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Report No: PAD5310

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT IN THE AMOUNT OF
SDR 20.9 MILLION (US\$28 MILLION EQUIVALENT)
TO THE REPUBLIC OF MADAGASCAR

AND

PROPOSED GRANTS IN THE AMOUNT OF

SDR 4.1 MILLION (US\$5.4 MILLION EQUIVALENT)
TO THE UNION OF COMOROS

SDR 93 MILLION (US\$125 MILLION EQUIVALENT)
TO THE REPUBLIC OF MOZAMBIQUE

SDR 159.9 MILLION (US\$215 MILLION EQUIVALENT)
TO THE REPUBLIC OF SOUTH SUDAN

SDR 3.8 MILLION (US\$5 MILLION EQUIVALENT)
TO THE SOUTHERN AFRICA DEVELOPMENT COMMUNITY

SDR 3 MILLION (US\$4 MILLION EQUIVALENT)
TO THE EASTERN NILE TECHNICAL REGIONAL OFFICE

FOR A

REGIONAL CLIMATE RESILIENCE PROGRAM FOR EASTERN AND SOUTHERN AFRICA PROJECT

May 2, 2023

Water; Urban, Disasters Risk, Resilience, and Land; and Social Protection and Jobs Global Practices
Eastern and Southern Africa Region

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CURRENCY EQUIVALENTS

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Currency Unit =

US\$1 = SDR 0.74

FISCAL YEAR

January 1 - December 31

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ABBREVIATIONS AND ACRONYMS

ACBP	Africa Climate Business Plan
AFE	Eastern and Southern Africa
AM	Accountability Mechanism
ANACM	National Agency for Civil Aviation and Meteorology
ARA	Regional Water Authorities
ASA	Advisory Services and Analytics
ASP	Adaptive Social Protection
AU	African Union
AUC	Africa Union Commission
Cat DDO	Catastrophe Deferred Drawdown Option Development Policy Financing
CATI	Center of Analysis and Treatment of Information (<i>Centre d'Analyse et de Traitement de l'Information</i>)
CCDR	Climate Change and Development Report
CE	Citizen Engagement
CERC	Contingent Emergency Response Component
CIWA	Cooperation in International Waters in Africa
COP	Conference of Parties
CoRC	Comoros Red Crescent
CPF	Country Partnership Framework
CPGU	Emergency Protection and Management Unit
CRA	Commission for Refugee Affairs
CRW	Crisis Response Window
DGEF	General Directorate of Environment and Forests
DNA	Drought Needs Assessment
DNATHU	National Directorate of Land Use, Housing and Town Planning
DNGRH	National Directorate of Water Resources
DRM	Disasters Risk Management
DRR	Disasters Risk Reduction
DSRM	Dam Safety Regulation of Mozambique
E&S	Environmental and Social
EAC	East African Community
EHS	Environment, Health, and Safety
ENDE	National Development Strategy (<i>Estratégia Nacional de Desenvolvimento</i>)
ENTRO	Eastern Nile Technical Regional Office
EPIC	Enable, Plan, Invest, Control
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
EU	European Union
EW	Early Warning
EWS	Early Warning Systems
FAO	Food and Agriculture Organization of the United Nations
FCDO	Foreign, Commonwealth and Development Office of the United Kingdom
FCV	Fragility, Conflict and Violence
FID	Development Intervention Fond

FM	Financial Management
FY	Fiscal Year
GBV	Gender-based Violence
GC	Comorian Coast Guard
GCA	Global Center for Adaptation
GDP	Gross Domestic Product
GEMS	Geo-Enabling initiative for Monitoring and Supervision
GHG	Greenhouse Gas
GMI	Groundwater Monitoring Institute
GP	Global Practice
PGP	Global Public Goods
GRADE	World Bank's Global Rapid Damage Estimation
GRID	Green, Resilient, and Inclusive Development
GRM	Grievance Redress Mechanism
HoA	Horn of Africa
IDA	International Development Association
IE	Impact Evaluation
IFC	International Finance Corporation
IFR	Interim Financial Report
IPCC	Intergovernmental Panel on Climate Change
JIRAMA	<i>Jiro sy rano malagasy</i> (National Water and Electricity Utility)
LMP	Labor-Management Procedures
M&E	Monitoring and Evaluation
MAFE	Ministry of Agriculture, Fishery and Environment
MAFS	Ministry of Agriculture and Food Security
MEAH	Ministry of Water, Sanitation and Hygiene
MEN	Ministry of Higher Education, Basic Research Education
MFD	Mobilizing Finance for Development
MHADM	Ministry of Humanitarian Affairs and Disaster Management
MIGA	Multilateral Investment Guarantee Agency
MIS	Management Information System
MLUUP	Ministry of Territorial Development, Land and Urbanism
MMAT	Ministry of Tourism, Maritime and Aviation
MoHSSPGP	Ministry of Health, Solidarity, Social Protection and Gender Promotion
MOIDTA	Ministry of Interior, Decentralization and Territorial Administration
MoWEH	Ministry of Water, Energy and Hydrocarbons
MPA	Multi-Phase Programmatic Approach
MPWRH	Ministry of Public Works and Water Resources
MRV	Measurement, Reporting, Verification
MTR	Mid-Term Review
MWRI	Ministry of Water Resources and Irrigation
NBI	Nile Basin Initiative
NBS	Nature-Based Solutions
NCCR	Nile Cooperation for Climate Resilience

NDC	Nationally Determined Contributions
NELSAP-CU	Nile Equatorial Lakes Strategic Action Program- Coordinating Unit
O&M	Operation and Maintenance
OHS	Occupational Health and Safety
OVK	Karthala Volcanic Observatory
PAD	Project Appraisal Document
PASA	Water Sector Action Plan (<i>Plano de Ação de Águas</i>)
PCU	Project Coordination Unit
 PDO	Project Development Objective
PES	Social and Economic Plan (<i>Plano Económico e Social</i>)
PFM	Public Financial Management
PIM	Public Investment Management
PIU	Project Implementation Unit
PNRH	National Water Resources Management Plan (<i>Plano National de Recursos Hídricos</i>)
PQG	Governmental Five-Year Plan (<i>Plano Quinquenal do Governo</i>)
PPSD	Project Procurement Strategy for Development
RCRP	Regional Climate Resilience Program
REC	Regional Economic Communities
RPF	Resettlement Policy Framework
RSC	Regional Steering Committee
SADC	Southern Africa Development Community
SADC-GMI	SADC Groundwater Management Institute
SDG	Sustainable Development Goal
SEA/SH	Sexual Exploitation and Abuse/ Sexual Harassment
SEP	Stakeholder Engagement Plan
SOP	Series of Projects
SOFF	Systematic Observations Financing Facility
SP	Social Protection
SSA	Sub-Saharan Africa
SSMA	South Sudan Meteorological Authority
SSNT	Social Safety Net Project
STEP	Systematic Tracking of Exchanges in Procurement system
TA	Technical Assistance
ToR	Terms of Reference
TPM	Third-Party Monitoring
TPMA	Third-Party Monitoring Agency
UNSG	Secretary General of the United Nations
URL	Urban, Disasters Risk, Resilience, and Land
USAID	United States Agency for International Development
WBG	World Bank Group
WHR	Window for Host Communities and Refugees
WRM	Water Resources Management
WUAs	Water Users Associations

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DATASHEET

BASIC INFORMATION				
Country(ies)	Project Name			
Eastern and Southern Africa, Comoros, Madagascar, Mozambique, South Sudan	Regional Climate Resilience Program for Eastern and Southern Africa Project			
Project ID	Financing Instrument	Environmental and Social Risk Classification		
P180171	Investment Project Financing	High		
Financing & Implementation Modalities				
<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)			
<input checked="" type="checkbox"/> Series of Projects (SOP)	<input checked="" type="checkbox"/> Fragile State(s)			
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input checked="" type="checkbox"/> Small State(s)			
<input type="checkbox"/> Financial Intermediaries (FI)	<input checked="" type="checkbox"/> Fragile within a non-fragile Country			
<input type="checkbox"/> Project-Based Guarantee	<input checked="" type="checkbox"/> Conflict			
<input type="checkbox"/> Deferred Drawdown	<input checked="" type="checkbox"/> Responding to Natural or Man-made Disaster			
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input checked="" type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)			
Expected Approval Date	Expected Closing Date			
24-May-2023	29-Dec-2028			
Bank/IFC Collaboration				
No				
Proposed Development Objective(s)				
To improve the management of water-related climate impacts in Eastern and Southern Africa, and, in case of an Eligible Crisis or Emergency, to respond promptly and effectively to it.				
Components				
Component Name		Cost (US\$, millions)		



1. Risk Management and Climate Financing	26.00
2. Infrastructure Investments and Sustainable Asset Management for Climate Resilience	316.40
3. Adaptive Climate Services for Resilient Communities	17.90
4. Project Management	22.10
5. Contingent Emergency Response	0.00

Organizations

Borrower:	Eastern Nile Technical Regional Office Republic of Madagascar Republic of Mozambique Republic of South Sudan Southern African Development Community Union of Comoros
Implementing Agency:	Cellule de Prévention et Gestion des Urgences (CPGU) Eastern Nile Technical Regional Office (ENTRO) Ministry of Land-Use and Urban Planning Ministry of Public Works, Housing, and Water Resources Ministry of Water Resources and Irrigation Southern African Development Community

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	382.40
Total Financing	382.40
of which IBRD/IDA	382.40
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	382.40
IDA Credit	28.00
IDA Grant	354.40



IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
Comoros	0.00	5.40	0.00	0.00	5.40
National Performance-Based Allocations (PBA)	0.00	2.00	0.00	0.00	2.00
Regional	0.00	3.40	0.00	0.00	3.40
Madagascar	28.00	0.00	0.00	0.00	28.00
National Performance-Based Allocations (PBA)	10.00	0.00	0.00	0.00	10.00
Regional	18.00	0.00	0.00	0.00	18.00
South Sudan	0.00	215.00	0.00	0.00	215.00
National Performance-Based Allocations (PBA)	0.00	50.00	0.00	0.00	50.00
Regional	0.00	100.00	0.00	0.00	100.00
Window for Host Communities and Refugees (WHR)	0.00	25.00	0.00	0.00	25.00
Crisis Response Window (CRW)	0.00	40.00	0.00	0.00	40.00
Eastern and Southern Africa	0.00	9.00	0.00	0.00	9.00
Regional	0.00	9.00	0.00	0.00	9.00
Mozambique	0.00	125.00	0.00	0.00	125.00
Crisis Response Window (CRW)	0.00	125.00	0.00	0.00	125.00
Total	28.00	354.40	0.00	0.00	382.40

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2023	2024	2025	2026	2027	2028	2029
Annual	0.20	22.30	80.00	120.00	102.00	55.00	2.90
Cumulative	0.20	22.50	102.50	222.50	324.50	379.50	382.40

INSTITUTIONAL DATA

**Practice Area (Lead)**

Water

Contributing Practice Areas

Social Protection & Jobs, Urban, Resilience and Land

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● High
2. Macroeconomic	● Substantial
3. Sector Strategies and Policies	● Substantial
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial
7. Environment and Social	● High
8. Stakeholders	● Substantial
9. Other	● High
10. Overall	● High

COMPLIANCE**Policy**

Does the project depart from the CPF in content or in other significant respects?

[] Yes [✓] No

Does the project require any waivers of Bank policies?

[] Yes [✓] No

**Environmental and Social Standards Relevance Given its Context at the Time of Appraisal**

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description

Comoros - Schedule 2, Section I. A.1. The Recipient shall cause MATUAFF to:

(a) establish, no later than one (1) month after the Effective Date, and thereafter maintain throughout Project implementation, a Project Implementing Unit (PIU), to be responsible for the management, coordination, supervision, and monitoring of Project activities.

(b) (i) recruit a finance officer, an accountant, an internal auditor, and a procurement specialist, and confirm the environment specialist, the social specialist, and the GBV specialist by not later than one (1) month after the Effective Date; and (ii) recruit an external auditor by not later than six (6) months after the Effective Date.

Sections and Description

Comoros - Schedule 2, Section I. A.3

The Recipient shall establish a Technical Committee, no later than three (3) months after the Effective Date, to be comprised, inter alia, of a representative of MATUAFTT, the Ministère de l'Intérieur, de l'Information, de la Décentralisation et de l'Administration Territoriale; the Ministère de l'Energie de l'Eau et des Hydrocarbures; the



Ministère des Transports Maritimes et Aérien; the Ministère de la Santé, de la Solidarité, de la Protection Sociale et de la Promotion du Genre; and the Ministère de l'Agriculture, de la Pêche, de l'Environnement du Tourisme et de l'Artisanat, to be responsible for overseeing the technical implementation of Project activities.

Sections and Description**Comoros - Schedule 2, Section I. B.1**

The Recipient, through MATUAFTT, shall, not later than one (1) month after the Effective Date, prepare and adopt, in accordance with terms of references acceptable to the Association, a Project Implementation Manual (PIM).

Sections and Description**Madagascar - Schedule 2, Section I. A.1 (b) and (c)**

(b) The Recipient shall ensure that the CPGU shall, no later than three (3) months after the Effective Date, recruit and thereafter maintain throughout the Project: (i) an environmental specialist; (ii) a social specialist; (iii) financial management staff including an internal auditor; (iv) a procurement staff; and (v) a technical officer; Madagascar; and (c) no later than six (6) months after the Effective Date, recruit and thereafter maintain throughout the Project, a SEA/SH specialist.

Sections and Description**Madagascar - Schedule 2, Section I. B.1**

The Recipient, through CPGU, shall, not later than one (1) month after the Effective Date, prepare and adopt, in accordance with terms of references acceptable to the Association, a Project Implementation Manual (PIM).

Sections and Description**Mozambique - Schedule 2, Section I. A**

The Recipient, through MOPHRH, shall,

- no later than one (1) month after the Effective Date, establish and thereafter maintain throughout Project implementation, a Project Steering Committee;
- not later than 30 days after the Effective Date, establish and thereafter maintain throughout Project implementation, a Project Coordination Unit (PCU) within DNGRH, comprised of dedicated staff from DNGRH and other departments of MOPHRH;
- no later than sixty (60) days after the Effective Date, hire (i) an environmental, health and safety specialist, and (ii) a social and GBV specialist at the national level, with qualifications, experience, and terms of reference acceptable to the Association, and thereafter maintain these positions throughout Project implementation;
- no later than twelve (12) months after the Effective Date, recruit a Project accountant, with qualifications, experience, and terms of reference acceptable to the Association; and

Sections and Description**Mozambique - Schedule 2, Section I. B.1.**

The Recipient, through MOPHRH, shall, not later than one (1) month after the Effective Date, prepare and adopt, in accordance with terms of reference acceptable to the Association, a Project Implementation Manual (PIM).

Sections and Description**South Sudan - Schedule 2, Section I. A.1**

The Recipient, through MWRI, shall, by no later than ninety (90) days after the Effective Date, establish and thereafter maintain during the implementation of the Project, a National Project Technical Working Group, with composition, functions, staffing, and resources satisfactory to the Association, which shall be responsible for



providing guidance and oversight of Project activities.

Sections and Description**SADC - Schedule 2, Section I. A (2)**

The Recipient shall, not later than three (3) months after the Effective Date, appoint or hire and thereafter maintain throughout the Project, a Project manager, a finance officer, a procurement specialist, an assistant finance officer, and an environmental and social specialist - with terms of reference, qualifications, and experience satisfactory to the Association.

Sections and Description**South Sudan - Schedule 2, Section I. C.**

The Recipient, through MWRI, shall, no later than one hundred eighty (180) days after the Effective Date, engage and thereafter maintain at all times during the implementation of the Project, a third-party monitoring agent, in accordance with terms of reference satisfactory to the Association, to monitor and review performance of the Project.

Sections and Description**SADC - Schedule 2, Section I. B (1)**

The Recipient shall, not later than one (1) month after the Effective Date, prepare and adopt, in accordance with terms of references acceptable to the Association, a Project Implementation Manual (PIM).

Sections and Description**ENTRO - Schedule 2, Section I. A.1 (b)**

The Recipient shall, for purposes of the Project, hire, not later than three (3) months after the Effective Date, a lead water specialist with terms of reference, qualifications, and experience satisfactory to the Association, to reinforce the implementation organization and provide support to South Sudan.

Sections and Description**ENTRO - Schedule 2, Section I. C (1)**

The Recipient shall, not later than one (1) month after the Effective Date, prepare and adopt, in accordance with terms of reference acceptable to the Association, a Project Implementation Manual (PIM).

Sections and Description**Madagascar - Schedule 2, Section I. A.3**

The Recipient shall, no later than four (4) months after the Effective Date, establish and thereafter maintain at all times during the implementation of the Project, a Steering Committee with mandate, composition, and resources acceptable to the Association, responsible for ensuring alignment between Project activities and government strategies and priorities and for approving the annual work plan.

Sections and Description**Madagascar - Schedule 2, Section I. A.4**

The Recipient shall, no later than one (1) month after the Effective Date, designate a coordinator and a representative of CPGU to be members of the Regional Steering Committee to be established for the Regional Project.

**Sections and Description****Comoros- Schedule 2, Section I. A.4**

The Recipient shall, no later than one (1) month after the Effective Date, designate a coordinator from among the Technical Committee ministry members, and a representative of MATUAFTT, to be members of the Regional Steering Committee to be established for the Regional Project..

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	<p>South Sudan:</p> <p>The Recipient has established the PIU in accordance with the provisions of Section I.A.1(a) of Schedule 2 of the Financing Agreement.</p>
Effectiveness	IBRD/IDA	<p>South Sudan:</p> <p>The Recipient has adopted the PIM in accordance with the provisions of Section I.B.1 of Schedule 2 of the Financing Agreement in form and substance satisfactory to the Association.</p>
Effectiveness	IBRD/IDA	<p>South Sudan:</p> <p>The Association is satisfied that the Recipient has an adequate refugee protection framework.</p>
Disbursement	IBRD/IDA	<p>South Sudan:</p> <p>Notwithstanding the provisions of Section III.A of the Financing Agreement, no withdrawal shall be made (b) under Category (1) until and unless the Recipient has adopted the Stakeholder Engagement Plan and the Security Risk Assessment/Security Management Plan, in form and substance satisfactory to the Association;</p>



STRATEGIC CONTEXT

A. Regional Context

1. **Eastern and Southern African (AFE) economies were on their way toward recovery from the turbulence of the COVID-19 pandemic, but the Russia's invasion of Ukraine contributed to a daunting new set of woes for the region.** These include soaring commodity prices and food shortages in a region that is already in the grip of worsening food insecurity, debt distress, and devastating climate shocks, including the worst drought in the Horn of Africa (HoA) in the last four decades. As a result, economic growth in Sub-Saharan Africa (SSA) slowed to 3.6 percent in 2022, from 4.1 percent. The pandemic has induced a lasting impact on long-term growth, particularly affecting the poorest people and increasing extreme poverty. The slow recovery of the per capita income growth rate, estimated at 1 percent in 2022 and 0.6 percent in 2023, still falls short of putting the continent back on the pre-pandemic path of poverty reduction. These effects further increase the relevance and timeliness of regional efforts to strengthen preparedness and build resilience to water-related climate shocks (cyclones, floods, and droughts).
2. **The complex development challenges affecting the region include varying degrees of conflict and fragility, food crises and macro-economic challenges, which are exacerbated by climate change-induced shocks, impacting mostly vulnerable populations.** For example, as a result of decades of fragility, insecurity, and disasters in South Sudan, more than 8.9 million people of the estimated 12.4 million total population needed humanitarian assistance and social protection in 2022. In Madagascar, approximately 81 percent of the population currently live under the international poverty line of US\$1.90 (2011 purchasing power parity) per day. In the period 2020-2021, the poverty rate averaged 64 percent in Mozambique, while in Comoros, approximately 45 percent of the population live below the poverty line.
3. **Climate change poses a major threat to the achievement of the region's long-term development objectives, especially poverty reduction, and the regional challenges that climate change poses, together with the need for shared regional solutions, constitute the main driver of this project.** Climate change is resulting in higher frequency of extreme weather events (i.e., too much/too little water) in the region, affecting millions of people, and further eroding the already fragile financial and fiscal sustainability of governments. Table 1 shows the devastating impacts of water-related climate shocks in the region.
4. **The transboundary consequences of climate shocks trigger compounded effects through migration, trade disruptions due to damaged infrastructure, and conflict over scarce resources.** In Africa, 90 percent of water is shared across 63 transboundary basins. As most basins in AFE are transboundary in nature, the impacts of climate variability and climate change have rippling effects across country borders, resulting in regional ecological and economic impacts. Besides opportunities for coordinated management of floods and droughts, the regional contribution of the main transboundary hydro-systems (e.g., Nile, Zambezi, Limpopo) to drinking water, food, energy, and job security in the region, as well as biodiversity could be further developed to respond to the exponential growth in water demand of a rapidly growing, increasingly urban population, and to reduce the existing food and energy shortages prevalent in the region. Importantly, the regional nature of climate change impacts materializes beyond shared waters. Trade corridors are equally important for resilience-building. For example, cyclone Idai's impact on the port of Beira disrupted the import chain of fertilizers to Malawi and Zimbabwe, further worsening the already ongoing food production crisis in these two countries.
5. **Recent Climate Change and Development Reports (CCDRs) for several countries show that boosting resilience and adaptation constitutes an urgent and integral part of development and poverty reduction, especially in low-income**



countries.¹ The threat from climate change to AFE's economic growth and poverty reduction comes from two main fronts: (i) the economic model and livelihoods are highly dependent on natural ecosystems (on which 70 percent of people in the region depend for their livelihoods), and (ii) climatic shocks are draining fiscal resources and affecting particularly the poor that have limited options to respond.

Table 1: Impact of recent climate-related disasters in AFE

Year	2019	2021	2022-23	HoA 5 consecutive years	Impacts
Event	Cyclone Idai	South Sudan floods	Tropical Storm Ana, Tropical Cyclone Gombe, and Tropical Cyclone Freddy	Drought	In the past 20 years, 35 cyclones, 8 floods and 5 periods of severe drought in Madagascar
Estimated damages/losses	>US\$2 billion (Mozambique, Malawi, Zimbabwe)	Over US\$670 million	Total damages in Mozambique estimated between US\$1.94 billion and US\$2.32 billion	2016/17 in Somalia alone ~US\$1.7 billion 2021 drought in Madagascar: 1.3 million food insecure people	~US\$700 million in 2022
Estimated damages as percent of GDP	3-9 percent	13 percent, 700,000 people in need of food assistance, 300,000 people displaced	~13-16 percent (2021)	37 percent	Total losses from cyclones in 2022 were equivalent to 4.8 percent of Madagascar's GDP

B. Sectoral and Institutional Context

6. **Despite the manifest impacts of climate-related shocks in the AFE, the tendency is overwhelmingly to react to these disasters, rather than prepare for them, which poses additional challenges to the already fragile financial and fiscal sustainability of the region's governments.** As the recent CCDRs confirm, the increasing frequency and intensity of natural hazards in AFE are generating a situation in which governments are confronted with increasing contingent liabilities. The impacts of these events are felt across all economic sectors. When cyclones or droughts hit the region, cities, which are hubs of economic activity, run out of water; power generation declines, cutting industrial productivity; and rural livelihoods, largely based on subsistence agriculture or wildlife conservation, collapse, causing widespread food insecurity. In South Sudan and other countries in the region, dikes are often constructed without proper consideration of the hydrology and flood patterns, without appropriately-sized and located culverts – in response to rising waters. Many of them are then washed away during the next rainfall or flood event. This results in an annual cycle of short-term measures that are more costly in the long run. In South Sudan, the short-term measures include humanitarian relief efforts to quickly access flood-affected areas. A sustainable, systematic approach and short-, medium-, and long-term response to climate hazards requires moving away from ad-hoc disaster risk response to strategic disaster risk management. Investing in simple accessible didactic tools and methods to enhance a whole-of-community understanding

¹ World Bank Group. 2022. Climate and Development: An Agenda for Action - Emerging Insights from World Bank Group 2021-22 Country Climate and Development Reports. Washington, DC: World Bank. © World Bank Group.
<https://openknowledge.worldbank.org/handle/10986/38220> License: CC BY-NC-ND.



of flood and water resource dynamics, and systematically involving local communities in the design, operation, and maintenance of flood infrastructure, would increase sustainability, community awareness, and buy-in.²

7. Climate-related impacts are further exacerbated by chronic underfunding for adaptation in Africa, urgently needed to close the infrastructure gap. Even when climate funding is available, countries find it difficult to access it. In the AFE region, there is a severe gap in green-grey storage assets and resilience infrastructure to reduce exposure to shocks, including in cities, that require immediate attention. For instance, Mozambique – despite having one of the largest hydropower potentials in Sub-Saharan Africa³ – has a very low storage capacity of renewable water, only 0.3 percent of the 213 km³/year of renewable water that crosses the country, which makes the country susceptible to water scarcity. Still, Africa is struggling to access climate finance. The Nationally Determined Contributions (NDCs) of 51 African countries cumulatively show a need for an estimated US\$579 billion in investment for adaptation through 2030. This compares to the US\$11.4 billion in tracked adaptation finance to Africa on average annually from 2019 to 2020. If this trend were to continue through 2030, cumulative adaptation finance through 2030 would be US\$125.4 billion—less than one quarter of the estimated needs stated in NDCs,⁴ and only 3 percent of global climate financing. Countries in the region also lack capacity to effectively apply for and mobilize these funds.

8. AFE countries struggle to deliver sustainable and transformative responses to climate-change impacts at scale, losing potential synergies across sectors and across countries. There is generally no sufficient strategic planning and implementation capacity to absorb financing for increasing resilience, even if available. The funds for rebuilding after a disaster are mainly channelled through emergency response agencies that do not always coordinate with the sector Ministries, who are not able to respond themselves in an agile manner because of lack of “emergency” public procurement legislations. While this may be effective in the short run (e.g., dikes get rebuilt, social assistance distributed), reactive actions with weak institutions risk leading to state failure and to the rise of conflicts. Moreover, the fragmented country-level response strategies miss opportunities of leveraging economies of scale at the regional level on these global public goods. While cross-border activities can be complex, involve greater transaction costs than single-country actions, a shared understanding of the issues and solutions, and in some cases collective action, they lead to greater efficiencies than single country activities alone, for instance in areas of regulatory harmonization, access to financing or advancing learning and capacity on climate adaptation.

9. The lack of proper climate-resilient planning, infrastructure, and building standards has resulted in structures that are prone to damage by natural disasters and other shocks and stress factors – with the most vulnerable people often bearing the brunt. The inadequate water resource management and services, rapid and often unplanned urbanization, unregulated development, poorly maintained drainage systems, inefficient solid waste management practices, environmental degradation, floods- and droughts-induced internal displacement, and large-scale encroachment of settlements onto low-lying wetlands, riverbeds, and coastal areas have exacerbated the vulnerability to natural catastrophes. They have also increased the exposure of people and assets to climate-induced risks. Climate shocks affect vulnerable populations unevenly, with forcibly displaced communities and their hosts, women, and children – often bearing the brunt of adverse impacts. Climate shifts could exacerbate internal displacement and lead to migration, potentially deepening existing vulnerabilities and leading to increased poverty, fragility, conflict, and violence.

10. Weak institutions with lack of clear accountability and responsibilities are often unable to allocate operation and maintenance (O&M) funds to manage already depleting protective and storage infrastructure, thus perpetuating

² Bernando del Carpio et. al., 2021.

³ Estimated at around 12,500 MW.

⁴ World Bank, 2022. Climate and Development: An Agenda for Action - Emerging Insights from World Bank Group 2021-22 Country Climate and Development Reports.



water insecurity and poverty. Frequently, across the AFE region, there is lack of predictable, flexible budgetary processes to ensure sustainable, cost-effective asset management (Box 1). In Mozambique, because of a fiscal crisis, the annual budget allocation to Ara Sul decreased from 300 million meticais in 2019 to less than 100 million meticais since then. As a result, the maintenance budget for the dikes under their responsibility was cut to zero and after each heavy rainfall, some of these dikes get destroyed. African institutions at both the national and regional levels will be vital to the planning, implementation, and ongoing management and operations of large-scale investments in resilience. Strengthening these institutions is a key priority for the African Union (AU), and there are opportunities to harmonize approaches to governance across the region.

Box 1: Slow institutional response and lack of proper O&M lead to tremendous failure of infrastructure, with large socio-economic repercussions.

