised projects and PIDA 2 Alignment

The prioritised water projects have been uploaded in an IGAD portal which has been developed in line with the AID Database structure in the same format as PIDA.

During the preparation of the PIDA/PAP2, IGAD submitted some of the priority projects. In water sector, most of the projects submitted by IGAD were shortlisted for consideration by the PIDA Steering Committee.





4.4 Enabling Environment, Institutional Arrangements and Capacity Development

The likelihood of successful interventions in the water sector can be partially assessed by considering the legal, policy and institutional context for water resources management or water supply and sanitation delivery in any given country. Transboundary investments will have the greatest impact in countries where governments are committed to providing water and sanitation in a cost-effective manner.

IGAD region need to strengthen the legal, policy and institutional frameworks that will enhance an enabling environment that facilitates or enhances key technologies and behaviours. This may be accomplished through advocacy, training, institutional strengthening and other appropriate support mechanisms.

The adoption of similar institutional frameworks and structures across the region is also beneficial in order to enhance the development of common standards, knowledge exchange and secondment of experts for training and experience sharing.

Finally, capacity building handled at regional level would be highly beneficial as countries reduce duplication of learning facilities by making use of existing training institutions that have built their capacities over time. The sharing of training institutions would also stimulate the development of Centres of Excellence which would specialise in specific areas and provide training on a regional basis.

4.5 Key Success Factors and KPIs

The water sector has many factors in its favour to facilitate the development of physical infrastructure and provision of services expected to deliver for the IGAD region. The following are some of the main success factors and indicators in line with the United Nations Sustainable Development Goals:

- Clean Water and sanitation for all communities within the IGAD Member countries. This will be achieved by adaption of policy papers on management issues that geared towards the capacity building via training local population and institution experts on the importance of adapting modern technology that facilitates recycling and reuse of the water resources, improved waste water treatment is availed to all. It will also result in adaption of simple monitoring and reporting systems easily understood by the communities for communication, problem identification and problem solving;
- Economic stimulation resulting from the water resources infrastructure that enable the women and children have a better live as amount of time required to access basic services is reduced. This will be shown by revenue collection by the managing institution managing the services that enables cost recovery and increased purchasing power by the community.
- Availing credit towards implementation of technologies that enables improvements towards more sustainable production. This will ensure water supply





system are properly maintained as spare parts are readily accessible/ available, and community can get credit for procurement of the necessary spares;

- Consistent support and planning of water resources infrastructures that ensures there is adequate monitoring of the operation and maintenance of the infrastructure.
- Adaption of affordable and clean energy, resulting in reduced pollution. This will ensure quality of water resources is guaranteed and is reliable;
- Number of hectares of wetlands and other high value ecosystems protected, conserved or restored. This will ensure water sources are sustainable;

Regarding KPIs, the performance of the various subsectors can be assessed through standard indicators already established international auspices. The water sector has specific KPIs as outlined in the United Nations Sustainable Development Goals.

4.6 The IRIMP Implementation Strategy

The physical infrastructure projects that comprise the IRIMP will be implemented by member states, coordinated at the corridor level by a River Basin Management Institution (RBMI), with the IGAD Secretariat providing oversight and advocacy.

Coordination will be essential in interactions with IFIs and multilateral institutions including other cooperating partners and donors. Coordination will also be necessary in building consensus among member states and also with other RECs and the African Union.

Role of IGAD Secretariat

As indicated above, the role of the IGAD Secretariat in implementing physical infrastructure projects will be one of advocacy, for example promoting the Action Plan at investor forums, commissioning feasibility studies to demonstrate bankability, ensuring projects appear in continental level plans such as PIDA etc., and consensus building to ensure that the goals and priorities of member states are aligned. In the immediate future, until RBMIs are established for river basin management units, the IGAD Secretariat will also play the coordination role.

IGAD has an important role to play in the harmonization of policies and regulations to create a conducive enabling environment for investment in each of the water sector.

Given the high degree of overlap between IGAD and other RECs in relation to the water resources, it is recommended that, where possible, the IGAD Secretariat adopts successful policies, strategies and systems already operational in other RECs, and that regulations, customs procedures and systems are also harmonized with other RECs. A good example of this is the adoption of the NELSAP initiative for use on all IGAD water resources.

Similarly, for water resources that overlap with more than one REC, it may make sense for a REC other than IGAD to play the primary oversight role and for IGAD to take an observer status – this is particularly the case for surface water and groundwater that traverse member states outside of. However, even where IGAD is not the primary REC, the Secretariat may still play an advocacy role, in particular for specific projects implemented in IGAD member states.