Severe flash floods during the February 2022 tropical storm Ana in Malawi caused extensive damage to the Kapichira's dam, wiping out a third of the country's power generation. At the time of writing, more than one year on, power had not been restored. At the time of the storm, only two of five gates of Kapichira's main spillways were open and were only partly functional, with reduced capacity to evacuate floods. Sediment accumulation due to inadequate operation and delayed maintenance, compounded by land degradation in the surrounding watersheds, caused this disaster, costing the country an estimated 2 to 3 percent of its gross domestic product (GDP).

11. **The poorest groups are the least well equipped to adapt – and climate shocks often lead to their displacement, including across borders.** The poorest households' lives and livelihoods are both more exposed and more vulnerable to extreme climate events. They often live in high-risk areas – both in urban and rural areas - and do not have hazard information, financial capacity, and many times only have limited access to social protection programs to reduce risks.⁵ With over 90 percent of the population dependent on climate-sensitive livelihoods (especially rainfed agriculture), recurrent flooding has deeply impacted peoples' livelihoods and aggravated an already dire humanitarian and food security situation in large parts of South Sudan. The number of severely food insecure people reached 6.4 million in October-November 2022 and is projected to further increase to 7.8 million people (63 percent of the population) in the April-July 2023 lean season.⁶

12. **Women on the lower end of the socioeconomic scale are particularly vulnerable to floods, droughts, and other climatic shocks, which have been associated with increased rates of child marriage, increased female school drop-out rates, higher rates of gender-based violence, and larger declines in incomes and in assets compared to men.** Case studies point to the differential impact on women who cut back on education and work to care for the household during floods, and yet are often not adequately represented on flood or disaster recovery committees that allocate compensation,^{7 8} and may not have equal access to public work opportunities.⁹ Women's more limited access to 'moveable' livestock assets, to credit and savings, to information and to communication technology for early warning is further linked to lower rates of resilience. Flooding has also disrupted the collecting water and firewood – the major source of energy in 96 percent of households – leading many women to traverse even longer distances in search of functioning water points and dry wood for cooking, putting them at greater risk of gender-based violence (GBV).¹⁰ Limited access to land and property, as well as credit and savings, further impacts women's and female-headed households' resilience and ability to cope with floods. In

⁵ The World Bank 2022. Adaptive Social Protection in Southern Africa. Washington, D.C.: World Bank Group.

⁶ IPC Acute Food Insecurity and Acute Malnutrition Analysis (October 2022 – July 2023), Issued: November 3, 2022.

⁷ Holmes and Jones. 2011. Public works programs in developing countries: Reducing gendered disparities in economic opportunities? Overseas Development Institute, London.

⁸ The World Bank. 2021. Safety First: How to Leverage Social Safety Nets to Prevent Gender Based Violence. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/35641> License: CC BY 3.0 IGO.

⁹ Beazley and Picanyol. 2019. Gender-sensitive public works in Mozambique. HEART (High-Quality Technical Assistance for Results).

¹⁰ BRACED, 2017. Building Climate Resilience in Fragile Contexts: Key Findings of BRACED Research in South Sudan. UK AID.



South Sudan, recent floods have destroyed a fifth of women and girl-friendly spaces,¹¹ as well as over 56 percent of health facilities and 400 schools.¹² Community-level preparedness is fundamental for reducing climate disaster risks and community engagement would facilitate increased maintenance of flood infrastructure, and yet these are often neglected. Conflicts and displacement also exacerbate the impacts of extreme climate events, mostly affecting the poorest and most vulnerable. Hence, identifying and assessing the ways in which climate-related hazards and social policies interrelate is critical to inform the design of risk reduction and mitigation programs, such as social protection.

13. Evidence from regional experiences indicate that effective resilience-building solutions need to be both integrated and cross-sectoral. Countries tend to adopt siloed and misaligned sectoral approaches to planning, investment design, and their operation, rather than optimizing protective assets across sectors and borders. Institutional efforts across the AFE region have aimed to reduce vulnerability through stronger and longer-term engagement with the transboundary river basin commissions or regional economic organizations. The Southern African Development Community (SADC), established in 1992, is promoting the sustainable management of shared water resources to boost livelihoods and climate resilience and acting as a coordinating body for several river basin organizations, in addition to coordinating efforts on regional early warning systems and disaster response. In East Africa, the Nile Basin Initiative (NBI) supports the 11 Nile riparian countries to reduce tensions over shared waters and identify opportunities for information sharing, capacity-building, and joint investments.

14. Engaging at the regional level on managing climate impacts, whilst supporting country-level adaptation, is essential. As essential as country-based engagement is, coordinated responses for shared challenges are required to engage at the regional level. Countries in the AFE region have much to learn from each other and gain from cooperation, and much remains to be done to strengthen and operationalize the existing coordination. At the level of regulatory and institutional frameworks for water resource management, the region possesses outdated or non-existent legal frameworks, displaying a huge gap in the effective governance of the resource. In some countries, even critical information to manage climate extremes is lacking, and coordination at the regional level is scarce. In South Sudan, hydro-meteorological information networks suffered extensive damage, with only five stations currently operational across a vast hydrological network, including the river Nile. With floods being largely shared by riparian countries, there is currently no regional information systems to prepare for and coordinate disasters response. In the SADC region, which includes three out of the four countries joining the first operation under the SOP, many current meteorological and hydrological stations are not operational, while networks are already not sufficiently dense for initialization and calibration of the global weather models and for early warning on hydrological events. Because of this, there is currently no coordinated response to cyclones increasingly affecting the region. Furthermore, there is a need to harmonize and fully integrate climate services with early warning systems at national and regional levels. Regional solutions addressing these challenges are urgently needed and SADC and NBI and its agencies like the Eastern Nile Technical Regional Office (ENTRO) can play a critical role for moving this agenda forward – including by promoting South-South exchanges so that countries can learn from each other.

15. There is a huge potential for regional approaches to effectively address these shared challenges at scale via collective action, and to contribute to building the AFE's resilience to climate-related impacts. The need for mobilizing more development and climate finance for investing in adaptation at various scales is clear. There is also a clear need to make each US dollar go further, including mobilizing both direct and indirect financing towards more sustainable long-

¹¹ A Women and Girls Friendly Space (WGFS) is a formal or informal place where women and girls feel physically and emotionally safe, comfortable, and able to express themselves. Depending on the context, WGFS can provide an opportunity for women and girls to gather and socialize informally and/or can be used as a platform for conducting more structured group activities.

¹² UNOCHA, 2021. Humanitarian Needs Overview: South Sudan. UNOCHA.



term investments and taking full advantage of regional synergies where they exist. Increased resilience¹³ can thus be achieved through a three-pronged approach, to be implemented within a clear regional strategy. This involves: (a) rapid and inclusive development, especially poverty reduction and universal access to infrastructure and social services; (b) a whole-of-society approach to resilience and adaptation, to ensure climate risks are considered in all decisions and investments; and (c) a set of targeted multi-sectoral interventions covering human capital, infrastructure, and various economic sectors.

C. Relevance to Higher Level Objectives

16. **Climate change is a priority World Bank Group (WBG) global challenge requiring coordinated and large-scale intervention, given its cross-border effects, with often far reaching and irreversible consequences.** In AFE, the loss and damages from increasingly frequent and intense climate induced water shocks are affecting millions of people, hitting the poor and women the hardest. Particularly for smaller and fragile countries, mounting costs are eroding fiscal sustainability and threatening development gains. In line with the WBG Evolution Roadmap, the RCRP SOP incentivizes and supports a dual track approach to building climate resilience in AFE and preserving Global and Regional Public Goods. At the country level, the RCRP SOP offers an adaptable and incremental vehicle for the operationalization of Country Climate and Development Reports given its focus on protective water infrastructure, asset management and adaptive safety-nets (this includes the implementation of 5 out of 13 recommendations from the forthcoming Mozambique report).

17. **The project is closely aligned with the WBG Country Partnership Frameworks (CPFs) and the Regional Integration and Cooperation Assistance Strategy.** The RCRP responds to focus area 1 of the Madagascar CPF FY17-21 (Report No. 114744 - MG): “Increase Resilience and Reduce Fragility,” which seeks to increase the resilience of livelihoods in rural and urban areas. For Mozambique, the project aligns with focus area 3 of the CPF FY17-21 (Report No. 104733-MZ): “Enhancing Sustainability and Resilience” and specifically with objective 11: “Improving Management of Climate Risk and Natural Resources.” For Comoros, the project aligns with the CPF FY20-24 (Report No. 145699-KM): “Crisis Response and Building Resilience”, and specifically objective 2: “Disaster Recovery and Resilience.” The project aligns with focus area 3 of the Country Engagement Note for South Sudan FY21-23 (Report No. 158008-SS): “Promote Resilience and Livelihood Opportunities,” and specifically objective 3.1: “Expand and strengthen access to social protection and livelihoods.” Finally, the project also aligned with the Regional Integration and Cooperation Assistance Strategy – Update (FY21-23); Report No. 154458, particularly through the provision of shared solutions for the regional climate change challenge.

18. **The project’s objectives contribute to the WBG twin goals of ending extreme poverty and promoting shared prosperity in a sustainable manner, and is well aligned with the principles of Green, Resilient, and Inclusive Development (GRID) and the Climate Change Action Plan for 2021–2025.** It directly contributes to the pillars of the Fragile, Conflict and Violence (FCV) strategy 2020-2025 on preventing violent conflict and helping countries transition out of fragility, and the WBG Climate Change Action Plan 2021-2025. The project is also aligned with the World Bank Group Global Crisis Response Framework, particularly with Pillar 3 on ‘Strengthening Resilience.’

19. **The RCRP project is aligned with the participating countries’ pathway towards low greenhouse gas (GHG) emissions and climate-resilient development, as per the goals of the Paris Agreement, and therefore is consistent with the countries’ strategies on climate change.** The participating countries’ NDCs prioritize investments in resilient

¹³ For the purposes of this project, resilience is defined as the capacity of vulnerable households, communities, and systems to withstand and respond effectively to shocks, and to recover and adapt sustainably. Climate-related shocks include cyclones, floods, droughts, and other climate events. World Bank (2017) “Operational Guidance for Monitoring and Evaluation (M&E) in Climate and Disaster Resilience-Building Operations”, Resilience M&E (ReM&E) initiative.



infrastructure and institutions for managing increasing flood, drought, and/or tropical cyclone risks in the water and other related sectors. Activities supported under this SOP will be specifically targeted to address these risks by building institutional capacity, as well as through the application of improved methodologies that better incorporate climate shocks and uncertainties, gender-responsive approaches, O&M and asset management practices informed by the latest climate science, and nature-based solutions (NBS). This work that will underpin the design of infrastructure to be financed through subsequent operations of the SOP will help to ensure that climate change vulnerabilities are sufficiently addressed and considered when prioritizing resilient investments. A robust climate lens in the preparation of bidding documents will ensure resilient design and performance of assets supported through future SOP stages. Furthermore, the project will not invest in activities that would lead to-carbon lock-in, so countries remain on track to transition to low GHG emission development pathways.

20. The project also responds to key client strategies, including the African Union Climate Change and Resilient Development Strategy and Action Plan (2022-2032). The project is also aligned with a number of regional instruments, including the SADC Regional Preparedness and Response Strategy and Fund 2016-2030, the Regional Resilience Framework 2020-2030, the Drought Risk Management and Mitigation Strategy, the Climate Change Strategy and Action Plan, SADC climate change strategy and action plan 2020-2030, and the 2022 Maputo Declaration on the Commitment by SADC to enhance early warning (EW) and EW action in the region. The Ministers responsible for Hydrometeorological Services and Disaster Risk Management of the region committed to support and take an active people-centered role to ensure all citizens, in particular the most vulnerable communities in SADC, are covered by effective EW and Early Action System initiatives; to establish, where absent, appropriate standard operating procedures, and enact enabling national policies and legislations on meteorology and disaster risk management; and to provide additional support to the capacities of the entities responsible for EW and early action, and increase collaboration between Member States, among others.¹⁴ In addition to regional strategies, Madagascar, Mozambique, South Sudan, and Comoros have submitted National Communications to the United Nations Framework Convention on Climate Change..

21. The project further complements, builds on, and will be complemented by other regional and national programs. The project also builds on a rich body of regional and global Advisory Services and Analytics (ASA) and flagships on climate resilience, Disaster Risk Management (DRM), and Adaptive Social Protection (ASP) Programs (Annex 3 lists synergies and complementarities with the ongoing national and regional portfolio). The project will also incorporate activities and build on the ongoing partnerships under the Southern Africa Drought Resilience Initiative (P173077), as well as a Climate Risk and Early Warning Systems-supported analysis of early warning systems in the region, and the global work on Adaptive Social Protection.¹⁵

22. The project will also complement climate resilience solutions in the participating countries and the region as a whole. It will specifically complement achievements from the Madagascar Disaster Risk Management Development Policy Financing with a Catastrophe Deferred Drawdown Option (Cat DDO) (P167941) and the Mozambique Disaster Risk Management and Resilience Program (P166437), among others, through longer-term and sustainable physical investments and capacity support. The policy reforms supported by the World Bank-financed operations in turn strengthen the institutional and capacity building activities that are envisioned in this and subsequent projects of the SOP. For example, the policies designed to promote holistic climate resilience/WRM/DRM systems and strengthen the cross-sectoral policy foundation that is needed to better manage main water-related climate risks (floods, droughts, storms) would contribute to effectiveness of physical interventions. While the SOP will entirely focus on ex-ante protective

¹⁴ Maputo Declaration, Southern Africa Development Community (SADC), Republic of Mozambique, 8th September 2022.

https://au.int/sites/default/files/pressreleases/42156-other-Maputo_Declaration_Final_AUC_11_Sept-2022.pdf

¹⁵ Adaptive social protection (ASP) helps build the resilience of poor and vulnerable households by investing in their capacity to prepare for, cope with, and adapt to shocks, ensuring that they do not fall (deeper) into poverty.



investments, the policy-based operations, such as Cat DDOs provide immediate liquidity in case of a disaster, hence helping to improve fiscal stability and enhance populations' well-being without compromising longer-term investment projects.

D. Series of Projects (SOP)

23. **The overarching development objective of the SOP is to strengthen the resilience to water-related climate impacts in Eastern and Southern African countries.** To achieve this overarching objective, the RCRP SOP will support investments to improve the enabling environment, capacity building, and infrastructure in progressive, overlapping projects over a period of ten years. The RCRP SOP provides a long-term instrument to address the gaps in how participating countries manage the complex challenges of climate change impacts on water resources, and in turn, on AFE economies and people. The SOP design was chosen because it allows for tailored support to the needs of diverse countries, while supporting the achievement of a common long-term regional, overarching objective.

24. **The overarching development objective of the SOP will be achieved by:** (i) strengthening participating countries and regional organizations' capacity to manage disasters risk, including via improved national and regional early warning systems; (ii) improving access to climate financing to leverage additional investments for climate adaptation; (iii) mainstream climate resilience in water infrastructure planning, and generally in water institutions; (iv) construct sustainable transformational water infrastructure, including improving their O&M under a changing climate; and (v) improve community-level awareness of climate risk and capacity to respond and adaptive social protection.

25. **The SOP provides a platform for coordinated action on the regional climate change challenges, for testing and expanding the use of standardized and replicable approaches on emerging good practices across countries and sectors and to mobilize co-financing for this agenda.** The SOP will support countries in the AFE region to move towards a new green, inclusive, and resilient growth pathway, harnessing the powerful synergies that exist between water resources, disaster risk management and social protection, enabling the achievement of climate resilience and development goals. In its first project (SOP-1), the SOP focuses on setting out a robust basis for future large-scale transformative investments, critical to increase the resilience of the region in this changing climate. Regional approaches to fostering more gender-responsive approaches, and to increasing the representation of women in technical and leadership positions within hydromet or water resource management institutions also offer significant advantages.

26. **The SOP would be implemented in four regional projects, overlapping in time, over a period of 10 years, from 2023 to 2033.** The total cost of the program is expected to be about US\$2 billion. The SOP recognizes that furthering regional cooperation around climate adaptation is a complex, high-transaction costs process which needs to be driven by a particularly strong national buy-in. Increasing preparedness for water-related climate shocks requires initiative at both the country and regional levels:

- a) Countries will be able to join when ready, via four regional operations, in a complementary yet independent way, as far as they contribute to the same overarching SOP development objective – thus building the critical regional mass for enhancing preparedness to climate shocks in the region. Participation in the SOP will be subject to the availability of IDA funds and meeting eligibility criteria. Criteria for countries joining the program include: (i) countries affected by transboundary water-related climate impacts, including rainfall variability, droughts, floods, and cyclones; (ii) commitment to the PDO and key features of the SOP; (iii) willingness to share information on how they institutionally approach climate change in the covered sectors with other participants in the program (i.e., from data to planning, to design of social protection programs, etc.); and (iv) expressed interest in South-South knowledge exchange and willingness to join the project's



Regional Steering Committee (RSC). As the SOP expands across the region, its impacts on regional resilience will grow, particularly via regional mechanisms such as regional early warning systems, management protocols for regional disasters, regional pooling of climate financing, transboundary water management, coordinated and scaled-up social protection programs, and policy coordination.

- b) Within each participating country, the possibility for new projects (or Additional Financing focused on large and critical climate-resilient infrastructure investments) signals commitment and continuity for the reform process that mainstreaming climate adaptation may require (i.e., from legal, to human, to technical). The sequencing of projects under the SOP will incentivize performance to allow client countries to access successive financing rounds. The first project (SOP-1) lays the foundation for large transformative water infrastructure investments, given their complex preparation needs and the need for a strong regulatory framework. If performance is satisfactory, the relatively prompt succession of projects after one or two years, respectively, will allow critical infrastructure to be built when needed and when ready for implementation, and will allow for the enhanced client capacity over the project life cycle.

27. **Along these principles, the project is the first under the SOP.** Following a demand-driven and readiness approach, the project will include South Sudan, Mozambique, Madagascar, and Comoros, and the regional organizations SADC and ENTRO (part of the NBI). Subsequent operations of the series are expected to include Malawi, Tanzania, Ethiopia, and Zambia, among others, as well as additional regional institutions (notably the African Union Commission, the Permanent Okavango River Basin Water Commission, other river basin organizations, and a range of knowledge partners). In addition, the project also envisages scaling up of support to SOP-1 countries, particularly to finance new storage in Northern Mozambique, Southern Madagascar, and Southern South Sudan, if their feasibility is confirmed. The scaling up is expected in FY25 and FY26.

28. **Regional coordination for addressing the regional and global climate challenge and for proposing harmonized regional solutions is at the core of the project.** Coordination amongst the participating countries and entities will be facilitated through mechanisms furthering collaboration, built into the project's implementation arrangements (Section III.I and Annex 2). For instance, the establishment of an RSC has been agreed with all countries and regional organizations.

29. **The project will finance a strong regional learning agenda.** As part of the regional coordination, the RSC will also convene joint regional technical platforms (i.e., working groups) and knowledge exchanges on specific themes/challenges for climate preparedness, and formalizing arrangements to support coordination of similar activities and their outputs, policies, regulations, and standards. These regional technical platforms range from development of shared climate financing strategies, to finding shared solutions to the sustainable maintenance challenges, to enhancing women's empowerment technical career development relevant to regional Water Resources Management (WRM), among others. These regional platforms will help increase sustainability and mobilize additional funds from donors and the private sector. The learning agenda via the regional technical platforms will aim at strengthening the capacity of project stakeholders, including national and local institutions, by better equipping them to cope with climate shocks amidst increasing climate change uncertainty. Lessons emerging from the RCRP project will help inform the identification of interventions that could be scaled up, whilst strengthening the countries' capacity on climate resilience. The learning agenda will be supported through a monitoring system and a series of studies to document and apply lessons learned on key areas related to the project's activities, in close collaboration with participating countries and regional organizations. The flexible and iterative approach associated with the SOP design will also provide an opportunity for learning across operations of the SOP, which is critical, considering the shared impacts of climate shocks, including on growth and livelihoods.

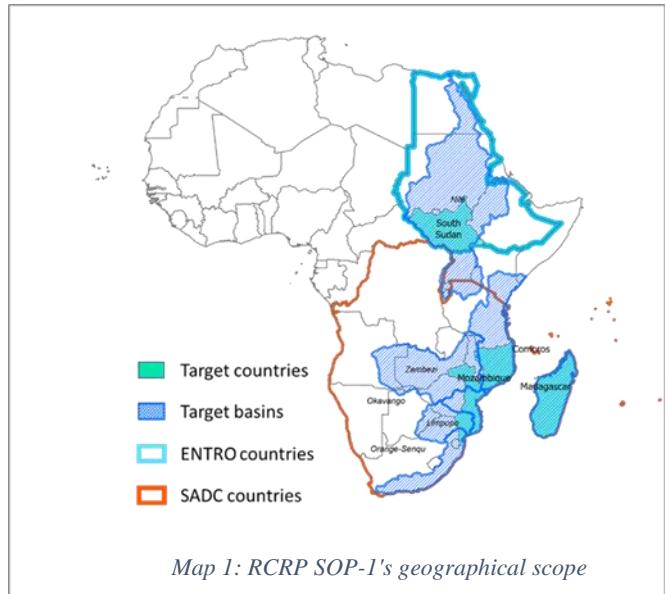


30. **For each participating country a water resource management diagnostic will be prepared.** This diagnostic will inform/prioritize the policy, institutional, investment priorities, and financing gaps to improve resilience to water-related climate shocks with a regional filter - which will also help identify common challenges, similarities, lessons learned, and set a roadmap for shared solutions, including potential for support (from the World Bank and/or other donors). As such, it is expected that the project will act as a regional platform to support different interventions in a comprehensive and coordinated manner across the AFE region. The results of these diagnostics will drive the dialogue and promote regional coordination. Similarly, eligibility criteria have been developed to prioritize infrastructure investments, including evaluating their regional benefits and maximizing synergies with ongoing or planned investments. It is likely that the needs will exceed the World Bank's resources available, hence the "platform," which other financiers can join. Importantly, the project includes a strong M&E framework to facilitate its monitoring and evaluation.

31. **The World Bank developed a set of tools and framework that will be leveraged where possible to identify priority investments to improve the management of water-related climate impacts.** One tool that is already being applied is the EPIC Response Framework, that helps national governments lead a whole-of-society effort to manage floods and droughts as different yet inextricably linked ends of the same hydro-climatic spectrum.¹⁶ Given that droughts are particularly challenging to prepare for and manage in the region, the project aims to carry out drought needs assessments (DNAs) in each participating country to help identify more detailed options for prioritizing drought resilience investments during implementation of SOP-1 and subsequent projects under the SOP. The RCRP project will also apply diagnostic tools and methodologies developed under the Global Facility for Disaster Reduction and Recovery (GFDRR) global programs for emergency preparedness and response, nature-based solutions, inclusive DRM, and DRM-FCV. Another tool that will be applied is the Women in Water Resilience diagnostic, on how to achieve more inclusive and gender-sensitive outcomes that are comparable across countries. Other tools will be developed to cover specific areas of Project intervention, such as climate financing, asset maintenance, or tools for community engagement in resilience planning, monitoring, early warning, or maintenance.

32. **The project meets the eligibility criteria for regional IDA financing.** The project: (i) covers several countries in the region; (ii) will have the benefits of the proposed interventions spill over country boundaries, generating positive externalities (i.e., regional climate risk financing) and/or mitigating negative ones (i.e. flooding and impacts of cyclones, lower average water flows downstream) as detailed in the next paragraph; (iii) provides a platform for regional climate policy's harmonization and for pulling climate financing from different sources; and (iv) demonstrates country and regional ownership, as the willingness of participating countries to discuss the program at the 2022 United Nations Climate Change Conference (COP27) evidenced.

33. **The project will promote regional integration** by bringing together governments, civil society, and private sector stakeholders from the region to collaborate on climate resilience efforts. By having a platform for coordination, these



Map 1: RCRP SOP-1's geographical scope

¹⁶ World Bank, 2021. An EPIC Response: Innovative Governance for Flood and Drought Risk Management. © World Bank, Washington, DC. <http://hdl.handle.net/10986/35754> License: CC BY 3.0 IGO



stakeholders would work together more effectively and pool resources to achieve shared climate resilience goals. This will be achieved via three main entry points (see Figure 1):

- **Creation of a platform for Eastern and Southern Africa for scaling up coordinated investments in climate resilience, particularly on:**
 - **Strategic planning, risk identification and analysis:** The project will facilitate the development of regional and national climate resilience and water resource management plans that take into account the unique challenges and opportunities of the region. With a coordinated approach, these plans would be more effective in building resilience to water-related climate impacts and reducing vulnerability. The risks of flooding, drought, storms, and climate change are analyzed across the region to inform investments at national and regional level.
 - **Resource mobilization:** The project will also help mobilize resources for climate resilience efforts in the region, both by attracting external financiers and by helping countries themselves access climate funds. By having a platform for coordination, stakeholders would identify funding opportunities and pool resources to support climate resilience projects. Fund raising and consolidating multilateral and bilateral supports are critical to develop projects at scale that will have a measurable impact to advancing climate adaption. Countries are stronger when there is a clear regional perspective that will focus on priorities and avoidance of duplication of efforts by individual countries.
 - **Knowledge sharing:** The project will facilitate the sharing of knowledge and best practices across the region. By having a platform for coordination, stakeholders would learn from each other's experiences and adopt successful strategies for climate resilience, including on improved maintenance of hydraulic infrastructure. The project's implementation will also be accompanied by a robust Learning Agenda.
- **Financing climate resilience infrastructure with regional benefits.** The project will finance much needed flood protection infrastructure and dam safety investments in transboundary basins, and large-scale transformational water storage with multiple regional benefits – planned and designed via state-of-the-art methodologies that integrate climate resilience considerations, informed by regional analysis and that also have a broader contribution of managing climate change-induced rainfall variability, flooding and drought.
- **Emergency preparedness and response,** including regional early warning systems, partnerships and information sharing protocols to prepare the region for both slow and fast onset disasters. Islands in Eastern Africa play an important role in this, as they are often the first to encounter the cyclone's paths and thus will be able to inform other countries in a timely manner.

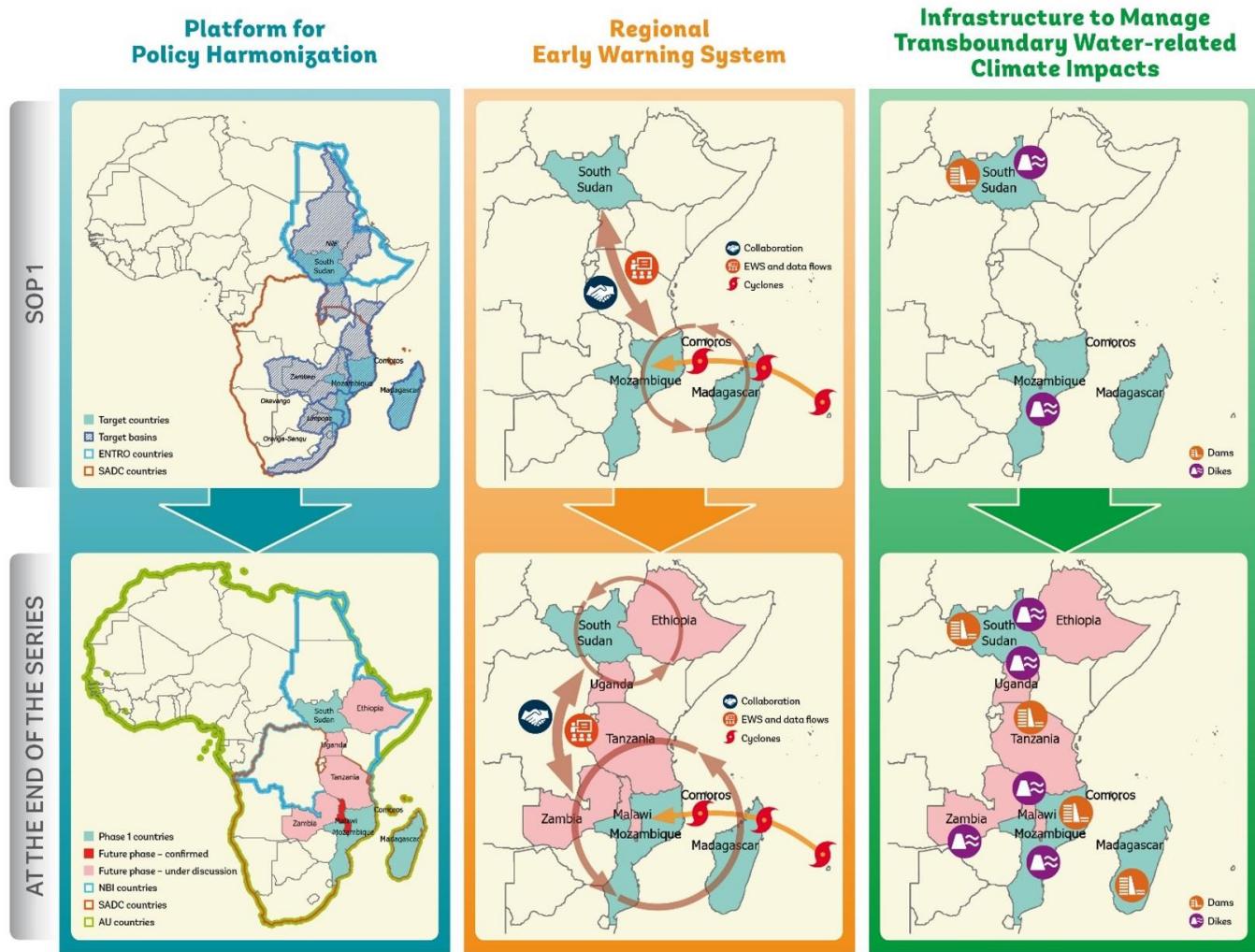
34. **The project is designed to address the growing acknowledgment of water as a Global Public Good.**¹⁷ It builds on the recognition that water resources management within a climate adaptation context requires looking beyond a basin-centered approach. Climate change has far-reaching impacts, and it is urgent to propose regional solutions that move beyond physical and towards atmospheric linkages, or atmospheric watersheds.¹⁸ A harmonized early warning system and information sharing thus become increasingly critical, even across countries that do not share physical borders. Moreover, its design considers the 'social cost of water' (akin to the 'social cost of carbon'), which considers the costs to society of loss and damage caused by water extremes and not meeting the basic provision of water for human needs.

¹⁷ Rockström, J. et. al., (2023) 'Why we need a new economics of water as a common good; Nature, Vol. 615, 30 March 2023
<https://www.nature.com/articles/d41586-023-00800-z>.

¹⁸ Ibid.



Figure 1: Project's and the overall SOP's salient features, incremental coverage, and regionality



35. The project will set up the foundations for expanding to other countries and regional organizations in future operations of the SOP across three areas. Figure 1 illustrates the key aspects of the project, the incremental coverage, and its regional impacts (of this and future projects of the SOP) through the provision of a platform for policy harmonization among participating countries and regional organizations (first column), regional EWS coordination and knowledge exchange around water-related climate impacts (e.g., rainfall variability, cyclones; middle column), and through infrastructure to manage transboundary water-related climate impacts (last column to the right).



PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

36. To improve the management of water-related climate impacts in Eastern and Southern Africa, and, in case of an Eligible Crisis or Emergency, to respond promptly and effectively to it.

PDO Level Indicators

37. **The PDO addresses the need to improve the management of water-related climate impacts in the participating countries, in particular increased rainfall variability, droughts, floods, and cyclones affecting the region.**

38. Progress towards achievement of the PDO will be measured through the following PDO-level indicators:

PDO level Outcome Indicators
1. <i>Land area benefitting from increased flood protection (ha) (percentage of which in transboundary basins).</i> *
2. <i>Improved regional information systems in use for decision making related to droughts, floods and/or cyclones (Number).</i> **
3. <i>Mechanism for climate-resilient maintenance of hydraulic assets developed and/or adopted as part of the project, including plans for financing (Number).</i> ***
4. <i>People with increased protection to climate shocks (Number) (percentage of which women, percentage of which refugees, percentage of which IDPs).</i>
5. <i>People covered with adaptive social protection or information campaigns addressing water-related climate risks (Number, percentage of which women, percentage of which refugees, percentage of which displaced).</i> **
6. <i>Regional knowledge sharing events organized to support regional integration on water-related climate impacts (Number).</i>

Note: *PDO indicator No. 1 applies to South Sudan and Mozambique only, given that works will only be financed there. It includes land restored to minimize floods. 100 percent of the works financed in this operation will be in transboundary basins.

**PDO indicator No. 2. 'Improved regional information systems' implies that protocols for data exchanges across countries and relevant regional organizations are in place.

***PDO indicator No. 3. These mechanisms involve institutionalized asset management, with clear decision-making system and financial management plans; as well as consideration of climate risks.

B. Project Components

39. **The project structure is strongly rooted in the need for solutions to build the AFE region's resilience through interventions across scales (from local to national, to regional levels) and sectors.** The project includes four integrated and mutually reinforcing components, which reflect the distinct but interconnected layers of improving the management of water-related climate impacts. The structure responds to the urgent need to invest in high-impact transformational water resource management that systematically addresses short- and long-term impacts of climate change on people, livelihoods, and protection in a sustainable manner (Component 2). As infrastructure alone is not sufficient to offset climate risks, it will take time to come online, and the needs exceed the scope of this project. Component 1 focuses on disaster risk management and early warning systems, and on climate financing to leverage additional investments. The non-infrastructure activities planned as part of the project will be crucial to set out a solid foundation for future climate-



resilient investments in the region, and the potential scalability of proven approaches as part of subsequent projects of the SOP. People and their increased resilience remain a core objective of the project – with Component 3 focusing on ensuring that the most vulnerable population are better protected from climate risk through enhanced access to information and adaptive social protection programs, with a particular focus on gender inclusion. Component 4 corresponds to project management. South Sudan, Madagascar, Mozambique, and Comoros will also include a fifth component, the Contingent Emergency Response (CERC) mechanism. While components remain technically the same for all, specific activities per country/regional organization are detailed in Annex 2. Table 2 below summarizes project's costs per country. Table A2.1 in Annex 1 further breaks down the costs per financing source, and Table A2.2 adds details on eligibility for financing from the IDA regional window.

40. The project components' structure presents a strong integration between regional and national dimensions, and provides a platform for policy and regulatory harmonization, joint knowledge generation, capacity development, standardization of climate-resilient infrastructure, cooperation, and coordination among countries. This regional approach is critical to achieve increased preparedness to the regional impacts of climate change, with social and economic benefits that will go beyond each country's boundaries.

Table 2: Project costs per country, per component.

	Project Costs (US\$, millions)						
	SADC	ENTRO	Comoros	Madagascar	Mozambique	South Sudan	Total Financing
COMPONENT 1. Risk Management and Climate Financing	2.0	0.5	1.5	9.0	5.0	8.0	26.0
1.1. Climate and disasters risk management	1.5	0.4	1.2	7.5	3.0	7.7	21.3
1.2. Climate financing	0.5	0.1	0.3	1.5	2.0	0.3	4.7
COMPONENT 2. Infrastructure Investments and Sustainable Asset Management for Climate Resilience	1.5	2.5	2.4	13.0	110.0	187.0	316.4
2.1. Enhancing institutional capacity for long term climate risk management	1.0	2.5	1.8	8.4	8.0	8.0	31.7
2.2. Closing the climate resilient infrastructure gap	0.3	-	0.3	1.0	98.0	174.0	264.6
2.3. Sustainable asset management	0.2	-	0.3	3.6	4.0	5.0	13.1
COMPONENT 3. Adaptive Climate Services for Resilient Communities	1.0	0.3	0.6	3.0	5.0	8.0	17.9
3.1. Empowering communities to manage climate risk	0.6	0.3	0.3	1.5	2.0	6.0	10.7
3.2. Mainstreaming climate resilience in social protection programs	0.4	-	0.3	1.5	3.0	2.0	7.2
COMPONENT 4. Project Management	0.5	0.7	0.9	3.0	5.0	12.0	22.1
COMPONENT 5. CERC	-	-	0.0	0.0	0.0	0.0	0.0
TOTAL SOP1	5.0	4.0	5.4	28.0	125.0	215.0	382.4

41. Component 1. Risk Management and Climate Financing (US\$26 million equivalent, including US\$5.5 million National IDA, US\$13.5 million Regional IDA, US\$6 million Crisis Response Window, CRW, and US\$1 million IDA Window for Host Communities and Refugees, WHR). The objective of this component is to build regional and national institutional capacity and strengthen cooperation on climate and disasters risk management and climate financing. This component is aligned primarily with the GCRF's pillar 2 Protecting People and Preserving Jobs, as it focuses on addressing the immediate and medium-term impact of climate crises.



42. **Subcomponent 1.1. Climate and Disasters Risk Management.** This sub-component will support investments in hydromet and early warning systems in participating countries, and establishment/strengthening of coordination mechanisms at the regional level. Eligible activities under this subcomponent include: (i) development of early warning systems (EWS), including acquisition, installation and rehabilitation of hydromet stations and monitoring equipment, software and technical assistance to national hydromet agencies; (ii) support to integration of remote sensing and satellite-based monitoring in EWS; (iii) capacity building for increased participation in regional knowledge and data sharing for hydromet and EWS; (iv) knowledge sharing events, and investments to ensure long-term data sharing arrangements; and (v) support to information exchange and experience sharing with riparian countries on flood and drought risk management, river basin planning, disaster risk management, flood forecasting, hydrological and metrological data exchange

43. **Subcomponent 1.2. Climate Financing.** This sub-component promotes multisectoral climate governance and crowd-in of climate financing from different sources. It will include regional-level Technical Assistance (TA) for strengthening clients' capacity to access climate mitigation and adaptation financing, or Global Public Goods (GPG) funds, for example, for the protection of wetlands and rangeland conservation, and to steer and benefit from carbon market opportunities via the creation of regional and country-based platforms for climate advocacy and financing; supporting deliberate outreach, and roundtables.

44. **Component 2. Infrastructure Investments and Sustainable Asset Management for Climate Resilience (US\$316.4 million equivalent, including US\$51 million National IDA, US\$103.4 million Regional IDA, US\$144 million CRW, and US\$18 million WHR).** Improving management of water resources and water-related climate impacts in AFE requires closing the regional gap on critical water infrastructure for climate resilience, as well as a strong institutional framework (i.e., rules and organizations) for **mainstreaming** climate considerations in the planning, implementation, operation and maintenance of the new and existing infrastructure. Given the tight fiscal space in participating countries, it is also crucial to extend the lifespan and effectiveness of existing protective and storage infrastructure via improved asset management and maintenance. Both for climate resilience planning and O&M, it is critical to promote a whole-of-government approach,¹⁹ that moves beyond siloed sectors and looks at the whole financial flows and competing demands. This will be achieved through: (i) institutional development and planning; (ii) infrastructure development and rehabilitation; and (iii) sustainable asset management. Taking a regional approach under this component is fundamental as the region has much to offer in terms of lessons learned, shared challenges, and successful solutions – the regional perspective thus helps maximize economies of scale and make the best use of scarce resources for larger impact. This Component is aligned with two of the GCRF's pillars, *Pillar 3 on Strengthening Resilience*, since it proposes solutions for long-term structural change to better manage water-related climate disasters, particularly via transformational investments under sub-component 2.2; and *Pillar 4 on Strengthening Policies, Institutions, and Investments for rebuilding better*, because it tackles the institutional challenges and gaps of building resilience, particularly via sub-Component 2.1 and 2.3.

45. **Subcomponent 2.1. Enhancing Institutional Capacity for Long-term Climate Risk Management.** This subcomponent will finance technical assistance and capacity building to strengthen the legal, regulatory, and institutional framework for climate-resilient water resources management, including strengthening of regional and transboundary collaboration. This involves strengthening the institutional capacity at the national and sub-national level to effectively manage long-term, climate-related floods, cyclones, and drought risks at watershed and urban levels, including foundational Policies, Institutions, and Regulation support, such as institutional strengthening, improving water resources planning, monitoring systems and watershed management, water resources/flood management/spatial planning (i.e., master plans and basin

¹⁹ Whole-of-Government refers to joint activities performed by diverse ministries, public administrations and public agencies in order to provide a common solution to particular problems or issues, in this case improving climate resilience planning at the system level, and financial availability for proper maintenance.



plans), gender resilience benchmarking and gender-responsive approaches, strengthened capacity and tools for community engagement in resilience planning and mitigation, updating technical standards for climate-resilient infrastructure, revision of water codes and accompanying legislations, and capacity building. It will also finance South-South exchanges on related topics and capacity building based on successful regional experiences.

46. *Subcomponent 2.2. Closing the Climate Resilient Infrastructure Gap.* This subcomponent will finance both preparatory studies and construction of new and in-dire-state priority infrastructure to increase climate resilience in participating countries. Studies will include dam safety assessments of critical storage – this infrastructure is critical in terms of managing too much/too little water, in addition to potentially supporting multiple water uses fundamental for countries' development. Eligible infrastructure includes protective assets (e.g., embankments/dikes, wetland restoration, urban drainage, channelization), and multipurpose storage (including priority large-scale dams). Both conventional infrastructure investments and nature-based solutions will be considered. In this SOP-1, works for flood and drought risk management and high priority remedial works to ensure the safety of existing storage will be financed in South Sudan and Mozambique. In both countries, the project uses a framework approach with eligibility criteria to identify, prioritize, and screen flood and drought management and dam safety interventions, including consideration of: (i) potential for impact on project outcomes, including regional benefits, (ii) environmental and social impact, (iii) cost-effectiveness, (iv) sub-basin level clustering; (v) accessibility and security, and (vi) synergies with ongoing World Bank and development partner's engagements. The project will also support identification of potential high-priority infrastructure investments, including for improving drought risk management, in participating countries to be financed in subsequent operations of the SOP and/or potential co-financing from other donors.

47. *Subcomponent 2.3. Sustainable Asset Management.* This subcomponent will include an evaluation of the legal and institutional framework and flow of funds, and cost recovery for operating and maintaining protective and storage infrastructure. It will support technical assistance and capacity building to strengthen the water agencies' capacity to operate and maintain existing and new assets for drought and flood management, including financial, legal, and human capacity aspects, considering gender inclusion. The technical assistance will help define an approach to public asset management and minimal standards, and - where applicable - recommendations for and support to set up a regional/national asset maintenance fund for storage and protective infrastructure, including recommendations and support for the revision of water laws. The specific set-up will vary in each country, with the common objective to increase coverage of maintenance costs of protective assets/storage, including those with transboundary benefits. Capacity building will be conducted at the regional, national, and sub-national levels.

48. **Component 3. Adaptive Climate Services for Resilient Communities (US\$17.9 million equivalent, including US\$2.2 million National IDA, US\$5.7 million Regional IDA, US\$6 million CRW, and US\$4 million WHR).** Strengthening social and human capital resilience to climate change in AFE will include enhancing "last mile" community preparedness and mainstreaming the climate dimension in social protection policy design, operational and budgetary planning, including in cash-for-work programs, whilst integrating gender needs. Adaptive social protection (SP) programs play a key role in the climate change risks cycle, from information campaigns about climate risks to vulnerability reduction to shock response. The development of these programs would decrease the number of refugees and internally displaced population in case of disaster events, thus preventing negative spillovers across countries, whilst safeguarding livelihoods of people in exposed areas. This Component is aligned with GCRF's Pillar 2 *Protecting People and Preserving Jobs* and Pillar 4 *Strengthening Institutions*, as it focuses on community outreach and mainstreaming climate resilience in social protection programs.



49. **Subcomponent 3.1. Empowering Communities to Manage Climate Risk.** This subcomponent will focus on enhancing “last mile” community preparedness and response capacity via: (i) preparation or improvement of flood and drought contingency community-level plans, simulation exercises, capacity building activities for community leaders and women to participate in effective preparedness, response and recovery efforts (including drought impacts reporting and drought contingency planning); and (ii) support to enhancing capacity of beneficiary communities to actively participate in asset operation and maintenance through training and education programs targeting women and youth, leveraging wherever possible existing local governance for O&M of flood and drought infrastructure. This will include support for the development and piloting of didactic tools to enhance the quality of community engagement and knowledge around floods and droughts preparedness and mitigation, with a particular focus on improving the knowledge and participation of women, youth, and other marginalized groups. While these programs will be tailored to the local context, cross-fertilization and learning across the region will inform their design and implementation.

50. **Subcomponent 3.2. Mainstreaming Climate Resilience in Social Protection Programs.** The ability of SP programs to timely respond to emerging needs depends on four activities supported by the project: (a) strengthening the climate-change content of the operational design of social protection programs, from public works to livelihoods; (b) improving information systems and households data to better assess climate change vulnerability, especially that of water; (c) enhancing the financial agility to support risk reduction measures and shock mitigation; and (d) supporting the intersectoral and cross-country coordination arrangements and partnerships, including for climate sensitive cash-for-work programs.

51. **Component 4. Project Management. (US\$22.1 million equivalent, including US\$3.3 million National IDA, US\$7.8 million Regional IDA, US\$9 million CRW, and US\$2 million WHR).** This component will finance all project management activities in participating countries and regional organizations, including equipment and materials, technical assistance and compliance with fiduciary, procurement, and environmental and social risk management requirements, security planning and management, remote supervision, monitoring and evaluation (M&E), impact assessment, and knowledge management and communication, and when needed, support to technical activities and supervision. It will also finance set-up and operation of national grievance redress mechanisms (GRM) and other project operating costs. At the national and regional organizations’ level, the activities will be performed by the Project Implementation Units (PIUs) or by a Project Coordination Unit (PCU), established under relevant ministries, maximizing wherever possible complementarity with existing PIUs. A Regional Steering Committee (RSC) will be established to increase coordination across the region. This component will finance participation at regional events and knowledge sharing, including in the meetings of the RSC. In South Sudan, it will support the implementation of security management plans and third-party monitoring. Finally, this component will also finance digital communications of the overall project – including blogs, social media posts and developing translated and engaging infographics targeting beneficiaries and community members.

52. **Component 5: Contingent Emergency Response Component (US\$0 million).** This component is included in the project, under South Sudan, Madagascar, Comoros, and Mozambique financing agreements. It will allow for rapid reallocation of uncommitted funds under corresponding credits and grants in the event of an eligible crisis or emergency. Under this project, eligible emergencies would be limited to the following: (i) floods/cyclones causing destruction, contamination, and limiting access to water services; (ii) droughts affecting water supplies for human consumption and livestock; (iii) localized water-borne disease epidemics related to flood/cyclones, and drought emergencies, and (iv) conflict-related impacts to water infrastructure. For the CERC to be activated and financing to be provided the Recipient will need to: (a) submit a request letter for CERC activation and the evidence required to determine eligibility of the emergency, as defined in the CERC annex; (b) submit an Emergency Action Plan, including the emergency expenditures to be financed; (c) meet the environmental and social (E&S) requirements as agreed in the Emergency Action Plan and Environmental and Social Commitment Plan (ESCP); and (d) adopt a CERC Manual.



C. Project Beneficiaries

53. The project's primary target groups are: (a) selected national, sub-national and regional entities that will increase their capacity; and (b) vulnerable communities in selected areas of participating countries, including refugee and host communities in South Sudan:

a) Regional Institutions. SADC and ENTRO's capacity will be enhanced through their participation in tailored technical trainings (e.g., access to climate financing) and South-South exchange on priority topics that contribute to the achievement of their regional mandates, as well as through the enhancement of their role as regional convenors and promoters of dialogue and cooperation around regional EW systems, data sharing, transboundary waters, and Natural Resources management.

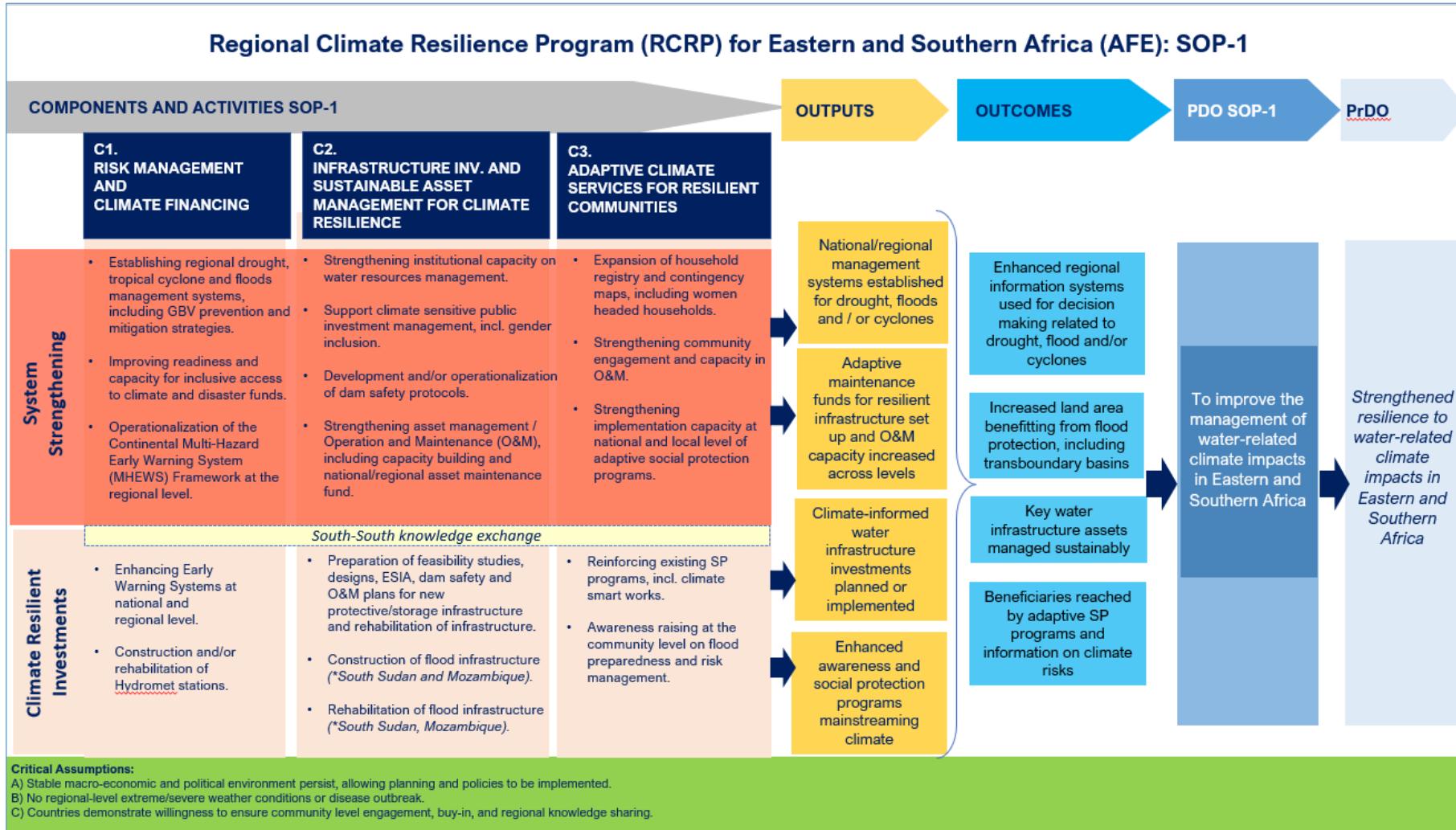
b) National Institutions. Project beneficiaries include institutions responsible for hydromet and early warning systems, disaster risk management, and water resources management at the regional, national, and subnational levels, including line ministries, government agencies, national authorities, and agencies at the national and sub-national levels.

c) Community-Level. Vulnerable communities and families will directly benefit from improved early warning systems and preparedness capacity and will indirectly benefit from the flood risk management works, community outreach, and inclusion in social registries and possible participation in water-related public works. In South Sudan, the project's beneficiaries will include 150,000 refugees as well as host communities in flood hotspots.

54. In addition, the supported activities would create benefits for the wider population in participating countries.



Figure 2: Theory of change





D. Results Chain

55. The causal results chain of this project is presented in Figure 2. Activities are linked to the three main technical components: (i) risk management and climate financing; (ii) infrastructure investments and sustainable asset management for climate resilience, and (iii) adaptive climate services for resilient communities. Actions in these areas will contribute to system's strengthening and to the enhancement of climate-resilient investments, providing strong positive regional spillovers in the reduction of poverty and vulnerability by increasing the capacity of local, national, and regional institutions and communities to effectively prepare for and adapt to climate impacts. Although climate impacts are multi-faceted and affect economies in a number of ways that this project will not be able to address entirely, expected intermediate outcomes will be crucial to building long-term climate resilience in the AFE region.

E. Rationale for Bank Involvement and Role of Partners

56. **The World Bank has an extended engagement in target countries in the region across sectors (Water, Disaster Risk Management, Urban, Social Protection, Environment) and is well placed to leverage the lessons and experience from the current portfolio into this project.** Past operations in the region and beyond also demonstrate the World Bank's expertise in national and transboundary watershed management, supporting disaster risk management, and promoting Adaptive Social Protection programs and digital inclusion through mobile payments in emergencies. The World Bank has a solid track record of supporting cross-country investments, especially at the regional level, to support implementation of complex regional projects, scale up support for regional institutions, and leverage internal and external financing. Using its convening power, the World Bank is also well-placed to coordinate the project's planned activities with existing interventions of development partners in the region, to build synergies and enhance the project's impact.

57. **The World Bank is a key partner to support the transition from humanitarian modalities of water management towards a government-led development approach critical in some fragile contexts in the region and particularly relevant in South Sudan.** The World Bank's focus on addressing challenges across the full spectrum of fragility and its expanded engagement in FCV settings allow it to draw from lessons learned in other contexts to support this delicate transition phase in FCV countries, including South Sudan. Social protection programs are now aligned with humanitarian interventions to ensure a smooth transition from emergency response to development interventions. In addition, the World Bank's convening power would help responsible ministries coordinate activities of various international partners involved in the flood response.

58. **Mobilizing financing through partnerships.** The design of the project is geared towards supporting countries to create the conditions (including systems, tools, and investments) to leverage climate financing towards their adaptation and development needs. This approach is likely to enable private financing in the medium term, whereas in the short term most financing is likely to come from other donors. Key confirmed partners to the project include the Cooperation for International Waters in Africa - CIWA (Denmark, EU, Netherlands, Norway, Sweden and UK Foreign, Commonwealth & Development Office, FCDO), and the Global Water Security Partnership (including Australia, Austria, Denmark, Netherlands, Sweden, Switzerland, USAID, and the Bill and Melinda Gates Foundation).

59. **Partnership with the Global Center on Adaptation (GCA).** The GCA is an international organization supporting adaptation through three areas: programs, advocacy, and knowledge. The GCA launched the Africa Adaptation Acceleration Program (AAAP) in 2021 and provides technical assistance to integrate adaptation and resilience into the design of downstream investments financed by the World Bank and other partners. The GCA and the World Bank will collaborate under the AAAP to deliver technical assistance that enhances the climate adaptation measures of this project with a particular focus on climate resilient infrastructure, urban climate resilience, and climate resilient water services.



60. The project will also collaborate with the Systematic Observations Financing Facility (SOFF), which was created at the 26th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26), to support sustained collection and international exchange of essential surface-based weather and climate observations according to the internationally agreed Global Basic Observing Network regulations. Madagascar, Mozambique, and South Sudan are already part of the first batch of countries benefiting from the ongoing national hydromet diagnostics expected to be completed by August 2023. The outputs of these diagnostics will directly complement the initial scoping conducted under the project. The capacity support, potential upfront investment and more importantly the results-based O&M financial support that are planned under SOFF will complement the O&M activities planned under this project. Finally, the SOFF will provide one more avenue to promote one of the objectives of this project which is to accelerate data and information sharing in the sub-region and beyond.

61. Discussions with other financiers and development partners to mobilize additional resources are ongoing, including with other Multilateral Development Banks (e.g., the Asian Infrastructure Investment Bank).

F. Lessons Learned and Reflected in the Project Design

62. **The project adopts a bottom-up and demand-driven approach to regional cooperation. It recognizes that advancing regional cooperation in the area of climate adaptation is a complex, high-transaction costs process which needs to be driven by a particularly strong and focused national buy-in.** This requires an incremental, flexible, and opportunistic approach set within a clear regional framework and theory of change. The project explicitly draws lessons from the past decade of transboundary water resources programs in Africa (Nile, Niger, Zambezi). Earlier programs were typically implemented by regional River Basin Organizations in a top-down manner, promoting equitable participation of all member countries. Attempts to seek upfront, simultaneous participation and coordination amongst upstream and downstream riparian countries often dampened national-level demand, accountability, and decision-making, resulting in sluggish implementation, with designs for new investments with strong transboundary benefits not always fully reflecting national priorities and struggling to attract further financing (including from ministries of finance). While there have been some notable successes (e.g., the Nile Basin Initiative incubated the Rusumo Falls hydropower which is now being jointly developed by Burundi, Rwanda and Tanzania), most climate and protective water investments have a much more diffuse transboundary footprint, requiring a more nimble, sequenced approach. Therefore, countries join the RCRP when they are ready – thus ensuring strong national buy-in and ad hoc, bottom-up support where most needed – though they are required to agree to a few criteria, including sharing information with other riparian countries, working together, and contributing to one, shared regional PDO – thus contributing to develop a shared mid-term vision of transboundary water cooperation. The project's social protection agencies have regular technical exchange meetings to share innovative approaches to climate-related shocks. Along similar lines, the approach to addressing gender gaps will include participatory diagnostics to build country-level support for change.