Role of River Basin Management Institutions (RBMs)

As discussed in the strategic management sector, the development of successful economic development corridors (EDCs) has most often been driven by a RBMI, which is mandated to coordinate investment across the water basin on behalf of national governments (examples include the NELSAP). RBMIs are established by a multilateral treaty signed by countries that comprise the water basin, which sets out the agreement for the roles and responsibilities of the RBMI.

The NBI is a regional intergovernmental partnership among 10 countries namely Egypt, Sudan, South Sudan, Ethiopia, Kenya, Uganda, DR. Congo, Rwanda, Burundi, and Tanzania. The objective of the NBI is: *“To achieve sustainable socio-economic development through equitable utilisation of, and benefit from, the common Nile Basin Water resources.”* The Cooperative Framework Agreement (CFA) is aimed at establishing a permanent institutional mechanism to promote and facilitate cooperation among the Nile Basin States in the conservation, management and development of the Nile River Basin and its waters.

The NBI is organised into three centres: Nile Basin Initiative Secretariat (Nile-SEC); Eastern Nile Technical Regional Office (ENTRO); and The Nile Equatorial Lakes Subsidiary Action Program (NELSAP), whose core functions are as follows:

- **Facilitating Basin Cooperation** (Nile-SEC): to facilitate dialogue, support and nurture cooperation amongst the Nile Basin countries so as to promote timely and efficient joint actions. It focuses on providing and nurturing the Platform for Cooperation; Strengthening Member States Capacity; Strategic Planning as well as Strategic Communication and Media engagement;
- **Water Resources Management** (Nile-SEC): to strengthen cooperative water resources management in the Nile Basin. Key activities under this core function include: Water Resources Analyses, Knowledge Services, Water Resources Assessment, Trans-boundary Policies and Program Technical Support; and capacity development;
- **Water Resources Development** (Led by ENTRO and NELSAP): focuses on promoting multi-country investments with the primary objective of developing the Nile Basin water resources in an equitable, efficient and sustainable manner to reduce poverty, promote economic growth and integration among countries, increase resilience to climate and water related disasters and reverse environmental degradation.

To achieve the Shared Vision Objective, NBI prepared a 10-year strategy 2017-2027. The 10-year strategy identifies six strategic priorities:

- Goal 1: Water Security;
- Goal 2: Energy Security;
- Goal 3: Food Security;





- Goal 4: Environmental Sustainability;
- Goal 5: Climate Change adaptation;
- Goal 6: Strengthening Transboundary Water Governance.

Once established, RBMIs will be responsible coordinating all investment, operation and maintenance decisions for physical infrastructure projects relating to the water storage structures, as well as basin management units, water services provider, irrigation schemes, etc. The RBMI will adopt the recommendations of the IGAD Secretariat on harmonisation of policies and regulations to ensure harmonisation across all corridors in the region, and ultimately the Tripartite Agreement area.

To ensure that the RBMI represents the interests of all member states, and is not acting separately to nationally determined development objectives, the most senior organ will be the Council of Ministers, with each relevant ministry from every member state represented, which will be responsible for all decisions of the RBMI. Below the Council of Ministers sits the Executive Committee comprised of Permanent Secretaries of the same ministries, and below the Executive Committee are working groups or committees responsible for making recommendations on RBMI activities to the Executive Committee.

The executing organ of the RBMI will be a Permanent Secretariat of staff employed by the RBMI and based permanently in a single location who are responsible for implementing all decisions and activities determined by the Executive Committee and approved by the Council of Ministers. It is recommended that the Permanent Secretariat has a unit responsible for monitoring and evaluation of the RBMIs activities, as well as collecting regular data on RBMI performance, and a unit responsible for providing assistance and support to member states in implementing projects.

The RBMI may be funded from three sources: charges levied on users of the infrastructure; contribution from member states; and possible contributions from donors. It is envisaged that, over time, resources from member states will become increasingly pooled and that the Project Support Unit will plan an increasingly active role in the implementation of physical infrastructure projects. In the short and medium-term, however, member states will be responsible for implementing projects, coordinated by the RBMI. In a shorter timeframe, the RBMI could take on the responsibility for maintenance of basin infrastructure, assuming all user charges are pooled and made available to the RBMI.

Roles of Member States

While decisions regarding which projects to implement (prioritisation and sequencing, identification of new projects) should be the remit of the RBMI, once established, project implementation will remain in the jurisdiction of the individual member states, who will also be responsible for organising funding or concluding financing arrangements for the projects as appropriate.





The IRIMP projects will be implemented by the national agencies, for example water works development agencies, county governments, water services providers etc., with the Project Support Unit of the RBMI playing a coordination role, particularly for trans-border projects involving two or more member states across the region