63. **The project addresses traditional shortcomings in infrastructure sustainability (because of poor maintenance) and service delivery.** The World Bank has extensive experience in designing and implementing risk reduction and Early Warning System investments. Based on the evaluation conducted by the Independent Evaluation Group covering a decade of World Bank's experience from 2010 to 2020, there are two lessons learned that this project has considered. The first is that while risk reduction projects often help build effective infrastructure, most of these projects do not explicitly address operations and maintenance that are required for long-term resilience aims. The project not only allocates substantial resources to rehabilitate existing infrastructure but equally aims at mobilizing sustainable funding and establishing governance structures for the maintenance of storage and flood control infrastructures. Given similar experiences across participating countries, the project will finance a diagnostic in all countries which will help identify common challenges and potential solutions for the specific themes covered by the project, under each component, and lessons to be learnt



via country exchanges at the regional level. The second lesson learnt is that the challenge with Early Warning System quality of service in many countries is fragmentation of data and lack of capacity to generate and disseminate actionable information. This project will address these challenges by engaging with regional institutions to develop a common protocol for regional forecasting, foster data sharing among regional countries, and strengthen last mile information flow that is critical for community preparedness. Moreover, the project devotes specific attention to maintenance, including through a PDO level indicator, and will help countries across the region identify constraints for proper maintenance and unlock financial flows.

64. The project invests in social protection risk reduction activities to enhance resilience and complement shock response programs. Social protection operations have an increasing role in climate response as SP agencies have leapfrogged in their capacity to respond to the increased frequency and intensity of droughts, cyclones, and floods in AFE. A first lesson from SP operations is that they were predominantly post-emergency social assistance interventions with a smaller weight on risk reduction programs. SP operations, however, have also expanded programs like public works to enhance the resilience of community assets while providing income support. In addition, climate-informed public works can reduce risks through enhanced environmental assets (e.g., reforestation of mangroves in coastal areas), more resilient livelihoods (e.g., small-scale water management), and even using community networks for climate risk information preparedness (e.g., soft public works are used for nutrition and WASH). The project will help strengthen households and communities' resilience through SP interventions that reduce their vulnerability by maximizing the interagency cooperation on hazard information, technical assistance, and complementarity of activities – including how to target women and youth. A second lesson is that the response to extreme climate events in AFE has been largely supported through external financing efforts with a lesser role of other sources. The multisectoral nature of the project would build the capacity to prepare government-wide contingency financial needs and inform governments about the need to establish climate resilience budgetary allocations. Third, the project explicitly raises the climate change agenda to the higher-level Steering Committee to ensure political support to this multisectoral effort at the central and local levels.

65. Activities in South Sudan will incorporate lessons learned from earlier IDA-funded projects in South Sudan and other countries that have benefited from the WHR and the CRW. First and foremost is the need to ensure that project benefits are provided on an equitable basis to both refugees and host communities. Second is to invest in institutional capacity of government and public institutions to play an increasing role in O&M of infrastructure and service provision, particularly in FCV contexts, like South Sudan, where humanitarian organizations currently provide the bulk of services for refugees, and a significant portion of services for their hosts. Third, WHR-funded operations will be leveraged as entry points for broader dialogue with government on pro-refugee reform and the implementation of government refugee strategies. Fourth, it is important to combine longer-term investments with rehabilitation of damaged infrastructure that would help address flood impacts on communities to manage expectations to see tangible benefits from the project, particularly in a context of emergency and crisis response. The project is well-placed to act on these lessons, in view of its focus on providing public goods infrastructure from which all communities – including host communities and refugees – would benefit and strengthening capacity of national and sub-national government institutions to deliver for their people, as well as the strong alignment of project activities with priorities set out in the South Sudan government's recent refugee strategy.

IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

66. The project will be coordinated at both the national and the regional level. At the national level by national project implementation units (PIUs) and/or project coordination unit (PCUs) under relevant Ministries/SADC and ENTRO Secretariat, strengthening already existing units, whenever possible. The PIUs will retain all fiduciary functions and will be



responsible for the implementation of the activities. Both SADC and ENTRO are eligible to receive a grant from the IDA Regional Window. Detailed institutional arrangements in each implementing country of this SOP-1 are included in Annex 1. The Nile Equatorial Lakes Subsidiary Action Program Coordination Unit (NELSAP-CU) will carry out some technical activities and supervision as part of this project, under ENTRO's coordination. ENTRO and NELSAP are institutions of the Nile Basin Initiative and have a common purpose in contributing to the achievement of its shared vision.

67. Collaboration between participating entities will be strengthened by formalizing coordination mechanisms (e.g., quarterly meetings and annual coordination meetings between PIUs, convening joint technical working groups to discuss thematic areas on preparedness for climate change, such as EWS, maintenance, infrastructure planning, etc.). At the national PIU level, focal points will be nominated to liaise with the regional PIUs on implementation of activities requiring country-level inputs (i.e., data platforms). A Regional Steering Committee will also be established to increase overall regional coordination at the Program level and maximize the impact of the project's framework approach. The RSC will reinforce the role of the project as a coordination platform expected to consolidate regional cooperation in climate governance in the AFE region by actively engaging stakeholders at multiple levels and encouraging communication and exchange (Box 2). It will include heads of PIUs/PCU, focal points from each participating ministry/implementing agency, and will convene at least once a year to discuss implementation progress, and at least another time to discuss technical themes addressed by all countries of the project. Details of these arrangements will be provided in the Project Implementation Manuals (PIM).

Box 2: Regional Climate Resilience Program RSC

Responsibilities of the RSC include, *inter alia*:

- Strengthening coordination and cooperation across participating countries and regional organizations to facilitate the achievement of the project's objectives.
- Monitoring regional implementation progress and providing advice, as needed, to ensure cross-fertilization of lessons learned and complementarities.
- Providing advice to maximize the impact and the reach of the project's learning agenda.
- Convening joint technical working groups and knowledge exchanges (regional technical platforms), on specific RCRP themes.

B. Results Monitoring and Evaluation Arrangements

68. The national/entity PIUs will be primarily responsible for M&E in their respective countries and will report the progress of the respective project activities and associated project indicators presented in the Results Framework in section VII. M&E reports will be submitted as part of the regular progress reports. In conjunction with World Bank implementation support missions, the national/entity PIUs will collect and present data and reports for respective national institutions responsible for the project's implementation. A mid-term review will be conducted to evaluate implementation progress and identify potential issues that need to be addressed to ensure the achievement of intended impact, including lessons learned that could help inform and strengthen the preparation of future operations in the SOP. A rigorous impact evaluation (IE) will be considered using experimental and quasi-experimental methods to identify the project's impact on its higher-level objectives. The World Bank will develop a web-based Management Information System (MIS) to track real time performance of the project, and ensure a robust monitoring and evaluation system to cross-fertilize lessons across country projects and operations under the SOP. The project will include the development and operationalization of a customized dashboard for M&E and Project Management based on the World Bank's Geo-Enabling initiative for Monitoring and Supervision (GEMS). This includes a Power BI platform integrating GIS-KoBO toolbox data forms for data collection and corresponding protocols. This platform will enable remote supervision of project activities, tracking progress in real time, and allowing a more accurate and agile risk monitoring and coordination across sub-



projects. The platform will provide a robust database to conduct research, training, and knowledge exchange, as well as institutional capacity strengthening. The World Bank will provide technical assistance in the design of a dashboard tailored to the project for remote monitoring and learning, in systematically implementing the GEMS method across participating countries, and in the delivery of capacity building linked to the use of this platform.

C. Sustainability

69. **The project is strongly rooted in the Recipients' demonstrated commitment to build resilience to climate shocks, including a strong alignment among the proposed investments, national and regional strategies.** Actions taken by governments and regional organizations in support of the project's preparation speak of their commitment and political willingness to achieve the expected results and sustain project outcomes. The implementing agencies/government institutions involved in the project's implementation also have the overall mandate for ensuring sustained O&M and asset management, relevant to the bidding documents for the infrastructure that could be supported in future stages of the SOP. The training, knowledge sharing, and improved monitoring systems supported through the project will further ensure institutional sustainability.

70. **Sustained ownership and enhanced capacity by the stakeholders involved at the national, local, and regional levels will be critical to the success of the project, as well as inclusive mechanisms and continuous political support.** Empowering and strengthening local governments and community organizations, including women and vulnerable groups, is at the core of adaptive social protection. The project will work in close collaboration with a variety of stakeholders to establish or strengthen community institutions, committees and/or water user associations (WUAs) for the O&M of local infrastructure and will build local capacity among local and national institutions to effectively engage citizens and to facilitate sustaining core staff and operations beyond the project's closing date.

PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

71. **The project focuses on creating the foundations for increasing resilience to climate change risks** (i.e., floods, droughts, and cyclones) in participating countries, via early warning systems, community engagement, and institutional strengthening, small-scale investments to protect communities, and preparation of large transformational infrastructure investments that will be financed in subsequent operations of the SOP. The components of the SOP-1 aim at achieving stronger integration between regional and national dimensions, by acting as a platform for policy and regulatory harmonization, joint knowledge generation, capacity development, standardization of climate resilient infrastructure, cooperation, and coordination across countries, with social and economic benefits that will go beyond each country's boundaries. It is difficult to quantify the benefits of several of these foundational investments, compared to those of infrastructure works to be financed under component 2 in Mozambique and South Sudan. Nonetheless, preliminary cost-benefit analysis in the form of qualitatively based synopsis of relevant experiences of countries or projects indicate that the moderate costs would yield a higher return on investment.

72. **The economic costs and benefits have been assessed based on the following development impacts:** (i) improve regional information systems for decision-making related to climate shocks, (ii) deploy flood protection infrastructure and prepare future large multipurpose storage investments, (iii) establish institutional arrangements for operations and maintenance (O&M) of protective and storage infrastructure in participating countries, and (iv) mainstream community-based adaptive social protection programs. Public goods analysis is applied to assess economic viability of components 1 and 3, which comprise 9 percent of total project costs; incremental cost-benefit analysis methodology is used for assessing economic viability of works financed under component 2, which comprises 82 percent of total project costs.



73. **Public goods and externalities produced by the project.** The project activities positively contribute to public goods. For instance, the installation of hydromet stations and early warning systems under component 1 will make it possible to produce critical information for climate and disaster risk management; availability of information is a case of pure public goods.

74. **All components of the project produce significant, positive economic externalities and are found to be economically viable based on the ex-ante economic analysis.** The project is expected to generate an important set of quantifiable and non-quantifiable benefits through its proposed interventions. The project will produce significant positive economic externalities that will boost economic growth, via positively contributing to public goods. The project's interventions are not foreseen to generate any GHG emissions given they are associated with rehabilitation and maintenance of infrastructure, scaling up of adaptive social provision and fostering stronger transboundary collaboration across cross-border river basins.

75. **Subcomponent 1.1 (Climate and Disaster Risk Management).** The installation of hydromet stations and early warning systems under this subcomponent will make it possible to produce critical information for climate and disaster risk management; availability of information is a case of pure public goods. The World Bank estimates that investments in strengthening standards for hydrometeorological information production and early warning systems capacity could lead to a benefit-cost ratios between 4 and 36, including: (i) between US\$300 million and US\$2 billion per year of avoided asset losses due to natural disasters; (ii) an average of 23,000 saved lives per year, which is valued between US\$700 million and US\$3.5 billion per year using the Copenhagen Consensus guidelines; and (iii) between US\$3 billion and US\$30 billion per year of additional economic benefits in developing countries.

76. **Subcomponent 1.2 (Climate Financing).** Strengthening of institutional capacities of relevant agencies in participating countries to induce a flow of climate financing is also a case of public goods involving policy making, rules/laws/regulations making and rules/laws/regulations enforcement (including needed institutional overhaul). Moreover, countries that share transboundary river basins would forge cooperation to harness the benefits of investment projects within entire river systems. In addition, a cost-benefit analysis done by the UN for water infrastructure projects in Southern Africa strongly supports the soft intervention of joint coordination of financing mechanisms. The analysis mentions that funding of infrastructure projects will require coordination and harmonization between traditional and non-traditional development partners to optimize funding.

77. **Subcomponent 2.2 (Closing the Climate Resilient Infrastructure Gap).** This subcomponent includes works in urgent small-scale (mostly) flood risk management and dam safety, in South Sudan and Mozambique. A cost-benefit analysis of works to be financed under this operation confirms their economic viability. As the project will be implemented using a framework approach for works in South Sudan and Mozambique, the economic and financial analysis is based on a selection of prototype investments in dikes, drainage/storm water systems, small community reservoirs and multipurpose dams, whose costs and benefits are documented based on available information. These investments as a whole, and each of its intervention areas, are found to be economically viable, with an overall economic internal rate of return of 14.4 percent, a benefit-cost ratio of 1.75 and an economic net present value of US\$222.78 million, all estimated using the incremental cost-benefit analysis method

78. **Subcomponent 2.3 (Sustainable Asset Management).** It is estimated that good and timely infrastructure maintenance boosts prosperity, enabling growth and well-being of people, firms, and economic systems. There is strong evidence that good maintenance increases the lifetime of assets. In addition, maintenance is critical for ensuring that assets withstand extreme events. Assessing the direct costs imposed to firms in low- and middle-income countries, disruptions to the water supply infrastructure because of inadequate maintenance costs US\$6 billion annually. Estimates



show that for each US\$1 million spent making exposed infrastructure more resilient, there is a greater than US\$1 million gain (and this benefit-cost ratio is even more favorable if the scenario accounts for exposure to natural hazards).

79. **Component 3 (Adaptive Climate Services for Resilient Communities).** Regional exchanges of information are critical for African countries to learn from best practices of adaptive climate resilience social protection interventions that countries in the region have already implemented and stress-tested during disaster-driven events. Participating countries have scaled up their SP interventions by expanding coverage to shock response, often accompanied by an increase in activities aimed at reducing climate change risks, from climate-smart public works to strengthen the environmental landscape (reforestation) to livelihoods support that incorporate climate change risk in productive investments. The project would support scaling up the preparedness of households exposed to extreme climate events (water deficit/excess) through community-level activities to enhance dissemination of climate risk information and ASP interventions. The benefits of these activities have been documented in several analyses. As an example, social registries that are implemented in anticipation of shocks help accelerate delivery of programs with direct impact on human capital indicators (namely, malnutrition and productivity) resulting in 3.9 percent higher income per capita. Moreover, climate-informed livelihoods activities have significant impacts on income generation with increased earnings from 16 to 21 percent. There is also evidence of cash transfers contributing to improvement in women's decision-making power and lower physical and non-physical abuse by male partners.

80. **The project's investments are expected to generate several benefit streams for the targeted beneficiaries.** These benefits include socioeconomic benefits from improved adaptive social services, improved water availability through enhanced water storage, stronger transboundary cooperation and coordination, and overall prosperity and economic growth for all participating countries. Economic benefits for refugees and host communities are not expected to differ from those for the overall targeted population. Overall, all components are economically justified, where modest funding costs would yield a higher return on investment.

B. Fiduciary

Financial Management

81. **Assessments undertaken.** A financial management (FM) assessment of the implementing entities²⁰ was carried out in accordance with the Bank Directive: Financial Management Manual for World Bank Investment Project Financing Operations effective from March 1, 2010; and the World Bank Guidance: Financial Management in World Bank Investment Project Financing Operations effective November 10, 2017. The assessment covered the six key FM elements of budgeting, accounting, internal control including internal auditing, funds flow and disbursements, financial reporting, and external audit arrangements. The objective of the assessment was to determine whether these implementing entities maintain adequate FM arrangements to ensure that: (a) project funds disbursed will be used for the purposes intended in an efficient and economic manner; (b) the project's financial reports will be prepared in an accurate, reliable, and timely manner; and (c) the project's assets will be safeguarded from loss, abuse, or damage.

82. **Financial management's residual risk is Substantial.** The conclusion of the assessment is that the financial management arrangements have an overall residual risk rating of Substantial for Comoros, Madagascar, Mozambique and South Sudan; Moderate for SADC and NBI-ENTRO. To further improve the project FM arrangements, the PIUs will consider the following mitigation measures: (a) develop a project implementation manual (PIM) considering the project-specific

²⁰ Ministère de l'Aménagement du Territoire, de l'Urbanisme (MLUUP) - Comoros; the Emergency Prevention and Management Unit (CPGU) - Madagascar; National Directorate for Water Supply and Sanitation (National Directorate of Water Supply and Sanitation (DNAAS) and the National Directorate of Water Resources Management (DNGRH), Mozambique; Ministry of Water Resources and Irrigation (MWRI)- South Sudan; SADC, and Eastern Nile Technical Regional Office (ENTRO).



activities, budgeting and planning, contract management, flow of funds related to cash transfer by the negotiation; (b) recruit qualified Finance officers and Accountant to support the PIU, and (c) recruit an internal auditor to review the adequacy of the internal control system and who will conduct at least one review per quarter. The World Bank will provide training on FM and disbursement procedures to the staff upon their recruitment. These mitigation measures will strengthen the internal control environment and maintain the timeliness and the reliability of information produced by the PIU. Overall, the FM arrangements satisfy the World Bank's minimum requirements under the World Bank Policy and Bank Directive on Investment Project Financing, and are adequate to provide, with reasonable assurance, accurate and timely information on the status of the project as required by IDA. Details of FM capacity and risk assessment, and the FM strategy for the project for each entity are described in Annex 1.

Procurement

83. **Procurement capacity assessments.** Procurement assessments were completed for all the implementing agencies in accordance with the World Bank Procurement Risk Assessment and Management System.

84. **The overall residual risk for procurement is rated Substantial.** In Comoros, Mozambique, SADC, ENTRO, and Madagascar, the residual risk is rated as Moderate as the project will leverage existing PIUs and add support staff where needed. Where existing PIUs will be leveraged, risks primarily include inadequate number of staff or record keeping arrangements and related delays in processing. These are expected to be mitigated through recruitment of additional staff and hands-on implementation support from the World Bank through training, use of the Systematic Tracking of Exchanges in Procurement (STEP) system, and circular approvals and related measures. In South Sudan, where a new PIU will be established and staffed before project effectiveness, risks are High. Risks include the absence of: (a) staff with adequate procurement experience and familiarity with World Bank procurement procedures, (b) a tender committee trained in World Bank procurement procedures, and (c) an adequate procurement filing system. These risks will be mitigated through: (a) the adoption of a PIM satisfactory to the World Bank, with acceptable procurement procedures; (b) recruitment of qualified procurement staff for the PIU; (c) set-up of an acceptable filing system for procurement; (d) training for new procurement staff and the tender committee in the application of the World Bank's Procurement Regulations, use of the STEP system, and record-keeping; (e) recruitment of consultants to assist the PIU in drafting of terms of reference and technical specifications for key technical activities as needed; and (f) certain procurement activities regardless of value, nature, categories, or packages to be treated as prior review and reviewed by the World Bank as needed. Overall, the project's procurement risk is rated Substantial. Details of procurement capacity and risk assessment for each entity are described in Annex 1.

85. **Procurement rules and procedures.** All project procurements will be carried out in accordance with the 'World Bank Procurement Regulations for Investment Project Financing Borrowers,' dated November 2020, hereafter referred to as 'Procurement Regulations.' The project will be implemented in line with the 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', dated October 15, 2006, and revised in January 2011 and as of July 1, 2016 (referred to as World Bank Anti-Corruption Guidelines); and any provisions stipulated in the Financing Agreements.

86. **Project Procurement Strategy for Development (PPSD) and the procurement plan.** In accordance with World Bank procurement regulations, the implementing agencies have prepared the project PPSD and the 18-month procurement plan. The PPSDs provide the basis and justification for the procurement packaging, approaches, selection methods and estimates to be applied, and include market analysis and a capacity assessment of key parties who will be involved in procurement under the project. Each procurement plan will be updated at least annually, or as required to reflect changes in the procurement arrangements that might be required due to changes in requirements, market conditions, procurement environment, and so forth, but each update will require World Bank approval.



C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

87. **International Waterways policy OP 7.50 is triggered under the project.** The project interventions will be located across selected climate-vulnerable sub-basins in South Sudan, which are located in the Nile River Basin. The Nile River is considered an international waterway for the purposes of the World Bank's Operational Policy regarding Projects on International Waterways (OP 7.50). An assessment conducted shows that the proposed investments would not adversely affect the quality or quantity of water flows of the Nile River to other riparian countries or adversely affect their possible water use. The World Bank notified other riparian countries of the project (Burundi, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Uganda, and Tanzania) on behalf of the Government of South Sudan, and only Egypt responded, confirming its no-objection to the project. Dikes rehabilitation and small remedial works on existing storage and feasibility analysis in transboundary watersheds in Mozambique and in river basins targeted under ENTRO-implemented activities fall under the exception of paragraph 7(a).

D. Environmental and Social

88. **The overall environmental and social risks, including sexual exploitation and abuse and sexual harassment (SEA/SH) risk, for this project are High,** mainly due to contextual security risks in South Sudan, as well as the potential downstream environmental impacts that may occur for infrastructure investments prepared through SOP-1 TA activities that will include both technical designs and the development of relevant environmental and social (E&S) instruments for infrastructure investments in other participating countries under subsequent operations of the SOP. Contextual risks are also high, especially in South Sudan. The potential environment, health, and safety (EHS) risks of the project will result mainly from activities to be financed under component 2, with no high-risk investments being financed under the project. These may include construction of new or rehabilitation of existing protective (dikes, urban drainage) and storage infrastructure, which could generate significant downstream, direct, indirect, and cumulative environmental risks and impacts; most of which are spatial in context and irreversible by their nature. Construction of flood management structures may lead to clearance of terrestrial vegetation and disturbance of wildlife. Habitat degradation may occur because of reservoir creation, changes in hydrologic flow regime, and construction material extraction. Habitat conversion may also result from temporary construction such as storage/disposal sites and establishment of temporary work camps. There are potential sedimentation risks that may affect biodiversity. The construction of flood control structures may interrupt the pattern of seasonal flooding necessary for many fish to breed and grow.

89. **Construction of run-of-river water retention structures may physically obstruct upstream and downstream movements of fish and other aquatic organisms, causing a loss of connectivity between upstream and downstream components of the riverine ecosystem.** Change in the flow regime of water may also change the habitat suitability for aquatic plants and birds. Sand and gravel borrow pits could cause disturbance to the ecosystem and could have impacts on biodiversity. Reduction of flooding has the potential for impoverishing floodplain (recession) agriculture, natural vegetation, fisheries, wildlife, and livestock populations on the floodplain. Construction/rehabilitation of flood embankments/dikes and water harvesting infrastructure could generate construction waste and can cause, on some levels of emissions (dust, exhaust fumes), noise and vibrations. Dust will be emitted during construction materials extraction activities, excavation, movement of vehicles and related earthworks. Solid waste may result from rock waste and removed



topsoil but also construction debris, as well as domestic waste from work camps. Water and soil pollution may result from improper disposal of construction waste materials. Liquid waste that could be generated during construction includes used oil, petrol/diesel, grease, etc.

90. **There is also risk of contamination of surface and groundwater through spills of cement, fuels, and lubricants during construction.** Sand and gravel borrow pits could cause disturbance of riverbed and water quality. Various occupational health and safety (OHS) risks such as injuries, falls, fatalities, etc., may occur during construction. Dust from stone quarries or other construction activities may affect workers and community health and safety. Noise from construction could also be a nuisance to the local community. Static or slow-moving water conditions could promote disease vectors that would otherwise not thrive in faster flowing unregulated rivers. Ponds could increase the incidence of human disease. The project may use vehicles for transport of workers and materials, most notably during the construction phase which may cause road traffic accidents and fatalities. Dam safety risks include flood risk management structure failures and floodwaters higher than capacity of control structures that could lead to an increased risk to community health and safety. However, no high environmental risk subproject will be financed in this project and the environmental and social management frameworks (ESMFs) for South Sudan and Mozambique, which have remedial and other small-scale infrastructure planned for this project, have a clear exclusion criterion for any high environmental and social risk investments.

91. **The overall SEA/SI risk level of the proposed project is also rated High,** due to the FCV contexts relevant for all of the countries, anticipated civil works and labor influx for project works in South Sudan and Mozambique, as well as challenges in ensuring access to quality minimum survivor support care (psychosocial, health, and legal), safe and confidential reporting channels for the project GRM, as well as PIUs' abilities to manage SEA/SI risks across the project intervention zones.

92. **Given that the project infrastructure investments are anticipated in South Sudan and Mozambique, an Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) have been completed and disclosed in each country in March 2023²¹.** The ESMF provides a basis for identifying and screening E&S project risks and guidance to ensure the project activities' compliance with the ESF through: (i) overall project-wide E&S risk assessment in line with ESS1-ESS10; (ii) generic management and mitigation procedures for handling E&S risks resulting from the project in the context of each of the four countries; (iii) a preliminary social assessment including risks of discrimination, exclusion of vulnerable or marginalized groups from project benefits, project-induced community tensions, and violence; (iv) a GBV risk assessment and GBV Action Plan; (v) Labor-Management Procedures (LMP) including a workers' Grievance Redress Mechanism covering the project; (vi) procedures for screening of E&S risks and impacts of subprojects and determining what subproject E&S instruments would be required; (vii) templates for site-specific mitigation measures to be included in the Environmental and Social Impact Assessment and Environmental and Social Management Plan (ESIAs/ESMPs); (viii) organizational structure and resource planning; and (ix) monitoring and reporting

²¹ South Sudan's in-country disclosure: <http://www.mofep-grss.org/docs/esmf-for-regional-climate-resilience-program-for-eastern-and-southern-africa-p180171-for-south-sudan-activities-2/>; Mozambique's in-country disclosure: https://www.aracentroip.gov.mz/wp-content/uploads/2023/03/P180171-ESMF-QGAS_Mozambique_RCRP-2023.03.23-CLEAN.pdf; https://www.aracentroip.gov.mz/wp-content/uploads/2023/03/P180171-RPF-QPR_Mozambique_RCRP-2023.03.23.pdf. Instead, World Bank's disclosure dates and links are as follows: <https://documents1.worldbank.org/curated/en/099195503222315438/pdf/P180171016a70a08e08cd30c936d39039bf.pdf> (revised ESMF S.Sudan , March 2023); <https://documents1.worldbank.org/curated/en/099032923104020986/pdf/P1801710559faf0050808f0981333785ab6.pdf> (Mozambique RPF, March 2023); <https://documents1.worldbank.org/curated/en/099032923182014807/pdf/P1801710bd5572080bb6e03a69e7a88db0.pdf> (South Sudan RPF, March 2023); <https://documents1.worldbank.org/curated/en/099032923104038399/pdf/P1801710bba7e20b70aa150232d2c96ec89.pdf> (Mozambique ESMF, March 2023)



system. In addition, the Terms of References for preliminary E&S assessment components of feasibility studies were disclosed on January 20, 2023.

E. Climate Change, Gender, and Citizen Engagement

93. **Climate Co-benefits.** The project is fully motivated by the need to address climate-related risks in a multi-sectoral, multi-scale approach. That is, the need to adapt to increasing climate risks is integrated across all of the project's components and sub-components. To mitigate the impact of climate risks on the project's physical infrastructure and assets, resilience principles will be embedded in the selection and technical design of investments, based on the Water Global Practice's guidance provided in the Resilient Water, Supply and Sanitation Roadmap, Resilient Infrastructure Design Brief, and Decision Tree Framework. The project is specifically designed to propose adaptation activities that address the various vulnerabilities from climate change in the region, and thus climate co-benefits will result from, among others: (i) flood resilience measures to help confront more frequent and intense climate extremes; (ii) strengthened capacity at multiple levels, from national to community, to plan and respond to increasing climate shocks; and (iii) enhancement of livelihood opportunities to confront more frequent and intense disasters and long-term changes in water availability. While most co-benefits are expected to accrue on the adaptation side, the project also has mitigation co-benefits resulting mostly from the integration of nature-based solutions where possible in the construction and rehabilitation of flood infrastructure, for instance, wetlands restoration.

94. **Citizen Engagement (CE).** The project will support a "Whole of Society" approach to building resilience in several different ways. It will enhance systems, capacity, and tools for bottom-up community or "last mile" engagement in resilience/flood planning, investment prioritization, monitoring, and maintenance. Pilots in participatory citizen science will help fill data gaps in hydromet and Early Warning Systems, while simultaneously imparting information and raising awareness on climate risks among communities. Further, community input into flood early warning would be strengthened through community and civic flood and water resource management committees, building on and strengthening existing mechanisms where they exist, ensuring active engagement of youth, women, refugee and host community members, as relevant, and also taking into account social risks and specific dynamics of conflict in some locations. Government capacity in systematic civic engagement would be enhanced through the development/application of experiential didactic tools tailored for use at the community level (and in schools) to enhance understanding of flood, water resource management dynamics and allow for more active participation in localized modeling, investment prioritization, maintenance, and emergency flood planning. Peer exchange will build capacity and exposure to innovative community participation mechanisms (citizen observatories, citizen reporting on flood early warning and dam maintenance, creation of community-based disaster-preparedness groups to provide feedback and create civic networks to enhance mutual resilience, etc.). At a more macro-level, the diagnostics and planning processes, will also actively solicit the participation of civil society organizations. For example, the Climate Sensitive Urban Development Master Plans represent a good opportunity to engage civil society as a partner in identifying ways to better and more equitably ensure benefits of disaster recovery flow to more vulnerable groups.

95. **With regards to capital investments, the project will have a beneficiary-oriented design and will include systematic consultation, feedback, and grievance redress systems.** Consultations will be guided by thorough stakeholder analysis, including the use of social risk and conflict filters where warranted, and will be inclusive of all stakeholder groups including vulnerable and marginalized (e.g., refugee and host communities) or less likely to be represented in existing authority structures. They will continue to be conducted throughout the project implementation. In addition, systems to solicit feedback after consultations will provide accountability, and gauge the quality of the consultative process. The project's consultation activities would be based on countries' specific objectives, and it will be regularly conveyed to beneficiaries how the feedback was taken into consideration. In addition, grievance redress systems will be designed to



process concerns and questions from beneficiaries and other stakeholders at various levels and detailed in the PIM, which will be developed for each country and regional organization joining the operation. The Beneficiary Feedback indicator for the Results Framework is ‘grievances that have been satisfactorily resolved at the Grievance Redress Mechanism level registered and addressed by the project’ (percentage), which conveys closing the feedback loop.

96. **Gender.** A review of available country-level data points to several recurrent gender gaps, including: (i) systems to collect sex-disaggregated data to inform planning or evaluation; (ii) master planning processes that do not take into account gender dimensions or allocate resources and capacity building to implement gendered actions; (iii) lack of equal representation at technical and decision-making levels (both in terms of local flood management or water resource management committees, management of emergency shelters, or in higher level institutions governing investment decisions), (iv) challenges in equal access to flood early warning information; (v) recovery/safety net resources or livelihood restoration opportunities; and (vi) inadequate design of emergency shelters to address gender-based risks such as gender-based violence (Annex 4). The degree of the gap, as well as the specific drivers, vary both within and among countries based on social norms, administrative capacity and awareness, past efforts at female empowerment and educational attainment, and degree of gender considerations into policies, processes and practices.²² For example, although gender-specific beneficiary level data is not available on the reach of flood early warning systems²³ women in flood-prone communities in Juba in South Sudan prefer to receive early warning by radio (due to particularly large gender gaps relative to the other three countries in literacy and mobile phone access). Along similar lines, policies for the integration of gender issues into water resource planning are much more developed in Mozambique than in the other three countries.

97. **Across the region, there is a lack of a consistent framework and benchmarked data on the status of gender gaps in resilience/DRM, and timely feedback loops that would allow a better understanding of whether those gaps are in fact diminishing in practice.** At the same time, efforts to impose gender equality without building adequate buy-in, review of past experiences with Gender Directorates and Ministries, or tailoring to country-level context and challenges, often encounter problems.²⁴

98. **The project will support greater gender equity in building resilience through a three-pronged approach:** (a) the development and application of a participatory, standardized Women in Water Resilience diagnostic tool at country-level that would enhance country ownership on gender actions, reduce the data gender gap on resilience, allow for better benchmark and comparisons across countries as well as more tailored actions for subsequent SOP operations; (b) a regional-level platform to address the gap in women’s representation in medium- and high-skilled jobs²⁵ in increasingly important *regional* river basins, hydromet, disaster risk or water resource management organizations; and (c) mainstreaming actions to address and monitor known gender gaps in the results frameworks, specifically, components linked to the design of information and early warning systems, specific actions to address the gap in access to safety net and post-disaster recovery and livelihoods among women, etc., community engagement actions, and subcomponent design.

²² For example, reporting on SDG 6.5.1 shows that South Sudan and Mozambique rate a 50 and 60 out of a 100 scale in terms of gender integration into integrated water resource management laws and planning processes, compared to only 20 for Comoros and 40 for Madagascar. However, an indication of public participation in national water resource management policies in Sudan is low (20) compared to Mozambique (100).

²³ In 1991, the death toll from the Bangladesh cyclone was five times higher for women than for men. One contributing factor was that early warning information was transmitted by men to men in public spaces, rarely reaching women directly. International Federation of Red Cross and Red Crescent Societies, 2015. *Gender and Diversity for Urban Resilience: An Analysis*.

²⁴ For example, reviews of gender efforts in South Sudan, point to past efforts to use quotas on gender representation in local development committees that have not met their target or led to substantive increases in voice because of the need for a more holistic approach that addresses social norms, processes, and incentives.

²⁵ These include management and technical specialist positions in engineering, ICT, and natural sciences.



99. **Women in Water Resilience – Framework Approach.** Each country would undertake its country-level participatory diagnostic using a structured framework to measure, collect data, assess experience on the common gap areas on resilience in water, and ultimately use this as a benchmark for cross-country comparisons and basis for further improvements.²⁶ The diagnostic process would help to build ownership, country-level consensus, and more innovative, country-driven solutions to the common gap challenges. Further, by bringing together Ministries/Directorates on Gender, civil society organizations (CSOs) engaged at the community level on flood planning and gender, and other stakeholders, the recommended actions to reduce the country-level gaps would be holistic, grounded in lessons from past implementation experience. Each country would contextualize indicators and targets for actions going forward, defining at least one outcome indicator for subsequent projects in the SOP. Improving women's access to information and voice in early warning systems, master planning, investment planning, country-level benchmarking and increasing the representation of women in technical and decision-making positions in water resource/flood institutions and access to recovery assets will be possible outcomes. The country-specific gender gap, actions to address it, and results will be linked to one or more of the main project outcomes.

100. **Platform to Enhance Gender Diversity in Regional-Transboundary Water Institutions.** Women are not well represented in technical and decision-making positions within the regional and transboundary committees and water organizations, which are increasingly important for improving water resilience. Preliminary data from two Eastern Africa transboundary water organizations showed women represent 32 percent of core staff, but only 17 percent of engineers, and 9 percent of managers. The latter is well below similar statistics for other types of water institutions in SSA (compared to 21 percent female managers in water utilities, for example).²⁷ The platform will support actions to address the drivers of these low rates, including: (a) quantifying baselines of key drivers of low rates of female representation in these organizations; (b) creating networks between tertiary educational institutions, regional water institutions and local/national DRM water institutions to enhance attraction, mentoring, and capacity enhancement of young technical/DRM/engineering graduates; (c) assessing barriers to women in the workplace and applying structured diagnostics (under the Equal Aqua program)²⁸ and dialogue to enhance female retention; and (d) providing international internships followed by mentorships to enhance placement in regional water organizations for young women.²⁹ The project will target a 5 percent reduced gender gap in technical and leadership positions in targeted regional and transboundary water institutions.

101. **Mainstreaming gender actions.** In parallel to the diagnostics referenced above, the project will integrate actions into project interventions to mitigate known gender gaps. For example, interventions that will strengthen capacity for community-level understanding of floods and droughts, and community-level engagement in operations and maintenance of flood mitigation infrastructure, will specifically target women and girls. The project will monitor change in percentage of sampled women reporting increased preparedness to floods and droughts relative to percentage of sampled men. Technical studies and guidelines for climate-resilient infrastructure will be prepared with adequate input from female and other marginalized stakeholders (such as people with disabilities). The project will tailor training, didactic tools or models to women's needs; for example, by developing didactic tools and models accessible to less literate populations given the literacy gap, leveraging community radio programs women may be more active in, and hiring women to train others on maintenance, flood mitigation and so forth. Safety net systems under component 4 will look at the reach of women-led

²⁶ Either the six common gap areas may be used as outlined above, or the diagnostic may also use elements of the FAO Resilience Index (access to basic services, assets, social safety nets, sensitivity, and adaptive capacity).

²⁷ World Bank, Equal Aqua Database. <https://wbwaterdata.org/>

²⁸ The Equal Aqua provides participating water organizations the framework, diagnostic tools and knowledge on step-by-step processes, human resource policies, and promising approaches to boost female recruitment, retention, and promotion in water sector jobs.

²⁹ While the preliminary data is focused on core staff, the technical workforce for regional water organizations largely includes consultants and contractors. The project will perform additional data collection and analyses to identify opportunities to improving women's opportunities in this aspect as well.



households, which data has shown is a growing and particularly vulnerable category in countries such as South Sudan. Processes to implement gender mainstreaming include the inclusion of gender sensitive elements in the terms of reference for assessments.

GRIEVANCE REDRESS SERVICES

102. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project-affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit <https://accountability.worldbank.org>.

KEY RISKS

103. The **overall risk of the project is rated High**. The ratings consider the experience gained as part of implementation of regional projects in the region and the risks inherent to the project's activities, particularly in the fragile context of South Sudan. Detailed explanations of each risk rating are included below.

104. **Political and Governance risk is High.** Comoros, Madagascar, Mozambique, and South Sudan are at different stages of development, facing different political and governance-related challenges. South Sudan, Northern Mozambique, and Southern Madagascar remain caught in a web of political power struggles, violence, and displacement. As such, any water-related intervention needs to be cognizant of these political and governance risks and to avoid further exacerbating them. To mitigate political and governance risks: (i) the project activities have been designed and will be implemented following conflict-sensitive approaches; (ii) the project will regularly liaise with the World Bank FCV team for early identification of risks to and from the project; and (iii) conflict monitoring is embedded in the project's M&E structure to adjust and course-correct activities based on local conditions.

105. **Macroeconomic risk is Substantial.** The region's economies are struggling to recover from the 2020 recession, induced by the COVID-19 pandemic, and now face new economic growth challenges, compounded by the Russia's invasion of Ukraine, which severely impacts supply chains as well as contributes to inflation. If this situation continues, the consequent macroeconomic effects may undermine the achievement of the PDO, especially if they lead to a further tightening of fiscal space or an increase in the price of crucial imported inputs. As a mitigating measure for these risks, price contingencies were accounted for in the project's costing. Moreover, to mitigate risks arising from currency devaluation in South Sudan, contracts with local contractors will be denominated in US dollars. At the same time, the region's fragility and exposure to climate impacts pose risks to the countries' macroeconomic situation, which the project will help mitigate by strengthening the capacity of key institutions at all levels.

106. **Sector Strategies and Policies risk is Substantial.** The project activities are well aligned with countries' commitment to climate governance. Nonetheless, there remains weak coordination across ministries and administrative



levels on climate governance. Moreover, critical reforms need to be initiated in some countries to ensure the sustainability of the activities, in particular for improving the maintenance of critical water infrastructure. To mitigate this risk, the project will: (i) actively engage stakeholders at multiple levels, from national to community, and encourage communication through regular project meetings, project steering committees, etc.; (ii) maximize opportunities for capacity building, which in refugee-hosting areas will support the government's ability to deliver services to refugees and host communities; and (iii) actively address through project interventions some of the institutional bottlenecks of the sector. Moreover, through its national and regional implementation arrangements (particularly the establishment of governance bodies with inclusive representation of key stakeholders, such as the Regional Coordination Committee), the project will serve as a coordination platform that is expected to consolidate regional cooperation in climate governance.

107. **Technical Design of the Project risk is Substantial.** Technical design risk is high because the project intervenes in disasters' prone areas, which might impede project implementation and require changes in technical designs of specific interventions; and (ii) the project supports a shift in governance systems which may encounter some resistance. However, this technical risk will be mitigated by prioritizing interventions in different areas, so that implementation could continue if one area were inaccessible; and by adopting strong learning elements that will help countries move gradually towards the implementation of large infrastructure, by increasing their readiness but also their sustainability, share experiences and learn from each other.

108. **Institutional Capacity for Implementation and Sustainability risk is Substantial.** Weak government (and RECs) implementation and low absorption capacity (partly due to unnecessarily burdensome processes) are seen as key risks, as the project will entail implementation of significant enabling environment reforms. Where there are recent or ongoing national and regional projects, the expertise of existing PIUs will be leveraged, and additional capacity-building support will be provided as needed. The project will also mitigate these risks by hiring a multi-disciplinary expert team that will coordinate activities within and between countries, to provide technical support during implementation, and it will establish institutional coordination structures to ensure effective collaboration among stakeholders during the planning and implementation of project activities. In South Sudan, the use of third-party monitoring will also be leveraged.

109. **Fiduciary risk is Substantial.** The governments of Madagascar, Comoros, and Mozambique have a long-term experience with the World Bank-financed operations, so fiduciary risk is Moderate. In South Sudan, MWRI has not previously implemented World Bank-financed projects and is experiencing significant institutional capacity constraints, including conducting procurement and managing contracts; fiduciary risks are high. Furthermore, issues related to integrity and oversight hinder the Government of South Sudan's ability to efficiently carry out procurement processes and related handling of complaints. To manage these risks, the project will: (i) support capacity building activities on fiduciary matters in all countries; (ii) set up and staff the PIUs with experts in project management, FM, procurement, M&E, and environmental and social risk management; and (iii) ensure regular project implementation support, leveraging a risk-based approach, including through prior procurement reviews.

110. **Environment and Social risk is High.** The overall environment and social risk for this project is High, both for the project construction activities to be carried out in South Sudan, as well as for the potential downstream environmental and social impacts that may occur for infrastructure investments that will be planned and prepared through the project TA activities that will include both technical designs and the development of relevant E&S instruments for infrastructure investments in subsequent operations of the SOP in other participating countries. At the country level, the project activities are expected to provide positive social benefits, including supporting the government to strengthen national and sub-national institutions, information flow, and capacity to better manage water resources for climate adaptation which are expected to benefit the institutions and the communities. To manage potential risks, each Recipient prepared ESCPs that set out specific material measures and actions that the Recipient will carry out including timeframe for these



measures, institutional, staffing, training, monitoring and reporting arrangements, and grievances' management. Where works will be financed, an EMSF and RPF also guide prioritization and choice of sites.

111. Stakeholder risk is Substantial. The large number of stakeholders and development partners active in the region may not have harmonized approaches to support the participating countries. When that is the case, there is a risk of inefficiency, duplication, and possible exclusion, especially of stakeholders belonging to vulnerable and disadvantaged groups. In addition, for South Sudan, while currently low, tensions between refugees and host communities could hinder project implementation in refugee-hosting areas. A strong communication strategy and capacity-building plan will be developed at the beginning of the project to mitigate this risk. In addition, in South Sudan, the political landscape is fragmented and characterized by high levels of violence and conflict. In this context, the project might be instrumentalized for political purposes and even opposed through violence. The Stakeholder Engagement Plans (SEP) will highlight the role of consultations to address these stakeholder risks. In particular, the project will: (i) put in place consultation processes throughout implementation at multiple levels; (ii) conduct outreach and sensitization campaigns to ensure that stakeholders are familiar with project objectives and with the need for them to engage to ensure long-term sustainability; (iii) regularly collect feedback from beneficiaries and incorporate this feedback in project activities; (iv) establish a grievance redress mechanism; (v) ensure that PIUs conduct spot checks in regards to the implementation of the SEP and GRM; and (vi) in refugee-hosting areas, extensive efforts, including in consultation with UNHCR, will be made to ensure robust, equitable consultation with refugee and host communities as part of project implementation, specifically by leveraging the peaceful coexistence and numerous other committees that refugees and host communities have established to foster cohesion within and across their communities.

112. Other risks – Security risk is High. Security risk is high in South Sudan, and in parts of Mozambique and might negatively affect project implementation through a range of pathways, including delaying transportation and construction, leading to brain drain of trained staff, and causing sudden influx of forcibly displaced people in project areas. Mitigation measures include full coordination and integration of project activities and implementing entities within UN security frameworks, including the United Nations Department for Safety and Security and regular security assessments. The project will follow procedures to set up standard emergency and reporting systems to ensure that all security incidents occurring through the lifetime of the project are rapidly identified and addressed in coordination with country management and relevant UN agencies. If the security situation deteriorates significantly, options for project restructuring will be assessed. Risk associated with data collection and privacy have been considered and will be mitigated through security protocols and technical measures (e.g., use of password protected interfaces, clear hierarchies to access and manage data) to protect the identity of vulnerable groups, as required.

113. Other risks – Refugee protection risk is 'Moderate.' The World Bank, in close consultation with UNHCR, has confirmed the adequacy of South Sudan's refugee protection framework. The country has one of East Africa's more progressive refugee legal and policy frameworks, which grants refugees the right to move, settle, work, and benefit from public services. Implementation of these rights is hindered by capacity limitations of the Commission for Refugee Affairs (CRA) and other government institutions, as well as the country's challenging socioeconomic environment, more broadly. However, there is little risk of backsliding on the government's strong policy on, and longstanding demonstrated commitment to, refugee protection, and the World Bank is working with government to support further reforms that would benefit refugees (and hosts) through policy dialogue in the context of the IDA19 WHR. Moreover, the focused capacity building efforts that form part of this and other active and pipeline World Bank-financed projects will increase the government's ability to more fully implement its progressive refugee framework.

**RESULTS FRAMEWORK AND MONITORING****Results Framework****COUNTRY:** Eastern and Southern Africa**Regional Climate Resilience Program for Eastern and Southern Africa Project****Project Development Objectives(s)**

To improve the management of water-related climate impacts in Eastern and Southern Africa, and, in case of an Eligible Crisis or Emergency, to respond promptly and effectively to it.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	End Target
To improve the management of water-related climate impacts in Eastern and Southern Africa.			
Land area benefiting from increased flood protection (Hectare(Ha))	0.00		500,000.00
% of which in transboundary basins (Hectare(Ha))	0.00		100.00
South Sudan (Hectare(Ha))	0.00		400,000.00
Mozambique (Hectare(Ha))	0.00		100,000.00
Improved regional information systems in use for decision making related to droughts, flood and/or cyclones (Number)	0.00		1.00
Mechanism for climate resilient maintenance of hydraulic assets developed and/or adopted as part of the project, including plans for financing (Number)	0.00		4.00
People covered with adaptive social protection or information campaigns addressing water related climate risks (Number)	0.00		630,000.00



Indicator Name	PBC	Baseline	End Target
Of which women (Number)	0.00		315,000.00
Mozambique (Number)	0.00		200,000.00
South Sudan (Number)	0.00		280,000.00
Of which refugees (Number)	0.00		70,000.00
Of which Internally Displaced People (Number)	0.00		56,000.00
Comoros (Number)	0.00		150,000.00
People with increased protection to climate shocks (% of which women, % of which refugees, % of which IDPs) (Number)	0.00		1,000,000.00
Regional knowledge sharing events organized to support regional integration on water-related climate impacts (Number)	0.00		10.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target
C1. Risk Management and Climate Financing			
Hydromet stations constructed and/or rehabilitated under the project and functioning (Number)	0.00		105.00
Comoros (Number)	0.00		3.00
Madagascar (Number)	0.00		25.00
Mozambique (Number)	0.00		50.00
South Sudan (Number)	0.00		27.00
Improved regional capacity for accessing climate and disasters	No		Yes



Indicator Name	PBC	Baseline	End Target
funds (Yes/No)			
C2. Infrastructure Investments and Sustainable Asset Management for Climate Resilience			
Bidding documents for priority climate resilient infrastructure investments completed under the project and ready to be launched (Number)	0.00		22.00
Madagascar (Number)	0.00		4.00
Mozambique (Number)	0.00		6.00
South Sudan (Number)	0.00		10.00
Comoros (Number)	0.00		2.00
Manuals/regulations for climate resilient structures developed, approved, adopted or implemented as part of the project (Number)	0.00		11.00
Madagascar (Number)	0.00		2.00
Mozambique (Number)	0.00		3.00
South Sudan (Number)	0.00		5.00
Comoros (Number)	0.00		1.00
State and county officials trained on management of flood protection structures (Number)	0.00		350.00
Madagascar (Number)	0.00		150.00
Mozambique (Number)	0.00		50.00
South Sudan (Number)	0.00		100.00
Comoros (Number)	0.00		50.00
Community-level associations established and/or trained on the management of flood protection structures (Number)	0.00		10.00
Mozambique (Number)	0.00		5.00
South Sudan (Number)	0.00		5.00



Indicator Name	PBC	Baseline	End Target
Flood protection infrastructure constructed and/or rehabilitated under the project (Kilometers)	0.00		195.00
Mozambique (Kilometers)	0.00		80.00
South Sudan (Kilometers)	0.00		115.00
Critical water retention and storage infrastructure with improved safety for managing drought and floods (Cubic Meter(m3))	0.00		300,240,000.00
Mozambique (Cubic Meter(m3))	0.00		300,000,000.00
South Sudan (Cubic Meter(m3))	0.00		240,000.00
Women's share of leadership and technical positions in institutions governing water resource management (percentage change) (Percentage)	0.00		5.00
C3. Adaptive Climate Services for Resilient Communities			
Change in percentage of sampled women reporting increased preparedness to floods/droughts relative to percentage sampled men (Percentage)	0.00		10.00
Mozambique (Percentage)	0.00		10.00
South Sudan (Percentage)	0.00		10.00
Manuals/maps developed for climate sensitive/informed social protection programs approved at the technical level (Number)	0.00		3.00
Multidimensional analysis of adaptive social protection systems produced (Number)	0.00		3.00
Madagascar (Number)	0.00		1.00
Comoros (Number)	0.00		1.00
Mozambique (Number)	0.00		1.00
C4. Project Management			
Grievances that have been satisfactorily resolved at the GRM-level (% submitted by women, % submitted by refugees)	0.00		90.00



Indicator Name	PBC	Baseline	End Target
(Percentage)			

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Land area benefiting from increased flood protection		Annually	Surveys	Detailed in the PIM	PIU, PCU
% of which in transboundary basins					
South Sudan					
Mozambique					
Improved regional information systems in use for decision making related to droughts, flood and/or cyclones	'Improved regional information systems' include use of hydromet stations and EWS, coordination between regional and national level, capacity of countries in advancing continental EWS, regional data sharing, integration of gender benchmarking data and diagnostic etc.	Semi-annually	Periodical reports, surveys	Detailed in the PIM	PIU- SADC



Mechanism for climate resilient maintenance of hydraulic assets developed and/or adopted as part of the project, including plans for financing	'Mechanism for climate resilience maintenance' involves institutionalized asset management, with clear decision making and financial management plans, as well as consideration of climate risks. Indicates that this mechanism has been institutionalised in participating countries.	Semi-annually	Periodical reports	Detailed in the PIM	PIU/PCU
People covered with adaptive social protection or information campaigns addressing water related climate risks	Number of population (individual-equivalent) that are enrolled in national social registries in areas of high climate hazards and/or receiving community level information about local climate (water) vulnerability.	Semi-annually	Survey	Detailed in the PIM	PIU/PCU
Of which women					
Mozambique					
South Sudan					
Of which refugees	Refugees will specifically targeted in South Sudan only (25% of total beneficiaries of these activities)				



Of which Internally Displaced People	Internally Displaced People will be specifically targeted in South Sudan only (20% of total beneficiaries of these activities)				
Comoros					
People with increased protection to climate shocks (% of which women, % of which refugees, % of which IDPs)	Refers to people benefiting from increased protection to water-related climate impacts due to dikes rehabilitated/constructed under the project, and/or NBS implemented. Climate impacts include rainfall variability, droughts, floods and cyclones.	Semi-annually	Survey	Detailed in the PIM.	PIU/PCU
Regional knowledge sharing events organized to support regional integration on water-related climate impacts		Semi-annually	Periodical reports	Program data	PIU/PCU

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Hydromet stations constructed and/or rehabilitated under the project and functioning		Semi-annually	Periodical reports	PIU/PCU M&E system	PIU/PCU
Comoros					
Madagascar					



Mozambique					
South Sudan					
Improved regional capacity for accessing climate and disasters funds		Semi-annually	Periodical reports	Trainings completed and support provided for preparing applications, questionnaire.	PIU/PCU
Bidding documents for priority climate resilient infrastructure investments completed under the project and ready to be launched	These packages will include at least technical detailed design, ESIA, and RAPs. Includes dams, dikes and hydrometric equipment.	Annually	Periodical reports, project documentation	Detailed in the PIM	PIU/PCU
Madagascar					
Mozambique					
South Sudan					
Comoros					
Manuals/regulations for climate resilient structures developed, approved, adopted or implemented as part of the project		Semi-annually	Periodical reports	Detailed in the PIM	PIU/PCU
Madagascar					
Mozambique					
South Sudan					
Comoros					



State and county officials trained on management of flood protection structures		Semi-annually	Periodical reports	Detailed in the PIM, questionnaire.	PIU/PCU
Madagascar					
Mozambique					
South Sudan					
Comoros					
Community-level associations established and/or trained on the management of flood protection structures	Definition of 'community-level associations' included in the PIM	Semi-annually	Project documentation	PIU/PCU M&E system	PIU/PCU
Mozambique					
South Sudan					
Flood protection infrastructure constructed and/or rehabilitated under the project		Semi-annually	Periodical reports	PIU/PCU M&E system	PIU/PCU
Mozambique					
South Sudan					
Critical water retention and storage infrastructure with improved safety for managing drought and floods		Semi-annually	Periodical reports	PIU/PCU M&E system	PIU/PCU
Mozambique					
South Sudan					
Women's share of leadership and technical positions in institutions	This would include regional/transboundary	Semi-annually	Periodical reports	Questionnaire	PIU/PCU



governing water resource management (percentage change)	organizations opting in, including ENTRO and SADC. 'Leadership and technical positions' defined in the PIM.				
Change in percentage of sampled women reporting increased preparedness to floods/droughts relative to percentage sampled men		Baseline in year 1, thereafter every two years	Periodical reports	Sample survey + complementary qualitative. Detailed in the PIM	PIU/PCU
Mozambique					
South Sudan	The baseline will be identified with a diagnostic carried out in the first year of the project.				
Manuals/maps developed for climate sensitive/informed social protection programs approved at the technical level	At least one per country and one at the regional level	Annually	Periodical reports	PIU/PCU M&E system	PIU/PCU
Multidimensional analysis of adaptive social protection systems produced		Annually	Periodical reports	Detailed in the PIM	PIU/PCU
Madagascar					
Comoros					
Mozambique					
Grievances that have been satisfactorily resolved at the GRM-level (% submitted by women, % submitted by refugees)		Quarterly	Periodical reports	PIU/PCU M&E system	PIU/PCU



The World Bank

Regional Climate Resilience Program for Eastern and Southern Africa Project (P180171)

**ANNEX 1: Implementation Arrangements and Support Plan**

1. This annex contains information on the following topics, relative to the specific arrangements in each participating country and regional organization of SOP-1:

- (i) *project institutional and implementation arrangements*
- (ii) *financial management*
- (iii) *disbursement*
- (iv) *procurement*
- (v) *implementation support plan and resource requirements.*

2. All participating entities (countries and RECs) will develop a mandatory stand alone and detailed Project Implementation Manual (PIM), with its own structure, results framework, and activity descriptions – including cooperation mechanisms across participants which will be common in all PIMs. The PIMs will be completed within one month of effectiveness.

A. PROJECT INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

3. This Section summarizes institutional and implementation arrangements in countries and RECs participating in RCRP SOP-1.

Comoros

4. The Government and World Bank discussed the institutional arrangements. A new PIU under the same Ministry (MATUAFTT) will be created, coupled with robust implementation capacity building measures. The PIU will work closely in coordination with the Post-Kenneth Project PIU due to complementarities in activities. Moreover, the Government will designate a coordinator and a representative of the selected Ministry to be members of the Project RSC and will cover its share of the operating costs of the RSC through the regional integration financing (under Component 4).

5. A Technical Committee will be formed with sector focal points from the following ministries, responsible for overseeing the technical implementation of the various activities: a representative of MATUAFTT, the Ministry of Interior, Decentralization and Territorial Administration; the Ministry of Water, Energy and Hydrocarbons; the Ministry of Maritime and Air Transport; the Ministry of Health, Solidarity, Social Protection and Promotion of Women; and the Ministry of Agriculture, Fishery, Environment, Tourism and Artisans, to be responsible for overseeing the technical implementation of Project activities. As part of the technical Committee, Sector Focal points will be responsible for the review, input and finalization of all technical implementation, including preparation of terms of reference, bidding documents and deliverables, for their respective sectoral activities. The PIU will submit semi-annual progress reports as well as the mid-term review (MTR) and project completion reports to the World Bank.

Madagascar

6. The project will be implemented by the Emergency Prevention and Management Unit (*Cellule de Prévention et Gestion des Urgences*, CPGU), under the Prime Minister's office to ensure coordination across the relevant sectors. CPGU has experience coordinating with other sectors and managing a range of contracts for technical assistance and limited works – which is in line with the needs for the project. CPGU will consolidate M&E and all reports, with inputs from relevant institutions. CPGU will also be responsible for all environmental, social, and fiduciary responsibilities under the project and as such will consolidate inputs from relevant stakeholders for all relevant reports, annual work plans and other documents



to submit to the World Bank. CPGU will need to recruit a technical expert, an environmental expert, a social expert, a SEA/SH expert, an accountant, an internal auditor, and a procurement specialist. The PIU will submit semi-annual progress reports as well as MTR and project completion reports to the World Bank.

7. To support the CPGU, they will work in coordination and consultation with a **technical committee** comprised of representative from Ministry of Finance; Ministry of Water, Sanitation and Hygiene; Ministry of Land Management and Land Services; Ministry of the Interior and Decentralization; Ministry of Transport and Meteorology; Ministry of Population and Social Protection; Ministry of Environment and Sustainable Development; Ministry of Agriculture and Livestock; Ministry of Energy and Hydrocarbons, as well as other national entities, including CPGU, Development Investment Fund (FID), National Office for Risk and Disaster Management, the National Water and Electricity Utility (JIRAMA), the DG Meteorology, and the Plain of Antananarivo Flood Protection Authority. These individuals will ensure the technical quality of the terms of reference, studies and other contracts being managed for the project and further ensure close alignment between project activities and ministerial priorities.

8. **A national level steering committee will also be set up**, including the same institutions, plus the 2 regions targeted in the South (namely Anosy and Androy) to provide strategic inputs into the project. They will ensure alignment with higher-level government strategies and priorities as well as approval of the annual work plan.

9. The Government will designate a coordinator and a representative of CPGU to be members of the project's RSC and will cover its share of the operating costs of the RSC through the regional integration financing (under Component 4).

Mozambique

10. Implementation arrangements for the project will be as follows:

- (a) Project implementation will be led by the National Directorate of Water Resources (DNGRH, under MPWRH) with a Project Coordination Unit (PCU) and with the participation of the ARAs (South, Central and North) as well as INGD and INASS.
- (b) The ARAs, INGD, INASS, and MTA will establish technical units in a manner acceptable to the association and following the guidelines established in the Project Implementation Manual, that will participate in the planning and implementation of activities assigned to their respective geographical and thematic areas, in their areas of coordination with DNGRH and MOPHRH.
- (c) The PCU will be comprised with fully dedicated staff mainly from MPWRH/DNGRH (such as project coordinator, technical experts, procurement, accountant, etc.) and certain specific skills will be reinforced such as environmental, social, and international procurement experts to train the MPWRH/DNGRH at least during the first two years of the project.
- (d) A training program will be developed where DNGRH and ARAs will recruit young graduates (with gender balanced approach) and paid by the project funds during the first three years with the agreement that the Government will absorb them as civil servants in the year four.
- (e) In addition, the MPWRH plans to host a Center of Excellence (CoE) which would be responsible to setup and reinforce fiduciary and environmental and social capacities at the MPWRH level.
- (f) The PCU/DNGRH will submit semi-annual progress reports as well as an MTR and project completion reports to the Steering Committee, Regional Committee, and the World Bank.
- (g) A Steering Committee/platform with the participation of various Ministries (including MGCAS/INAS, INGD, MTA, etc.) will provide strategic direction and review project activities meeting at least twice per year. The Secretariat will be assured by the ARAs.
- (h) Finally, the project will also join the Regional Project Committee for knowledge sharing and learning.



South Sudan

11. The project will be government-led in alignment with the FY21-23 CEN,³⁰ which emphasizes the need for World Bank-financed projects to transition from third-party to government-led implementation. The project will support the establishment of a core PIU at MWRI, staffed by MWRI staff and technical, engineering design, and other consultants. The PIU will include at a minimum the following positions: Project Manager, Environmental Specialist, Social Specialist, Procurement Specialist, Financial Management Specialist, Monitoring and Evaluation Specialist, and Security Risk Management Specialist. This approach will provide the opportunity to strengthen MWRI capacity in core project management functions (financial management, procurement, ESF, and M&E), and in WRM, including in flood risk management. Certain project activities may be contracted by the PIU using an output agreement with a UN agency. Given high levels of institutional fragmentation, coordination will be critical to the project's success. Therefore, the project will leverage the existing Water Sector Steering Committee, chaired by MWRI's Undersecretary, with broad membership across other ministries.

12. Additionally, the project will establish a **National Project Technical Working Group** comprising technical staff from national ministries, a representative of Commission for Refugee Affairs (CRA), state coordination committees from line ministries, and development and humanitarian partners involved in the project, to provide guidance and oversight. State-coordination committees will be established comprising technical staff from line ministries involved in the project to facilitate coordination between national and sub-national levels. In refugee hosting areas the **State Coordination Committee** will also include a representative from CRA and UNHCR. Coordination at county and community levels will build on and strengthen existing coordination mechanisms. This implementation arrangement is expected to enable the delivery of this project and other pipeline operations in the sector, namely the Horn of Africa Groundwater for Resilience (GW4R, P174867) Project. The Government will also designate a coordinator and a representative of MWRI to be members of the RCRP Regional Steering Committee (RSC).

13. MWRI will be responsible for overall coordination and implementation of project monitoring and evaluation systems. The M&E objectives are to regularly monitor the implementation process and measure inputs, outputs, and outcome indicators to provide regular information and analysis on project implementation. Furthermore, the M&E will identify potential issues and determine the extent to which the project is achieving its development objectives. Data collection, analysis and reporting will be on the results framework and will be disaggregated by gender and refugee status, where possible. The project will use the GEMS supported by the World Bank to gather data using open-source software that will feed into the overall monitoring system. Furthermore, the M&E system will be a valuable knowledge management mechanism for learning and experience sharing.

14. The PIU will submit semi-annual progress reports as well as the Mid-Term Review (MTR) and project completion reports to the World Bank. Periodic reviews, assessments and case studies may be used to supplement this reporting schedule, as appropriate. Furthermore, MWRI will, no later than 180 days after project effectiveness, hire a Third-Party Monitoring Agency (TPMA) to independently monitor and review project performance on a bi-annual basis. The TPMA will be expected to: (a) track project performance through collection and analysis of appropriate and credible gender disaggregated data and other evidence; (b) review compliance of financial management and procurement arrangements; (c) monitor ESF implementation and compliance; (d) identify any technical and procedural gaps, issues, bottlenecks and recommend improvements as necessary, and (e) document key experiences and learning. The ToR for the TPMA will be

³⁰ South Sudan - Country Engagement Note for the Period FY21-FY23 (English). Washington, D.C.: World Bank Group.



developed and agreed by the MWRI and World Bank. The TPM reports will be shared simultaneously with the MWRI and World Bank to enable concurrent supervision and timely assessment of project implementation.

SADC

15. At SADC, a PIU will be hired to implement the project. The PIU will be composed by a Project Manager, a Finance Officer, a Procurement Specialist, an Assistant Finance Officer, and an Environmental and Social Specialist. Given the scope of the project, the finance and procurement positions will be merged. The E&S Specialist position will be filled no later than 3 months after effectiveness, provided that there is a clear delegation of this role until the position is filled for the duration of the project permanently. SADC agreed with its participation and the role and structure of the proposed RSC for the overall project. Details about the RSC's role will be included in the PIM.

ENTRO

16. ENTRO will be the lead implementing entity, retaining all fiduciary and reporting responsibility. The current ENTRO team under NCCR will be reinforced with a Lead Water Specialist that will provide hands-on support to South Sudan. ENTRO will enter into an implementation agreement with its sister entity NELSAP to carry out certain technical activities and supervision as part of this project. NELSAP will be responsible for technically conceptualizing and supervising the implementation of certain activities under the project. NELSAP will not hire any new staff; however, NELSAP's staff input time will be covered under the project. Similarly, ENTRO's existing staff input time will be covered under the project.

17. **Eligibility of Eastern Nile Technical Regional Office (ENTRO) to Receive a Grant from the IDA Regional Window.** An assessment was carried out on ENTRO's eligibility to receive a grant from the IDA Regional Window. It was determined that ENTRO is a *bona fide* regional organization, and it has the legal status and fiduciary capacity to receive grant funding. ENTRO was established by the Ministers of Water Affairs of the Eastern Nile Countries (ENCOM), consisting of Egypt, Ethiopia, and Sudan, with South Sudan joining the ENCOM subsequently, and it is the technical and administrative arm of the Eastern Nile Subsidiary Action Program. As such, it has the legal authority to carry out the activities under the project in respect of South Sudan and its upstream riparian countries. ENTRO's purposes are developmental in nature and its activities do not generate revenues for ENTRO and thus, it does not qualify to receive an IDA Credit. The activities that ENTRO will carry out under the project are primarily regional in nature and are not easily attributed to national programs, and they are related to an intervention to provide a regional public good, namely, regional resilience to climate change. Grant co-financing is not readily available from other development partners. Finally, ENTRO is associated with an IDA-funded regional operation – the project involves four IDA-eligible countries, namely, Comoros, Madagascar, Mozambique, and South Sudan. Based on the foregoing, ENTRO is eligible to receive a grant from the IDA Regional Window.

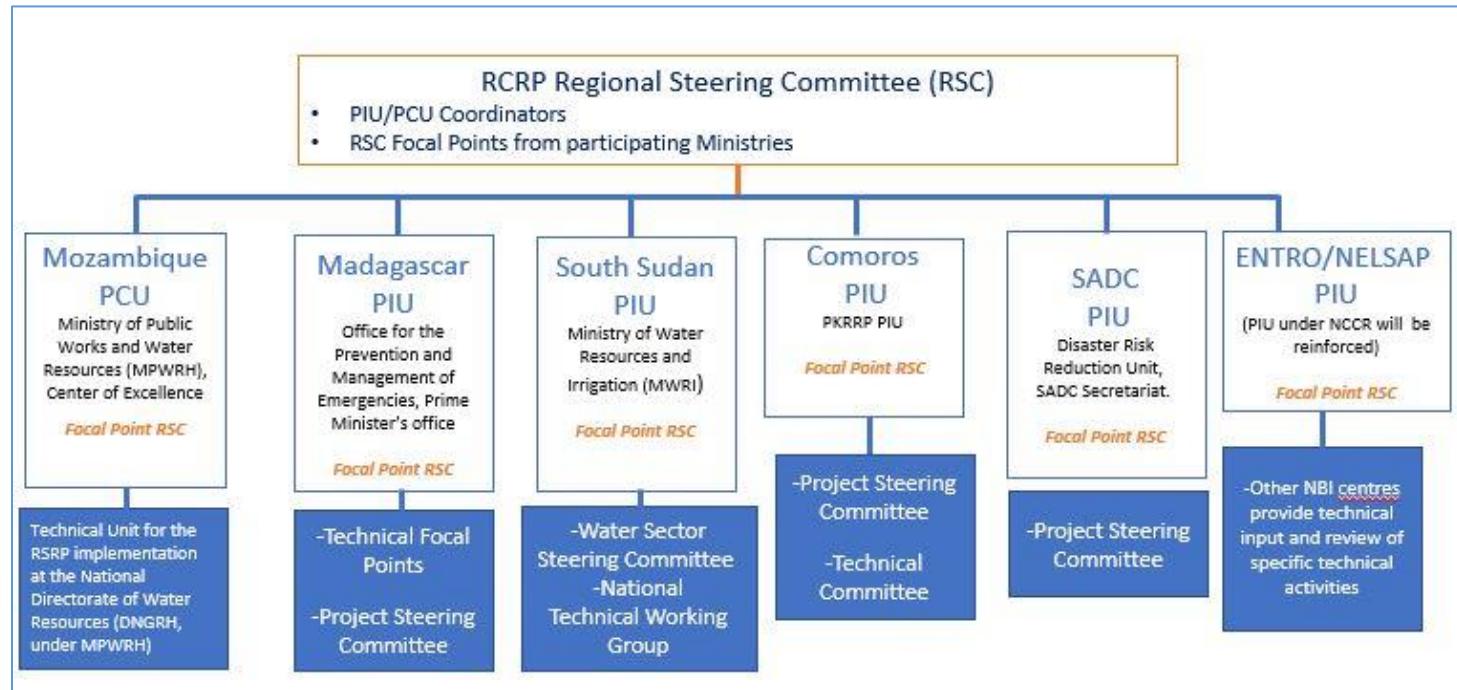
Overall Regional Coordination at the Project's Level

18. An RSC is responsible for supporting coordination during the implementation of the regional project. Its specific responsibilities include, *inter alia*: strengthening coordination and cooperation across participating countries on climate adaptation. The RSC is composed, among others, of the National Focal Structures coordinators, and representatives of the national supervising Ministries. RSC meets at least once a year to discuss RCRP implementation progress and results. It chairs at least one regional workshop and/or technical working groups every year on topics relevant to the RCRP, like climate financing, O&M for adaptation, and closing the infrastructure gap, among others. Its operating costs are borne by RCRP participating countries/RECs.



19. ENTRo and SADC are a fundamental piece in the regional integration promoted by this project. In dialogue with their member countries and countries participating in this project, and particularly coordinating the countries under their mandate, they will lead the organization of these events and knowledge exchange, and continue to foster dialogue around climate adaptation in their respective regions.

Figure A1.1: Coordination between RCRP countries and regional organizations



C. FINANCIAL MANAGEMENT

20. **The World Bank conducted a financial management assessment** of the *Ministère de l'Aménagement du Territoire, de l'Urbanisme* (MLUUP) -- Comoros; the Emergency Prevention and Management Unit (CPGU) -- Madagascar; National Directorate for Water Supply and Sanitation (*Direcção Nacional de Abastecimento de Água e Saneamento* -- DNAAS) - Mozambique; Ministry of Water Resources and Irrigation (MWRI) -- South Sudan; Southern Africa Development Community (SADC) and Eastern Nile Technical Regional Office -- one of the three Centers of the Nile Basin Initiative, (NBI), the project implementing entities. The FM assessment was carried out in accordance with the **World Bank Directive**: Financial Management Manual for World Bank Investment Project Financing Operations effective from March 1, 2010; and the **World Bank Guidance**: Financial Management in World Bank Investment Project Financing Operations effective November 10, 2017. The assessment covered the six key FM elements of budgeting, accounting, internal control including internal auditing, funds flow and disbursements, financial reporting, and external audit arrangements. The **objective** of the assessment was to determine whether MWRI maintains adequate Financial Management arrangements to ensure that: (a) project funds disbursed to the ministry will be used for the purposes intended in an efficient and economical manner; (b) the project's financial reports will be prepared in an accurate, reliable, and timely manner; and (c) the project's assets will be safeguarded from loss, abuse, or damage.

21. **The World Bank conducted FM assessments** for Comoros, Madagascar, Mozambique, South Sudan, SADC, and ENTRo to evaluate the adequacy of FM arrangements to support project implementation. The assessments focused on



implementing entities at the regional and country levels. The objective of the assessments was to determine whether the proposed FM arrangements: (a) are capable of correctly and completely recording all transactions and balances relating to the project; (b) would facilitate the preparation of regular, accurate, reliable, and timely financial statements; (c) would safeguard the project's assets; and (d) would be subject to acceptable auditing arrangements. The assessments build as much as possible on the World Bank's knowledge of country FM systems and requirements, and experience and performance of the implementing entities through its involvement in other World Bank-financed operations. This annex summarizes the key FM arrangements, risks, and mitigating measures. Detailed assessments for each country were prepared, which are the basis for this summary.

22. **Organization and staffing.** The implementing entities for the project all have experience in managing World Bank-financed operations. Each institute in Comoros, Madagascar, and Mozambique will maximize the use of PCUs for existing projects which are staffed with qualified accountants. In South Sudan, a new PIU will be established before project effectiveness, including Financial Management experts among its staff. The finance manager at SADC and ENTRO will be responsible for the project FM.

Planning and budgeting

- **Comoros.** Budget arrangements will be described in the Project Implementation Manual (PIM). The PIU will prepare the annual budget of the project with the support of the accounting firm. The budget will be submitted to the project' steering committee for approval. The budget monitoring will be enhanced using the accounting software that will be acquired by the project. The periodic variance analysis will enable the timely identification of deviations from the budget. These reports will be part of the interim unaudited financial reports (IFRs) that will be submitted to IDA on a quarterly basis.
- **Madagascar.** The PIU will prepare the annual budget of the project and will submit it to the project's steering committee for approval. The budget monitoring will be carried out with the help of the accounting software to be acquired by the PIU. The periodic variance analysis will enable the timely identification of deviations from the budget.
- **Mozambique.** The budgeting, budgetary control, and budget monitoring will follow government Procedures. Project budget will be inserted as part of DNGRH's budget and approved by parliament. Preparation of the Annual Work plan will follow the approved budget, and approved activities on the budget will be captured in a procurement plan. The budget will be monitored through the automated accounting software once purchased and operational. The PIU will also ensure that adequate project budget monitoring system is place, and this will be described in the PIM. The Project budget will need to be registered with the National Directorate of Budget (DNO) and National Directorate of Treasury (DNT) prior to effectiveness.
- **South Sudan.** Planning and Budgeting in the Ministry of Water Resources and Irrigation (MWRI) follows a top-down approach. The budget allocation to the ministry is done from the Ministry of Finance and Planning (MoFP) and budget ceiling communicated to MWRI. There exist a Directorate of Planning and Programme at the ministry with 9 staff but only 3 have basic knowledge in planning and budgeting, and these are (a) Senior inspector of planning, (b) Inspector of planning, and (c) Director of planning. There are 6 directorates at the ministry and each directorate prepares work plan that is submitted to Directorate of planning for consolidation in line with the approval from MoFP. Upon consolidation, the ministry budget is submitted to the Undersecretary in the MWRI for final approval and submission to the MoFP, accompanied by a cover letter. MoFP provides a Budgeting Preparatory System (BPS), and an Excel sheet, used for generating budget execution reports. An annual narrative report is also prepared by the ministry and presented to the National Legislative Assembly by the undersecretary for approval. The assessment, however, noted that expenditures are not linked to the BPS and budget variance analyses are not adequately monitored.



- **SADC.** The Budget Committee, established by the Executive Secretary, prepares annual budgets, which include activities funded by Development Partners/donors. The Executive Secretary submits the proposed budgets to the Finance committee and Council for approval. The Budgets clearly distinguish Member States' and Development Partners' Contributions and include actual performance for the preceding fiscal period. The Finance Directorate prepares monthly and quarterly management reports, comparing the budget with actual performance. The Internal Audit Unit conducts monitoring of the budget throughout the year and recommends additional required action to address material variances. The project will follow the above operational SADC budget preparation and monitoring processes.
- **ENTRO.** ENTRO has an adequate internal budgeting process. Detailed budget preparation and control procedures are outlined in the harmonized NBI Finance and Administration Policy Manual. ENTRO submits budgets to its governance body, ENCOM, for endorsement. There are delays in the approval process which need to be addressed. Specific for the Project, ENTRO will prepare realistic Annual Work Plan and Budget (AWPB) for activities that will be undertaken during a financial year. ENTRO will then obtain No Objection from the World Bank on the AWPB as well as approval of its governance body as noted above. Preparation and approval process will be finalized before the start of a financial year. Once approved, budget forms the basis of eligible expenditure during a year. Budgets are recorded into the accounting system in use and controlled at transaction level and periodically at report level as well as through the system. Budget tracking records will be maintained in the computerized accounting system. The project will thus follow these procedures. Lessons indicate that the ENTRO follows the existing budget arrangements for the World Bank financed projects. Budget utilization trends over the past three years also indicate the need for improvement. Variance analysis, including explanation, will also form part of regular quarterly reports. Implementation will be monitored regularly, and action will be taken on bottlenecks to assist better utilization of the budget.

23. **Accounting systems, policies, and procedures.** The main implementing entities have systems, policies and procedures in place which are used by existing projects. Existing projects'/institutions' finance manual will be used for the project with some modification to account for project specifics.

- **Comoros.** The PIU will prepare accounting reports on a modified accrual basis with disclosure of commitments and will comply with the revised SYSCOHADA. The accounting software to be acquired will enable recording of projects financial transactions, monitoring of the budget execution, and preparation of the financial reports, register, manage assets, and issue statements of expenditures required for disbursement purpose. The accounting records will reflect adequately the Project's structure in terms of components and sub-components and the source of funds. The PIU will appoint a qualified finance officer to perform the FM tasks related to the project. This consultant will be responsible of the day-to-day accounting and reporting duties, operating of bank accounts, assistance with the budgeting, enforcing, and monitoring controls, regularly updating the FM manual. The Finance officer will be supported by an Accountant. Their recruitment will be made based on ToRs agreed with the World Bank and would be completed no later than one month following the effectiveness date.
- **Madagascar.** The accounting records will reflect adequately the Project's structure in terms of components and sub-components and the source of funds. The PIU will appoint a qualified finance officer to perform the FM tasks related to the project. This consultant will be responsible of the day-to-day accounting and reporting duties, operating of bank accounts, assistance with the budgeting, enforcing, and monitoring controls, regularly updating the FM manual. The PIU will recruit qualified FM staff – one Finance officer and one accountant no later than three months after the effective date. The PIU will undertake annual performance assessment of the staff prior to the renewal of their contract.



- **Mozambique.** DNGRH will be responsible for handling their own accounting responsibilities through e-SISTAFE and existing accounting software purchased at DNAAS and will be customized to add the project, while DNAAS will make use of PHC which will be customized to add the project. The preparation of the accounting information will be on a cash basis in accordance with GoM requirements, which are also in alignment with the International Public Sector Accounting Standards. DNGRH has experience in handling World Bank operations; however, all projects are currently closed, and this project will make use of existing staff handling on-going World Bank projects at DNAAS to handle the financial management responsibilities of the Project, at most for the first 12 months of the project implementation, whilst another financial management officer is mobilized. In the meantime, an accounting assistant will be recruited. There will be an assessment of one or two Ministry of Public Works, Housing and Water Resource accounting staff to join the project FM team and benefit from on-the-job training in Bank Disbursements and Financial Management.
- **South Sudan.** The Ministry of Water Resources and Irrigation maintains a manual system for recording and reporting financial information that lacks critical control areas e.g., controls for completeness, chart of accounts for ledger account code classification and controls for accuracy of financial transactions. MoFP issued Financial Forms used in recording financial information. It is recommended that a simplified accounting software be acquired for the project. The undersecretary is the accounting officer in MWRI; there are twelve staff in the finance department that include four senior bookkeepers also referred as accountants but none of the twelve staff hold relevant professional qualification in accounting such as Certified Public Accountant (CPA) or Association of Chartered Certified Accountants (ACCA). To improve staff capacity, a consultant Financial Management Specialist will be hired at the PIU supported by designated accountants from MWRI.
- **SADC.** SADC is using a computerized accounting system called “Sunsystems” which is interfaced with Ordering Procurement System (SUNFLOW). The accounting system is configured to produce both standardized and customized reports as required by various development partners. Specific project codes will be included in the Sunsystems chart of accounts to facilitate recording and reporting on project transactions. The Finance Directorate is currently staffed with well-qualified and experienced personnel. The personnel hold post graduate degrees and appropriate professional accounting qualifications. Much as the Directorate is staffed to cope with the available workload, there is need to hire two project-specific Finance Officers to handle the project financial operations given the many projects implemented by SADC. New projects are required to include allocations for some staff to meet capacity for its specific processes. A Finance Officer and Assistant Finance Officer, to be supervised by the Financial Controller (SO)-Grants, Contracts and Projects, will be recruited to fulfill day-to-day FM responsibilities of the project. The World Bank will conduct an FM and disbursement training on World Bank requirements for the recruited expert and other officials in the PIU and Finance Department.
- **ENTRO.** ENTRO is using the NBI-harmonized Finance and Administration Policy Manual for its financial management and accounting procedures. The manual sets out important budgeting, accounting, and internal control procedures and is adequate to guide on management of financial resources. The manual will be used for the Project. ENTRO has adopted Accrual Basis International Public Sector Accounting Standard (IPSAS) for accounting and reporting purposes. An accounting system named ‘Microsoft Dynamic Navision’ has been customized and is operational at ENTRO. The system is capable of recording Project transactions, including expenditures, according to activity and so will be used for the Project, but Chart of accounts will be developed for the Project. FM Staffing: Apart from the regional finance and administration head, ENTRO has two FM staff against a requirement of three. It has, however, been reported that the current staff level was adequate for the current volume of work. The proposed project will require additional effort of the existing FM staff, and they are capable in handling the FM aspects of the Project. If there are additional staffing requirements these will be informed and agreed with the Bank during implementation.



24. **Internal controls.** Internal control comprises the whole system of control, financial or otherwise, established by management to (a) carry out project activities in an orderly and efficient manner, (b) ensure adherence to policies and procedures, (c) ensure maintenance of complete and accurate accounting records, and (d) safeguard the project's assets.

- **Comoros.** The PIU will develop the project implementation manual (PIM) and will submit it to World Bank review. The PIM will be adopted no later than one month after the effectiveness date. The PIM will consider specifics of the project to be implemented as well as World Bank requirements in terms of reporting and auditing, disbursement and flow of funds, the authorization process for payments as well as the subsequent controls to be undertaken, budgeting process, stock and assets management, accounting process, contracts' management. The PIM will clearly describe the procedures and control applicable to activities involving cash transfer operations. Procurement procedures applied by this Project will be in line with the World Bank procurement regulations.
- **Madagascar.** The PIU will develop the project implementation manual (PIM) based on the previous manual used for other projects. The PIM will consider specificities of the project to be implemented as well as the World Bank's requirements in terms of reporting and auditing, disbursement and flow of funds, cash transfer management, authorization process for payments as well as the subsequent controls to be undertaken, budgeting process, stock and assets management, accounting process, and contracts' management. Procurement procedures applied by this Project will be in line with the World Bank procurement regulations. The PIM will be adopted no later than one month following the effectiveness date. The PIU will recruit an internal auditor (IA) to continuously ensure the effectiveness and efficiency of the governance, risk management and control over the project's activities. A risk-based audit plan will be developed. During the project implementation, the IA will undertake at least one review per quarter. The Internal Auditor will prepare after each audit a report for the coordination; the steering committee and will share with the Bank no later than one month after end of quarter.
- **Mozambique.** Project internal controls system and procedures will be based on national procedures which are defined in the *Manual de Administração Financeira* (MAF) and the PIM. In addition, the project may also be subject to the review of the General Inspectorate of Finance (*Inspeção Geral das Finanças* [IGF]) based at the Ministry of Economy and Finance. The World Bank FM team will conduct regular implementation support through desk review and field visits to ensure that the implementing agency is managing adequately the internal controls systems. A contract monitoring system will be kept for all contracts to strengthen the internal controls by DNGRH.
- **South Sudan.** MWRI has established an internal audit unit in its organogram, but currently the department is unstaffed due to lack of adequate resources. Duties and responsibilities are segregated in the ministry, whereas the function of authorization to execute transactions, recording of transaction and custody of assets, are performed by different persons. The assessment noted lack of periodic preparation of bank reconciliation statements, the last bank reconciliation statement was prepared in November 2021. Under the project, the MWRI will consult the Directorate of Internal audit and request for deployment of an internal auditor in the ministry, responsible for testing internal control, policies and procedures and advise the management on areas of improvement. The internal auditor will be required to prepare quarterly reports during the project period.
- **SADC.** SADC applies financial management practices and internal controls set out in the Financial Regulations and Financial Management and Accounting Procedures Manual. The project will apply the policies, procedures, and practices in these manuals to ensure that funds of the project are utilized for intended



purposes. Concerning procurement, the project will follow World Bank procurement guidelines and the Bank's Anti-Corruption Guidelines and Sanctions Framework. SADC has an Internal Audit Unit that reports functionally to the Audit Committee and administratively to the Executive Secretary. The Unit provides assurance on adequacy and effectiveness of the risk management framework, internal control systems and governance processes. The Unit applies a risk-based approach to fulfil its role. The Unit will be required to conduct an annual review of adequacy and adherence to internal controls and risk management framework of the project and a copy of the report be submitted to the World Bank.

- **ENTRO.** ENTRO follows internal controls of the “NBI Finance and Administration Policy Manual” which incorporates important internal control procedures. ENTRO’s internal control procedures are adequate to ensure authorization, recording, and custody controls. Functional responsibilities are adequately segregated. As regards internal audit, there are good internal audit activities as well as follow-up of implementation of findings. An Internal auditor with audit experience has been employed by ENTRO. A World Bank-financed project audit is conducted as part of the entity internal audit. The current control practices or provisions of the harmonized Finance and Administrative Policy Manual will be applied for activities of the proposed project as part at ENTRO. ENTRO also need to ensure that sound internal controls continue to exist. The internal auditor will include the proposed project in the annual audit plan, conduct audit on project execution transactions as per plan, and conduct close follow-up of implementation of the findings reported. The World Bank will have access to the audit reports during implementation.

Financial reporting

- **Comoros.** The PIU will prepare quarterly un-audited IFRs for the project in a form and content satisfactory to the World Bank. These IFRs will be submitted to the World Bank within 45 days after the end of the quarter to which they relate. At the end of each fiscal year, the PIU will prepare annual financial statements of the Project which will be subject to an external audit.
- **Madagascar.** The PIU will prepare a quarterly un-audited interim financial report (IFRs) for the project in a form and content satisfactory to the World Bank. These IFRs will be submitted to the Bank within 45 days after the end of the quarter to which they relate. The annual financial statements will be prepared using international accounting standards. At the end of each fiscal year, the project will prepare annual financial statements which will be subjected to an external audit.
- **Mozambique.** The project implementing agency will prepare quarterly IFRs for the project in a form and content satisfactory to the World Bank. The IFRs will be submitted to the World Bank within 45 days after the end of the calendar quarter to which they relate. At the end of each fiscal year, the DNGRH will also produce annual project financial statements.
- **South Sudan.** MWRI prepares monthly and semi-annual financial reports as part of its financial reporting regime. A monthly statement of expenditure is prepared and submitted to the Undersecretary for Finance and Administration who is the Accounting Officer. If any issues are noted in the statement of expenditure, the accounting officer discusses with the finance department and corrective measures are taken depending on the type and magnitude of the issue raised. Under this project, the PIU will prepare quarterly Interim Unaudited Financial Reports (IUFRs) which will be submitted to the Bank within 45 days after the end of the quarter in line with the Grant Agreement. The financial reports will be prepared in excel sheets, provided to the MWRI, and will reflect project expenditures, in addition to a comparative statement of budgeted and actual expenditure. The format, content and periodicity of the financial report will be reflected in the financing agreement.



- **SADC.** SADC will prepare the required reports to manage and monitor the project on regular basis. Specifically, the PIU will be required to prepare interim unaudited financial reports (IFRs) for every quarter and submit the reports to the World Bank not later than forty-five (45) days after the end of each quarter. The contents of these reports will consist of statements on: (i) sources and uses of funds, (ii) uses of funds by project components and activities, (iii) designated accounts Activity Statements, and (iv) contracts subject to/and not subject to the Bank's prior review.
- **ENTRO.** ENTRO will prepare quarterly un-audited Interim Financial Reports (IFRs) for the proposed project in form and content satisfactory to the Bank. The IFR will be submitted to the Bank within 45 days after the end of each quarter to which they relate based on format which will be agreed with the Bank. The project will also prepare the project's annual accounts/financial statements within three months after the end of the accounting year for external audit.

External audit

- **Comoros.** The project accounts will be audited annually, and the audit report will be submitted to the World Bank no later than six months after the end of each financial year. Currently, there is no overdue audit report for the sector, though the last project audit report was received late. The project will comply with the World Bank disclosure policy on audit reports (including making publicly available), promptly after receipt of all final financial audit reports (including qualified audit reports) and place the information provided on the official website within one month of the report being accepted as final by the Association. The Union of Comoros does not have a professional accountancy body recognized by the International Federation of Accountants at this stage. Hence, the external auditor recruitment will be opened at international level and only qualified external auditors will be short-listed. The TOR for this audit will be reviewed by the World Bank prior the recruitment.
- **Madagascar.** The financial statements of the project will be audited annually in accordance with the World Bank policy and Directive. The financial audit will be conducted by a private audit firm acceptable to the World Bank. The audit report will be submitted to the World Bank no later than 6 months after the end of each financial year. The Project will comply with the Bank disclosure policy on audit reports.
- **Mozambique.** The Administrative Tribunal (the country's supreme audit institution) is mandated to audit all government funds, including externally financed projects. As such, the Tribunal will be responsible for auditing the whole project. The project financial statements will be audited by the Tribunal in accordance with International Standards on Auditing as issued by the International Auditing and Assurance Standards Board (IAASB) within IFAC. The audit report, together with Management Letter, will be submitted to the World Bank within six months after the financial year-end, i.e., by June 30th of the year following the end of the financial year subject to audit.
- **South Sudan.** The National Audit Chamber (NAC) is the Supreme Audit Institution (SAI) in the Republic of South Sudan and is constitutionally mandated to audit all public resources including World Bank-financed projects. Annual financial statements for this project will be audited by the NAC, and the audit report and management letter will be submitted to the Bank within six months after the financial year end. Any incremental cost of project audit will be met out of project funds. NAC has been auditing the financial statements of all Bank-supported projects in the portfolio with support from private audit firms and expressing an opinion on those financial statements.
- **SADC.** The project financial statements will be included and audited by SADC appointed external auditors as part of SADC annual financial statements. The project cumulative receipts, expenditures, and closing cash balances will be disclosed in a note in the SADC annual financial statements, commencing with the fiscal year



in which the first withdrawal will be made. The annual financial statements will be prepared in accordance with the accrual-based International Public Sector Accounting standards (IPSAS) and audited by SADC-appointed external auditors using International Standards for Supreme Audit Institutions (ISSAIs). A copy of the SADC audited annual financial statement and management letter will be submitted to the World Bank not later than six months after the end of the fiscal year. The management letter will contain the external auditor's assessment of the internal controls, accounting system and compliance with financial covenants in the Financing Agreement, suggestions for improvement, and management response to the letter. The Audit - Terms of Reference (TORs) will be developed, agreed upon between the SADC and external auditors, and cleared by the World Bank to ensure the adequacy of the scope of the audit.

- **ENTRO.** ENTRO accounts are audited annually by external audit firm. Audit reports of the past three years were submitted within the due date, and auditors issued unqualified (clean) audit opinion on these accounts. Audit reports cover all the activities of the ENTRO, including projects financed/managed by the World Bank. The ENTRO could continue with this practice (with adequate disclosure) or could have a separate project financial audit. The audit of the proposed project part at ENTRO will be done using an external auditor acceptable to the World Bank. External audit Terms of Reference will be agreed with the Bank. The audit will be done using International Standards on Auditing (ISA). The audit report of the Project, together with the Management Letter, will be submitted to the Bank within 6 months after the end of a financial year. In accordance with the World Bank Policy on Access to Information, the World Bank requires the borrower to disclose the audited financial statements in a manner acceptable to the World Bank. Following the Bank's formal receipt of these statements, the Bank will make them available to the public as well.

Fund Flow and Disbursement Arrangements

25. **The detailed fund flow arrangement for each of the countries and the regional implementers will be documented in each of the implementers DFIL.** The proposed arrangements are described below.

26. **The participating entities will each open a DA at banks acceptable to IDA.** The project may follow one or a combination of the following disbursement methods: DA, direct payment, reimbursement, and special commitment. Detailed arrangements are summarized as follows:

- **Comoros.** The PIU will open a designated account (DA) denominated in KMF dollar at an acceptable bank to receive the proceeds of the financing. Transaction-based disbursements will be used for this project. An initial advance of up to the ceiling of the DA and representing four months of forecasted project expenditures payable through the DA, will be transferred after project effectiveness. Subsequent disbursements will be made monthly against submission of the statement of expenditures (SOEs) or other documents as specified in the DFIL. The project will be allowed to use direct payment, advance, reimbursement, or special commitment as disbursement methods. Retroactive financing for an aggregate amount not to exceed SDR 160,000 may be made for eligible expenditures made prior to the date of signing of the Financing Agreement but on or after June 1, 2022.
- **Madagascar.** The PIU will open the Designated Account (DA) in the Central Bank of Madagascar in accordance with the applicable regulation, denominated in US Dollars to receive funds from the Bank. Secondary account, denominated in Ariary or USD, will be opened at an acceptable commercial bank to enable payment of eligible expenditures. Transaction-based disbursements will be used. An initial advance up to the ceiling of the DA and representing four months forecasted project expenditures payable through the DA will be made into the DA. Subsequent disbursements will be made monthly against submission of the Statement of Expenditures (SOEs) or other documents as specified in the Disbursement and Financial Report Information Letter (DFIL).



- **Mozambique.** Report-based (IFR) disbursement will be applied to this project. One Designated Accounts (DA) in US dollars to be managed by DNGRH will be opened at the Bank of Mozambique (Central Bank) to receive funds from IDA. From the DA, funds will be transferred to the Single Treasury Account (Conta Única do Tesouro [CUT]) based on requests from DNGRH to the National Directorate of Treasury. Payment of eligible project expenditures will be made from CUT to providers of goods and services. Disbursements of IDA funds will be done on unaudited IFRs. An initial advance will be made into the DA upon the effectiveness of the Financing Agreement, based on cash forecast for the six months and at the request of DNGRH. The option of disbursing the IDA funds through direct payment, reimbursement, and special commitment will also be available. The Disbursement Guidelines for Investment Project Financing (issued in February 2017) provide guidance on disbursement arrangements. In addition, the Bank will issue the Disbursement and Financial Information Letter (DFIL) which will specify the additional instructions for withdrawal of the proceeds of the investment project financing.
- **South Sudan.** Disbursement of the Grant will use advances, reimbursement, direct payments, and payments under Special Commitments, including full documentation or against statements of expenditure, as appropriate. MWRI will open a designated bank account (DA) denominated in US Dollars in a Commercial Bank acceptable to IDA for the project from where US Dollar payments will be made. MWRI will also open an operational account denominated in South Sudanese Pounds (SSPs) for payments denominated in SSPs.
- **SADC.** Funds will flow from the World Bank to a Designated Account to be opened and managed by SADC. Funds in the DA will be used to finance eligible activities of the project. SADC will use any of the following four disbursement methods to request for funds from the World Bank: (i) advance, (ii) reimbursement, (iii) direct payment, and (iv) special commitments. An advance will be made to the Designated Account at the effectiveness of the grant and the request of SADC (the Recipient). The advance will be meant to cover project expenditures for 6 months as indicated in the initial six-month cash flow forecast. After every subsequent quarter, the project will submit IFRs which will include a cash flow forecast for the following six-month period. The cash request at the reporting date will be the amount required for the forecast period as shown in the approved IFRs less the balance in the Designated Account at the end of the quarter. Request for reimbursements will be supported by IFRs. The option of disbursing the funds for large payments through direct payments from the grant account will also be available. Withdrawal applications for such payments will be accompanied by relevant supporting documents such as copies of the contract, contractors' invoices, and appropriate certifications.
- **ENTRO.** ENTRO will open separate bank accounts (one USD and one local currency) for the project fund at a bank acceptable to the World Bank. IDA Funds received will be deposited into the separate USD/Designated bank account while the local currency bank account facilitates payments in local currency. It is important to ensure that all the separate bank accounts are used only for the project purposes. The project may follow one or a combination of the four disbursement methods available that are Designated Account, Direct Payment, Reimbursement, and Special Commitment. The Project will use report-based disbursements, i.e., using quarterly Interim Financial Reports (IFRs) which will include six-monthly forecasts for disbursements under the Advance to Designated Account method and reimbursement methods. Regularity and timeliness of IFRs is important to ensure smooth disbursements. The authorized ceiling of the designated account will be two quarters forecasted expenditure based on the approved annual work plan and budget. Cash forecast will be prepared based on ENTRO's approved annual work plan and budget. Details of the disbursement will be laid out on the Disbursement and Financial Information Letter (DFIL). Some funds will be transferred to NELSAP for program management and operational costs only. ENTRO will initially transfer these funds to NELSAP in the amounts of which will be based on agreements.

**Fraud and Corruption**

27. **All implementing entities are expected to adhere to the World Bank Anti-Corruption Guidelines as outlined under the World Bank's policy and procedure for investment project financing.** The possibility of circumventing the internal control system with fraudulent and collusive practices such as bribes, abuse of administrative positions, hiding conflicts of interest, and misprocurement. Specific concerns include: (a) late submission of supporting documents, (b) poor filing and records, (c) lack of system integration, (d) lack of budget discipline, and (e) unauthorized commitment to suppliers, bypassing budget and expenses vetting procedure among others. These are mitigated as follows: (a) inclusion of specific aspects on corruption ISA 240 in the audit TOR; (b) FM procedures (as part of the FM manual) approved and in operation for the project; (c) strong FM arrangements (including qualified project accountants in the implementing entities, (d) periodic IFRs, including budget execution and monitoring, and (e) separate accounts, internal audit, and external audit reviews.

28. **FM risk and mitigating measures.** The overall FM risk of the project is **Substantial**. The table below discusses the risks and mitigating measures per country or regional institution.

**Comoros**

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Residual Risk
Inherent risk	S		S
<i>Country level:</i> The MLUUP systems mirror the Central level PFM system and its weaknesses resulting in the risk of lack of transparency and accountability in the use of public funds.	S	The Comoros PFM systems remain weak. The Government of Comoros is committed to implement further reforms of the country's PFMs (with support from the development partners).	S
<i>Entity level:</i> FM requirements not met, weak FM capacity	S	The PIU within the MLUUP will be supported by a Finance Officer that will perform FM task. The Finance Officer will be responsible of the day-to-day accounting and reporting duties, operating of bank accounts, assistance with the budgeting, enforcing, and monitoring controls, regularly updating the FM manual.	M
<i>Project level:</i> The resources of the Project may have been distracted due to weak control environment.	S	The PIU will comply with the internal control processes as set out in the PIM once adopted. Robust arrangements and control will be put in place to manage cash transfer operations.	M
Control Risk			
<i>Budgeting:</i> Weak budgetary execution and control leading to budgetary overruns or inappropriate use of project funds.	S	The PIM will spell out the budgeting and budgetary control arrangements to ensure appropriate budgetary oversight. The PIU will be supported by a qualified Finance officer in the preparation of the budget and its monitoring. The budget follow-up will be documented in the quarterly IFR.	M
<i>Accounting:</i> Reliable and accurate information not provided to inform management decision	S	The PIU will rely on qualified Finance Officer and an Accountant to perform the FM functions including accounting and financial reporting. The FM staff will be recruited based on ToR agreed with the World Bank.	M
<i>Internal Control:</i> Business process, role and responsibilities within the Project is not clear leaving to ineffective of control. Delay, error, fraud in cash transfer operations. Lack of control on decentralized activities resulting to loss of assets.	S	The PIM will contain all the key internal control processes pertaining to the various project activities. The PIU will consider robust funds flow and control on cash transfer operations. The assets management system across the country, will be clearly defined in the PIM.	M



Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Residual Risk
<i>Funds Flow:</i> Inappropriate Funds arrangements may lead to non-financing of the Project activities. Delay and misuse of funds exacerbated by the nature of activities to be financed. Frauds and corruption on cash transfers operation.	S	The PIM will clearly set the authorization process regarding payment requests as well as the subsequent controls required, particularly for requests from the regions. Cash transfer operations will be made exclusively through mobile banking or bank transfers. A robust grievance redress mechanism will be developed under this project.	M
<i>Financial Reporting:</i> The project may not be able to produce the financial reports required in a timely manner as required for project monitoring and management	S	The financial reporting processes will be facilitated by the utilization of appropriate accounting software. This will enable timely generation of financial information. The template of interim financial report will be agreed with the World Bank.	M
<i>Auditing:</i> Delays in submission of audit reports. Poor quality of audit report	S	The auditor will be recruited early. The computerized accounting software will lead to timely generation of IFRs and financial statements. The Union of Comoros does not have a professional accountancy body recognized by the IFAC at this stage. Hence, the external auditor recruitment will be opened at international level and only qualified external auditors will be short-listed. The ToR for this audit will be reviewed by the World Bank prior the recruitment.	M
<i>Governance and Accountability:</i> Possibility of corrupt practices including bribes, abuse of administrative and political positions, mis-procurement, and misuse of funds etc., are a critical issue.	S	Robust FM arrangements, World Bank FM and procurement supervisions will be maintained. Effective internal control and internal audit arrangements will be in place.	S
Overall FM risk	S		S

Madagascar

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Residual Risk
Inherent risk	H		S
Country level: The CPGU system mirrors the Central level PFM system	H	The country PFM systems remain weak. The Government of Madagascar is committed to implement further reforms of the	H



and its weaknesses resulting in the risk of lack of transparency and accountability in the use of public funds.		country's PFM (with support from the development partners).	
Entity level: Financial management requirements not met, weak financial management capacity	S	The PIU will recruit qualified staff for the implementation of this project.	S
Project level: The resources of the project may be distracted due to weak control environment	S	<p>The PIU will comply with the internal control processes that will be set out in the PIM.</p> <p>The internal audit unit will also continuously review the adequacy of internal controls and make improvement recommendations.</p>	S
Control Risk			
Budgeting: Weak budgetary execution and control leading to budgetary overruns or inappropriate use of project funds.	S	<p>The PIM will spell out the budgeting and budgetary control arrangements to ensure appropriate budgetary oversight.</p> <p>The budget follow-up will be documented in the quarterly IFR.</p>	S
Accounting: Reliable and accurate information not provided to inform management decision	S	<p>The PIU will recruit one Finance Officer and one Accountant to ensure appropriate performance of the accounting and financial management functions.</p> <p>The project expenditures will be recorded with the existing accounting software.</p> <p>The financial reporting processes will be facilitated using accounting software.</p>	M
Internal Control: Business process, role and responsibilities within the project is not clear leading to ineffective controls. Lack of control at decentralized level.	S	<p>The PIM will develop all the key internal control processes pertaining to the various project activities.</p> <p>A qualified internal auditor will be recruited to oversee the adequacy of the internal control system of the project and recommend enhancement of the system.</p>	S
Funds Flow: Risk of misuse and inefficient use of funds. Inappropriate Funds arrangements may lead to non-financing of the project activities. Errors or frauds in cash transfers.	S	<p>The process leading to payment will be described in the PIM and monitored to mitigate the risk of the use of funds for unintended purposes.</p> <p>Internal control risks will be mitigated as part of the internal audit engagements.</p> <p>The PIU will maintain appropriate control over cash transfers through robust reporting arrangements and use of banking service and the like.</p> <p>A robust grievance redress mechanism will be developed under this project.</p>	S
Financial Reporting: The project may not be able to produce the financial reports required in a timely manner	S	<p>The PIU will recruit qualified FM staff.</p> <p>The PIU will timely record the project transactions, using an</p>	M



as required for project monitoring and management		appropriate accounting software. The accounting software will enable the efficient and timely generation of financial information.	
Auditing: Delays in submission of audit reports. Poor quality of audit report	S	The auditor will be recruited early, based on ToRs reviewed by the World Bank. The computerized accounting software will lead to timely generation of IFRs and financial statements.	M
Governance and Accountability: Possibility of corrupt practices including bribes, abuse of administrative & political positions, misprocurement and misuse of funds etc., are a critical issue.	S	Robust FM arrangements, Bank FM and procurement are considered for the implementation of this project. Effective internal control arrangements. Subject to the Anti-Corruption Guidelines and in accordance with the national anti-corruption laws and regulations corruption grievances related to the project's activities could be submitted and handled by the BIANCO "Bureau Indépendant Anti-corruption" or other relevant domestic agencies in the national anti-corruption system.	S
Overall FM risk	S		S

Mozambique

Risk factors/Description of Risk	Risk Rating	Risk Mitigating Measures Incorporated into the Project Design	Residual Risk Rating
Inherent Risk			
Country level: Shortage of human resources, limited capacities for key FM functions, and overall weak public finance management control environment may negatively impact the implementation of the proposed project expenditures.	H	The Government is committed to implement further reforms of the country's PFM with support from the World Bank and other development partners. The World Bank has several initiatives and projects under preparation that will strengthen the FM systems.	S
Entity level: DNGRH and DNAAS has experience in handling externally financed investment projects as well as World Bank-financed projects through a PIU.	S	The DNGRH finance staff will be trained in use of World Bank-financed operation as soon the project is declared effective and, DNAAS Finance Manager who will be supporting the project will provide on the job training to them throughout the project implementation period. The World Bank will provide regular implementation support to the finance team and well as monitoring the transfer of knowledge progress to the Ministry staff.	M



Risk factors/Description of Risk	Risk Rating	Risk Mitigating Measures Incorporated into the Project Design	Residual Risk Rating
Project level: The involvement of many beneficiary institutions in the implementation of the project may difficult the implementation of activities.	S	Elaborate a project Implementation Manual (PIM) that will include the implementation arrangements of the project.	S
Control Risk:			
Budgeting: The DNGRH may not be able to produce a realistic and comprehensive budget as the project involves other beneficiary entities. Weak budget monitoring system may also lead to budget overrun, poor planning, and execution.	S	The PIM including FM procedures will be developed and applied. The World Bank will review the draft overall budget as well as the IFRs and provide comments.	S
Accounting: Delays in preparing timely and accurate consolidated data and dissemination of information might be a challenge given that the accounting staff will be managing other operations.	S	Assistant accountant and staff from the Ministry will be added to the team and trainings will be provided as well as proper maintenance of systems backups.	S
Internal control: Non-compliance with key project internal control procedures due to weak internal control environment and oversight mechanisms in the country in a sense that the project will rely on government system which may have challenges to perform a timely review of internal control systems.	H	The World Bank's regular FM implementation support through desk reviews and field visits will make appropriate recommendations to improve project FM environment. The Bank will conduct project supervision at least twice a year.	S
Fund's flow: Project FM aspects will be handled by a different entity other than the implementing entity, and this may pose the risk of delayed payments.	S	Cleary defined roles and responsibilities of both entities described in the PIM.	S
Financial reporting: The implementing agencies may fail to produce timely the project financial reports.	S	Automated accounting software (PHC) purchased under DNAAS project will be customized to record and prepare reports for the project funds, expenditures, and resources. DNAAS Finance Manager have experience in producing reports and will provide regular training and supervision to other project finance staff.	M



Risk factors/Description of Risk	Risk Rating	Risk Mitigating Measures Incorporated into the Project Design	Residual Risk Rating
Auditing: Delays in submission of audit reports and delays in implementing the recommendations of the Management Letter.	S	The project financial statements will be audited by the Administrative Tribunal, which is auditing the project financial statements of the most of World Bank-finance operations in Mozambique portfolio. The World Bank will monitor audit compliance and ensure timely implementation of Management Letter recommendations. Draft Audit ToR will be reviewed by the World Bank FMS and discussed with The Administrative Tribunal. The ToRs will include auditing project operations at provincial level.	S
Governance and Accountability: Possibility of corrupt practices including bribes, abuse of administrative and political positions, mis-procurement, and misuse of funds and so on, are a critical issue.	H	Robust FM arrangements (including a comprehensive internal and external audit of the project operations, World Bank FM supervision including review of transactions and asset verification) designed to mitigate the fiduciary risks in addition to agencies overall internal control systems. Clear protocol for sanctions or remedies for misuse of project funds will be determined and well publicized.	S
OVERALL FM RISK	S		S

South Sudan

Type of Risk	Initial FM Risk Rating	Risk Mitigation Measures incorporated in Project Design	Residual Risk Rating ¹
Inherent Risk			
Country Level. The country's political environment remains volatile/fragile following resurgence of violence in July 2016 and apparent collapse of the December 2015 peace agreement. Key legislations on public procurement, internal audit and national audit chamber are inadequate. Weaknesses in the country's overall governance	H	Relative calm/stability following signing of the Revitalized Peace Agreement in September 2018 and formation of unity government in February 2020. Government in collaboration with Development Partners has initiated the implementation of PFM reforms outlined in the Revitalized Peace Agreement 2018. This includes, establishment of PFM governance structure,	H



Type of Risk	Initial FM Risk Rating	Risk Mitigation Measures incorporated in Project Design	Residual Risk Rating ¹
environment, involving lack of transparency and accountability over use of public funds and weak oversight. Weak PFM systems including weaknesses in planning and budgeting especially budget execution, internal controls and accounting systems and capacity. Also, poor linkages between strategic planning and long-term budgeting at the sector levels. Parliament not yet reconstituted following formation of unity government.		preparation of PFM Reform Strategy and roadmap, hiring TA to address backlog of financial reporting, review of key PFM legislation (PFMA Act 2011, NAC Act 2011, SSACC Act 2009, Petroleum Act, 2012; Petroleum Revenue Management Act, 2012).	
Entity Level. MWRI has implemented MDTF project also funded by the World Bank before but lacks adequate capacity.	H	Project to be implemented through PIU to be established in MWRI equipped with necessary capacity for coordination and monitoring.	S
Project Level. Project design complex with activities at state and county levels with security and logistical challenges.	H	PIU capacity enhanced through deployment of key personnel with requisite experience and qualifications.	S
OVERALL INHERENT RISK	H		S
CONTROL RISK			
Budgeting. Weak capacity to prepare credible budgets, monitor budget execution and take timely and appropriate corrective action may result in huge unexplained variances. Government budgets cannot be relied upon for expenditure control.	H	PIU with enhanced capacity to take overall responsibility for project budget preparation. Project to follow simple cash budget based on approved work plans. PIU to design effective budgetary control tools.	S
Accounting. Weak accounting capacity at the implementing ministry could affect transaction processing and eligibility of expenditures	H	Regular FM trainings to be conducted for project staff at ministry level. Project to hire consultants with adequate skills and relevant experience in the PIU. Project FM manual to provide guidance on project FM functions.	S
Internal controls, management oversight and risk management. Weak internal control arrangements of the implementing ministry could result in risk of ineligible expenditure. Project resources may not reach intended beneficiaries. Weak fiduciary oversight due to low capacity	H	Project FM manual to detail the internal control arrangements. Regular internal audit oversight and World Bank FM Supervision reviews. Annual external financial audit, including sampled field reviews to strengthen controls.	S



Type of Risk	Initial FM Risk Rating	Risk Mitigation Measures incorporated in Project Design	Residual Risk Rating ¹
and resources			
Funds Flow. Delays in disbursements to implementing agency may affect project implementation	H	Disbursements to be effected through direct payment method from Grant Account. PIU with enhanced capacity to submit regular withdrawal applications for DA replenishment	S
Failure to prepare annual financial statements pose risk of delayed and inaccurate IFRs due to inadequate accounting capacity	H	Regular FM trainings to be conducted for project staff in line ministry. Qualified FMS in the PIU responsible will be responsible for IFR preparation.	S
Auditing	H	MWRI to request NAC to conduct annual audits. NAC can also engage private auditor to enhance capacity and submit audit reports in time.	S
OVERALL CONTROL RISK	H		S

SADC

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Residual Risk
Inherent risk	S		M
Entity level: Financial management requirements may not be met due to weak financial management capacity.	S	SADC Finance Directorate has adequate and suitably qualified finance officers. SADC will appoint an additional Finance Expert responsible for the project FM responsibilities. SADC has experience in implementing donor-funded projects.	M
Project level: The resources of the project may be used for unintended purpose due to weak control environment	S	The project activities are not complex. The project will apply SADC existing internal controls set out in the Financial Regulations and Financial Management & Accounting Procedures Manual. The SADC internal audit unit will continuously review the	M



Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Residual Risk
		adequacy of internal controls and make recommendations to improve the controls.	
Control Risk			
Budgeting: Weak budgetary execution and control leading to budgetary overruns or inappropriate use of project funds.	M	The project team will comply with existing SADC budget processes to ensure appropriate budgetary planning and monitoring.	L
Accounting: Reliable and accurate information not provided to inform management decision and ensure effective accountability of project funds.	S	SADC has adequate and suitably qualified FM staff in the Finance Directorate. An additional Finance Expert will be recruited to perform FM responsibilities of the project. The PIU will use the existing accounting software, sunsystem, which is deemed adequate to prepare and issue timely and quality financial reports	M
Internal Control: Non-compliance with key project internal control procedures due to weak internal control environment and oversight mechanisms in SADC.	S	The project will follow the well-established internal controls in the SADC Financial Regulations and Financial Management & Accounting Procedures Manual. The SADC internal audit unit will continuously review the adequacy of internal controls and make recommendations to improve the controls.	S
Funds Flow: Delays in funds flow may affect implementation of the project which could affect the activities implementation timelines.	M	The World Bank will provide timely support to PIU, including training on the use of Bank client connection to ensure the timely submission of withdrawal requests.	L
Financial Reporting: The PIU may not be able to produce the financial reports required in a timely manner to facilitate project monitoring and management	S	SADC has a well capacitated Finance Department and will recruit an additional Finance Expert to conduct FM responsibilities of the project. The PIU will use the existing accounting software, sunsystem, which is deemed adequate to prepare timely and quality financial reports	M
Auditing: Delays in submission of audit reports. Poor quality of audit report	M	The external audit will be performed by SADC appointed private audit firm that has experience in auditing the institution.	L



Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Residual Risk
Overall FM risk	S		M

ENTRO

Risk	Risk Rating before Mitigation	Risk Mitigating Measures incorporated into the Project Design	Residual Risk Rating
Inherent Risk			
<i>Entity Level</i> - Delays in settling agreed contributions by member countries & limited number of funding sources affect financial & institutional sustainability of ENTRO.	H	- Effort ongoing to enforce settlement of contribution by defaulting countries will continue.	S
<i>Project Level</i> - Presence vacant FM staff position and additional project could have impact on project implementation and timely submission of reports.	S	- ENTRO will assign FM staff to the project and charge the project for FM Staff cost based on agreement with the World Bank and approved annual budget.	M
Inherent Risk	H		S
Control Risk			
<i>Budgeting</i> - Delays in approval of ENTRO's budget by the governing body. (The governing body may not meet as expected and ENTRO budget may not be approved before the beginning of budget year)	S	Senior management of ENTRO will continue to approve the budget by informing the relevant personnel in the member countries. The senior management approval will be ratified when the governance council meets.	M
<i>Accounting System</i> - IPSAS may contradict with project recording & reporting requirement (Like expensing cost of assets)	S	ENTRO will conduct recording and reporting based on project requirements while applying IPSAS. Assets will not be procured under this project and if procured will be expensed at the time of purchase for project purposes	M
<i>Staffing</i> - The project will bring additional work load on the existing staff and project requirements could not be met as expected	S	Depending on the volume of work, ENTRO will assign accountant to the project and charge the project for FM Staff cost based on agreement with the World Bank and annual work plan & budget.	M
<i>Internal Audit</i>	S	Internal auditor will conduct follow up of implementation of	M



- Delay in taking action on internal audit findings.		audit findings by preparing action plan.	
<i>Financial Reporting</i> - Delay & poor-quality reporting	S	IFR format will be agreed. Up to date record will be maintained. ENTRO will submit IFR within 45 days after end of the relevant quarter at the required quality.	M
<i>Fund Flow</i> Comingling of funds	S	ENTRO will open separate bank accounts (one USD and one local currency) for the project fund. Some funds will be transferred to NELSAP for program management and operational costs only. ENTRO will initially transfer these funds to NELSAP, based on the agreed amounts	M
<i>Auditing</i> - Delay in finalizing audit.	S	Audit ToR will be agreed. Financial statements will be prepared timely. Audit report will be submitted within six months after end of the year.	M
Control Risk	S		M
Total Project FM Risk	S		M

Risk Rating: H = High Risk, S = substantial Risk, M = Moderate Risk and L = low Risk



Financial Management Action Plans

29. Based on the outcome of the financial management assessments, the following implementation support actions as presented in the tables have been agreed:

Comoros

Remedial action recommended	Responsible Entity	Completion date
Develop and adopt the Project implementation manual (PIM).	PIU	No later than 1 month after the effectiveness
Recruit a Finance Officer and one Accountant to support the PIU for FM tasks.	PIU	No later than 1 month after the effectiveness
Recruit an internal auditor based on TOR agreed with the World Bank.	PIU	No later than 1 month after the effectiveness
Acquire adequate accounting software.	PIU	No later than 3 months after the effectiveness
Recruit an external auditor based on ToR agreed with the World Bank.	PIU	No later than 6 months after the effectiveness

Madagascar

Remedial action recommended	Responsible Entity	Completion date
Develop and adopt the PIM considering the specificities of this project.	PIU	No later than 1 month after effectiveness
Open a designated account at the Central Bank.	PIU	Immediately after signing of the agreement
Recruit qualified FM staff involved in the implementation of the project.	PIU	No later than 3 months after effectiveness
Acquire adequate accounting software to record the project transactions.	PIU	No later than 3 months after effectiveness
Recruit a qualified internal auditor.	PIU	No later than 3 months after the effectiveness

Mozambique

Remedial action recommended	Responsible Entity	Completion date
Develop and adopt the Project Implementation Manual (PIM) including FM procedures.	DNGRH	No later than 1 month after effectiveness
Customize the accounting packages by creating codes to maintain separate records and ledger accounts for the proposed project.	DNAAS	No later than 2 months after effectiveness
Request the budget line of the project in e-SISTAFE	DNGRH	After signing of the Financing Agreement
Allocate one or two DAF staff to integrate project FM team	DNGRH	No later than 12 months after project effectiveness
Recruitment of one project accountant	DNGRH	No later than 12 months after project effectiveness



South Sudan

Remedial action recommended	Due Date
Desk reviews	
IFRs review	Quarterly
Audit report review of CRFMP	Annually
Internal audit of project activities	At least once a year
Review of other relevant information such as internal control systems reports	Continuous as they become available
Onsite visits	
Review of overall operation of the financial management system including internal controls.	Once every 12 months
Monitoring of actions taken on issues highlighted in audit reports, auditors' management letters, internal audit and other reports	Quarterly
Transaction reviews (if needed)	Annually or as needed
Capacity Building Support	
Hire a Financial Management Consultant to support the PIU and MWRI	Before effectiveness
Designate Accounting staff from the ministry to support the project	Completed
Acquire an accounting software for the project	Immediately after effectiveness
Orientation on World Bank FM Guidelines and procedures	Before effectiveness
Training on World Bank Financial Management Guidelines and procedures	By effectiveness and thereafter as needed

SADC

Remedial action recommended	Responsible entity	Due date
Staffing: Recruit a Finance Officer and Assistant Finance Officer to fulfil the project FM responsibilities	Financial Controller (SO)-Grants, Contracts & Projects	No later than 3 months after project effectiveness
Develop and adopt Project Implementation Manual (PIM) including FM procedures.		No later than one month after effectiveness
Staffing: World Bank to conduct training for the recruited expert on World Bank FM and disbursement requirements.	World Bank	Once Finance staff are on board
Accounting: to create project-specific codes in the SADC Sunsystems chart of accounts to record and report on project transactions	Financial Controller (SO)-Grants, Contracts & Projects	After Finance Agreement signing but before project effectiveness
Funds flow: Open a project-designated account	Financial Controller (SO)-Grants, Contracts & Projects	Before project effectiveness



ENTRO

Action	Responsible entity	Due Date
Budgeting i) Project budget will obtain Bank's No Objection. ii) ENTRO will prepare budgets early on and will closely follow up to ensure timely approval by its governing body as well	ENTRO	Annually before the beginning of budget year
Budget utilization issues needs to be addressed with careful and pragmatic planning and implementation addressing bottlenecks as they occur	ENTRO	During implementation
Chart of accounts will be developed for the Project	ENTRO	During implementation
The internal auditor will include the project in audit plan and conduct audit on project implementation transactions;	ENTRO	Ongoing during implementation
Submission of IFRs quarterly during implementation;	ENTRO	Within 45 days after end of the relevant quarter at required quality
Submit project audited financial statement and audit report	ENTRO	Six months after end of the relevant year.
Develop and adopt Project Implementation Manual (PIM) including FM procedures.	ENTRO	No later than one month after effectiveness

Supervision plans

30. Based on the current overall FM risk, the project will be supervised in each country/organization as indicated in the table below. The project FM specialists will use an enhanced supervision approach and will supervise the project on an ongoing basis through virtual means and site visits, when possible. The FM team will review expenditures, reports, supporting documents, internal and external audit reports, internal controls, and the use of assets procured under the project. The FM team will consider feedbacks from stakeholders collected through the grievance mechanism in the periodic risk assessment. The World Bank will provide required training to the PIU staff on the World Bank FM and disbursement procedures to make them familiar with these procedures and to ensure that the funds are used for the project purposes. Two implementation support missions per year are planned in Comoros, Madagascar, Mozambique, and South Sudan, due to Substantial FM Risk. One implementation support mission per year will be conducted in SADC and ENTRO, due to Moderate Risk.

Conclusion

31. The conclusion of the assessment is that the financial management arrangements have an overall residual risk rating of **Substantial** for **Comoros, Madagascar, Mozambique and South Sudan- MWRI**; **Moderate** for **SADC and ENTRO** which satisfies the World Bank's minimum requirements under World Bank Policy and Bank Directive on Investment Project Financing, and therefore is adequate to provide, with reasonable assurance, accurate and timely information on the status of the project required by IDA.

**(iv) Procurement Arrangements****Procurement Arrangements**

32. **Procurement oversight and monitoring arrangements.** The World Bank exercises its procurement oversight through a risk-based approach, comprising prior and post reviews as appropriate. The World Bank sets mandatory thresholds for prior review based on the procurement risk rating of the project. The requirement for a prior or post review will be specified in the procurement plan. The World Bank will carry out post reviews of procurement activities undertaken by the recipients to determine whether they comply with the requirements of the legal agreement.

33. **Systematic tracking of exchanges in procurement using Systematic Tracking of Exchanges in Procurement (STEP).** The World Bank's STEP will be used to prepare, clear, track, and update procurement plans and conduct all procurement transactions for all implementing agencies of the project. Procurement staff of the IAs who are not familiar with STEP will be trained by the World Bank STEP champions.

Breakdown of procurement arrangements:

- a) **ENTRO.** Procurement implementation will leverage an existing PIU established NCCR project within the ENTRO. Due to the increased workload under the RCRP, ENTRO will either strengthen the existing PIU procurement capacity by hiring additional staff or assign a dedicated procurement staff to cover the procurement under the project. All fiduciary responsibility and accountability remain with ENTRO.
- b) **SADC.** The SADC Secretariat will be the implementing agency for the project. The Project will leverage the existing PIU established and integrated in the SADC Secretariat which will be responsible for program management, including procurement, FM, and M&E. The PIU is currently implementing World Bank-financed projects and other African Development Bank projects. The PIU will also be responsible for coordination between NSOs, organizing training events, and monitoring progress. It will also be responsible for quality control and preparing in-house analysis. An initial assessment during project preparation showed the need to strengthen the capacity of the SADC Secretariat in human resources. Therefore, resident consultants with adequate skills in World Bank-financed operations will be hired to support the PIU that will be put in place. These consultants would include a coordinator, a finance specialist, and procurement specialists as required.
- c) **Comoros.** A procurement specialist will be hired as part of the new PIU to be established, no later than one (1) month after effectiveness,
- d) **South Sudan.** A dedicated PIU will be established within MWRI and will serve as the main IA in South Sudan. The PIU will be responsible for implementation of the procurement activities of the project within South Sudan and will be strengthened through recruitment of experienced procurement consultants, including technical experts that are necessary to process the implementation of the project's activities. The PIU will also be responsible for coordination between NSOs, organizing training events, and monitoring progress. It will also be responsible for quality control and preparing in-house analysis. MWRI has no experience with World Bank-financed projects after more than 10 years. The last time MWRI was involved in a Bank-financed projects in 2008 during the implementation of MDTF.
- e) **Mozambique.** The project will leverage the existing PIU in the National Directorate of Water (DNA) but managed directly by the National Directorate of Water Resources Management (DNGRH) within the National Directorate of Water (DNA) in the Ministry of Public Works, Housing and Water Resources (MPWHWR). The National Directorate of Water (DNA) has long experience in the implementation of World Bank-funded projects such as the National Water Resources Development Project (2012-2020), the Transforming Hydrological and Meteorological Services Project (2013-2018), and the Emergency Resilient Recovery Project -- P156559 (2015-2021). Furthermore, the Directorate of Water Supply and Sanitation (DNAAS) has 2 active projects with 2 PIUs,



P173518-Rural and Small Towns Water Security Project, and P161777 - Mozambique Urban Sanitation Project, with adequate procurement capacity. DNGRH has no previous experience of implementation of World Bank projects; thus, is not familiar with the World Bank's Procedures. For implementation of this project, DNGRH will have a fully dedicated team that will be reinforced with the necessary expertise to implement the project under the leadership of its director. The reinforcement of staff includes recruitment of (i) one short-term (three months) international procurement expert which the main responsibility is to kick start the project because there are many parallel procurement activities of high value that needs to be processed, and (ii) one long-term procurement specialist responsible for procurement processes over the duration of the project.

- f) **Madagascar.** Procurement implementation will leverage existing PIU within the Prime Minister's Office: The Emergency Prevention and Management Unit. It implemented the Madagascar Pilot Program for Climate Resilience Phase I with a Moderately Satisfactory performance at its closing date in 2020.

34. **Procurement capacity risk assessment.** The procurement risk is rated as high for South Sudan, and Comoros and substantial for ENTRO, SADC, Mozambique, and Madagascar. The overall procurement risk is **Substantial**.

- a) **ENTRO.** The main risks identified include (a) inadequate number of procurement staff and limited knowledge of World Bank procurement procedures; and (b) delays/inefficiencies in processing, approving, and managing procurement activities. The mitigation measures recommended include (a) recruiting an additional procurement consultant with qualifications and experience acceptable to the World Bank; (b) ensuring that procurements are processed as per the timelines; (c) using a "circular approvals" mechanism for members of the procurement committee to expedite procurement processes; and (d) conducting training tailored toward addressing weaknesses in contract management for the ENTRO Secretariat and the PIU. The overall project procurement risk was assessed to be substantial.
- b) **SADC.** The SADC secretariat has Procurement Guidelines 2017 in place that are consistent with the World Bank's procurement framework core principles, and an active website that publicizes procurement opportunities. The SADC secretariat produces annual work plans and procurement plans under the current ongoing Bank-financed project. The SADC Secretariat intends to use their own in-house capacity to manage procurement activities. The SADC secretariat has put in place acceptable documentation to guide the procurement process. Under the project, procurement plans, opportunities, and award of contracts are published on the Bank's external website. The SADC secretariat will also be requested to improve the information available on its website. Considering the types of activities planned and the experience of the agency, there are a limited number of consultants for development of climate-smart solutions, including early warning systems. Risk mitigation measures based on the discussion include (i) recruiting an experienced procurement specialist to support project procurement; (ii) involvement of procurement officers in contract monitoring and developing a contract monitoring plan for major contracts; and (iii) training new and current staff on the World Bank Procurement Regulations and contract management. As this is not the first operation being undertaken by the SADC Secretariat with the World Bank, a rating of "Moderate" is assigned for institutional capacity for implementation.
- c) **Mozambique** The main risks identified include: (a) the IA (DNGRH) has no previous experience of implementation of World Bank projects; thus, is not familiar with the World Bank's Procurement Procedures including Procurement Regulations; (b) inadequate capacity in the procurement value chain including procurement planning, procurement processing, contract management and record keeping; and (c) lack of an adequate complaint handling mechanism to resolve complaints/disputes at appropriate stages of the procurement cycle. The proposed mitigation measures include: (a) while the National Directorate of Water Resources Management (DNGRH) is establishing the conditions to implement the P180171 - Regional Climate Resilience Program for Eastern and Southern Africa, the DNAAS procurement staff will provide support for



- preparation until all conditions are created; (b) recruitment of one short-term (three months) international procurement expert and one long-term procurement specialist; (c) training of the project IA staff on the World Bank Procurement Regulations; (d) initiate the advance contracting; (e) establishment of an effective complaint handling system known to the bidding community, to review and resolve complaints. In the medium-term, to bring more sustainability to the institution, the MPWHRH will have a Center of Excellence with main fiduciary, social and environmental responsibilities for the PIUs, and then at Direction level there will be only technical staff. The objective of COE will be to: (a) carry out capacity and gap assessments in MOPHRH and PIUs to agree with the respective agencies on plans to fill these gaps; (b) help create systems and procedures and best practices; (c) identify training needs and develop training programs with the support of the World Bank and Partner Training Institutions for delivery by the Partner Training Institutions; and (d) develop practical training methods among the various PIs such as staff (Civil Servants) exchange programs, internship programs, among other, to strengthen the PIUs' capacity. The residual risk is Substantial.
- d) **South Sudan.** The main risks identified include: (a) the incomplete public procurement framework; (b) lack of a functional procurement unit and oversight functions in the country, including generally weak PFM governance; (c) the narrow window of opportunity (only about six months) in the dry season during which most of the country is accessible; (d) significant delays in procurement processing, with a significant part of the time spent on preparation of tender specifications, terms of reference, and evaluation; (e) a nascent market and high costs for goods; and (f) weakness in capacity of procurement staff, procurement planning, and procurement process administration, including award of contracts, contract management, contract oversight, and procurement record keeping. Procurement risk mitigation measures include: (a) World Bank procurement standard documents will apply for all procurement activities, and a procurement manual will be developed and adopted by the project; (b) a PIU to be established and supported by an experienced procurement consultant and technical experts; (c) MWRI to deploy dedicated civil servants to the PIU as part of the knowledge transfer arrangement, including continuous procurement trainings; (d) project preparation advance to include advance procurement of key activities, including staffing at the PIU; (e) timely hiring of a third-party monitoring agency; and (f) an established enhanced contract management or monitoring and evaluation team. Based on the above procurement risks, the overall rate of procurement risk of the project is high, and given the country context, the risk remains high.
 - e) **Madagascar.** The main risks identified include: (a) no procurement staff with the right skills; (b) knowledge in the procurement guidelines not in the procurement regulations; (c) procurement reporting system outdated; and (d) lack of complaints management system. The mitigation measures recommended include: (a) recruiting the procurement staff; (b) updating the procurement manual; (c) training the PIU staff on the World Bank Procurement Regulations; and (d) establishing a complaint management system based on the World Bank's requirements. Based on the above procurement assessment, the risk remains Substantial.
 - f) **Comoros.** The government of Comoros has established a legal and institutional framework for its public procurement system. The current Law N°11-027/AU of December 29, 2011, on Public Procurement and Delegation of Public Services, generally meets international standards. However, Comoros public procurement oversight remains weak due to the capacity of the national directorate of public procurement control to review contracts, but also the lack of experienced procurement staff in the country. The PIU is currently staffed with one procurement specialist and one procurement assistant. They both have a good knowledge of the Bank's procurement rules, procedures and STEP system. However, as the ongoing project is delayed due to a weak performance in activity planning and contracts management, the PIU will be strengthened with additional procurement staff. The overall risk is rated moderately high.



35. **Compliance with World Bank Group Procurement Regulations and Guidelines.** Procurement under the project will be carried out in accordance with all relevant policies and procedures: the World Bank Procurement Regulations for Investment Project Financing Borrowers (Procurement Regulations), July 2016, revised November 2017, August 2018, and November 2020; Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, October 15, 2006, revised January 2011 and as of July 1, 2016; and other provisions stipulated in the Financing Agreement will be applied for all procurement activities. The World Bank's STEP will be used to prepare, clear, track, and update procurement plans and conduct all procurement transactions for all implementing agencies of the project. Procurement staff of the implementing agencies not familiar with STEP will be trained by World Bank STEP champions.

36. **Project Procurement Strategy for Development and Procurement Plan:** Comoros, Madagascar, Mozambique, South Sudan, SADC, ENTRO have completed the draft PPSD and 18 Months Procurement plans. The PPSD for each country will inform the Procurement risk, procurement approaches and categories, methods, and threshold for reviews in the 18 Months procurement plan. The procurement plan will be updated every 6 Months or as it may be required.

Contracting arrangements:

- a. **World Bank Standard Procurement Documents.** The standard procurement documents for the World Bank will be used for all contracts subject to competitive international procurement.
- b. **National procurement procedure.** When approaching the national market, the country's own procurement procedures may be used as agreed in the procurement plan. These procurement procedures will be consistent with the World Bank's Procurement Principles and ensure that the World Bank's Anti-Corruption Guidelines and Sanctions Framework and contractual remedies set out in its Legal Agreement apply.

37. **Procurement oversight and monitoring arrangements.** The World Bank exercises its procurement oversight through a risk-based approach comprising prior and post reviews as appropriate. The World Bank sets mandatory thresholds for prior review based on the procurement risk rating of the project. The requirement for a prior- or post-review will be specified in the procurement plan. The World Bank will carry out post reviews of procurement activities undertaken by the recipients to determine whether they comply with the requirements of the Financing Agreement.

Table A1.2. Procurement Prior Review Thresholds (US\$ millions)

Type of Procurement	High Risk	Substantial Risk	Moderate Risk	Low Risk
Works	5.0	10.0	15.0	20.0
Goods, Its, and non-consulting services	1.5	2.0	4.0	6.0
Consultants (firms)	0.5	1.0	2.0	4.0
Individual consultants	0.2	0.3	0.4	0.5

38. All contracts at or above the mandatory procurement prior review thresholds are subject to international advertising and the use of the World Bank's SBDs (or other documents agreed with the World Bank).



Procurement Action Plan. The following are to be carried out by the implementing agencies:

Action	Due by
Recruit qualified procurement specialists	between effectiveness and 3 months after effectiveness
Prepare and adopt a PIM with acceptable procurement procedures, including the procurement plan for the first 18 months	No later than 1 month after effectiveness
Train the procurement staff and other PIU member(s) in (a) the World Bank's procurement regulations, and (b) STEP	Within six months after effectiveness

Note: PIM = Project Implementation Manual; PIU = project implementation unit; STEP = Systematic Tracking of Exchanges in Procurement.

(v). IMPLEMENTATION SUPPORT PLAN AND RESOURCES REQUIREMENT

39. **The objective of the implementation support plan is to ensure that the relevant regional and government agencies implement the project properly.** It is also to ensure that the resources and staff allocated by the World Bank are sufficient to supervise and support project implementation. The plan basically aims at making the implementation support to the client more flexible and efficient, and therefore focuses on the principal risks identified and the agreed risk mitigation measures to be undertaken as described in the risk section of the PAD (Section VI). It will consist of: (a) semi-annual implementation support missions carried out jointly by the World Bank, the participating countries, ENTRO and SADC as well as technical partners (when technical needs arise), and (b) technical assistance in areas of weaknesses and where new approaches/procedures have been introduced.

40. **Objective of implementation support mission.** The implementation support and oversight missions will have the combined aim of reviewing the quality of implementation, providing solutions to implementation problems, and assessing the likelihood of achieving the PDO. More specifically, they will: (a) review implementation progress by pillar or component (including the level of implementation of recommendations made by former review missions), including institutional development aspects; (b) provide solutions to implementation problems as they arise; (c) review the action plan and disbursement programs with the national and regional PIU for the next six months; (d) review the project's fiduciary aspects, including disbursement and procurement; (e) verify compliance of project activities with the fiduciary agreement and the World Bank's environmental and social policies; (f) review case studies and survey results to ascertain results indicators and determine progress toward the PDO with regard to the targets set within the Results Framework, and assess the quality of implementation; and (g) review the quality of capacity-building activities, which are crucial for an effective implementation of the project. The missions will combine field visits whenever feasible; field-based focus group discussions and interactive workshops with stakeholders for feedback; they will also include regional workshops, as well as national workshops to highlight implementation issues, pick up emerging implementation lessons, and share mission recommendations, including agreements on actions moving forward. Reviews of quarterly/annual reports and various studies will also be undertaken. The supervision strategy will use a number of instruments to review progress and respond to implementation issues, including the following:

41. **MTR.** An MTR will be carried out midway during the project implementation. It will include a comprehensive assessment of the progress in achieving project objectives as laid out in the Results Framework. The MTR will also serve as a platform for revisiting design issues that may require adjustments to ensure satisfactory achievement of the project's objective.



42. **Other reviews.** Each year, the World Bank and the line ministry in each country will consider the need for additional analytical, advisory, and knowledge sharing activities and/or third-party reviews. Such reviews will be planned for over and above the semi-annual implementation support missions.

43. **Implementation completion.** At the close of the project, each Government, SADC, ENTRO, and the World Bank will carry out separate implementation completion reviews to assess the success of the project and draw lessons from its implementation.

44. **SOP task team set up.** Arrangements made during project preparation will be maintained through implementation support, involving three regional task team leaders, one per participating practice (Water, URL, and SPJ), as well as country leads. The task team leaders will be supported by one operations officer/analyst. This arrangement will enhance interaction with SOP countries and improve monitoring of progress.

45. **Technical assistance.** Implementation support will include specialized technical support from the World Bank, SADC, ENTRO, and possibly other bilateral/multilateral agencies for critical aspects of the project, including proper FM/procurement and the monitoring of social and environmental risk management. The objective of the technical assistance will be to help internalize good practices and resolve implementation bottlenecks, as they are identified during implementation support missions. Technical assistance will include training workshops to develop core resource skills within implementing units and program teams, helping finalize manuals, and reviewing and advising on ToR for required studies and technical support missions.

46. **Focus of support.** The first two years of implementation will need technical support to put in place the specific tools required for activity planning and implementation; the focus will later change to more routine monitoring of progress, troubleshooting, and assessments based on the Results Framework. Country implementation support missions will be every six months, followed by regional wrap-up workshops to discuss and exchange views on progress, experiences, best practices, and challenges for each country. A common rating process will be done at the end of each wrap-up mission.

47. **Technical support.** The implementation support missions will be complemented with regular short visits by individual specialists to follow up on specific thematic issues as needed. Consultants will be hired to provide technical support to PIUs and IAs. Regional trainings will be provided by the World Bank on key thematic areas such as environmental and social risk management, procurement, M&E, gender, and MFD. In addition, the FAO Investment Center, SADC, ENTRO, other NBI centers and a number of consultants may be mobilized periodically to provide technical assistance to IAs in the form of hands-on training and mentoring.

48. **M&E support.** The World Bank M&E specialist and relevant consultants will provide technical support and organize regional training for the M&E team, composed of the M&E officers from the concerned regional organizations and PIUs.

49. **Fiduciary support.** Fiduciary teams based in each involved World Bank country office (procurement and FM specialists) will closely supervise the project's fiduciary management. They will participate in the twice-yearly country implementation support missions and facilitate capacity building for the project's fiduciary staff. At least once a year, the procurement staff will organize a post review of procurement activities.

50. During **implementation support missions**, the project FM specialists, will: (a) review the FM systems, including capacity for continued adequacy; (b) evaluate the quality of the budgets and IAs' adherence thereto; (c) review the cycle of transaction recording until the end of report generation; (d) evaluate the internal control environment, including the internal audit function; (e) review IFRs and/or annual financial statements; (f) follow-up on ageing of the advance to the designated account; (g) follow-up on both internal and external audit reports; and (h) periodically assess the project's



compliance with the FM manual as well as the Financing Agreement. The World Bank regional FM specialist will consolidate the inputs at the implementing agencies' level.

51. On **procurement**, the World Bank will provide implementation support to the Recipients through a combination of prior and post reviews, procurement training to project staff and relevant IAs, and periodic assessment of the project's compliance with the procurement manual. Implementation support missions will be geared toward: (a) reviewing and updating procurement documents; (b) providing detailed guidance on the World Bank's Procurement Regulations; and (c) monitoring procurement progress against the detailed Procurement Plan and agreed actions to mitigate procurement risks. Following the recommendations of the fiduciary assessments of the IAs, and in addition to the prior review supervision to be carried out from World Bank offices, the semi-annual supervision missions will include field visits, of which at least one mission will involve post review of procurement actions. The World Bank regional Procurement specialist will consolidate the inputs at the implementing agencies' level.

52. **Environmental and Social Risk Management.** The World Bank specialists in social and environmental risk management will have responsibility for supervising E&S aspects. Each year, they will conduct supervision of the project's E&S aspects, participate in regional meetings to discuss findings, and draft action plans to improve implementation. The World Bank regional E&S specialists' team will ensure coordination across IA, support country-level implementation together with national E&S teams, and provide updates.

53. **Resource requirements.** Regional program are complex operations to supervise and as such, adequate resources would be allocated to project implementation, both from national and regional annual budget. In addition, the World Bank will seek to leverage additional TF sources, particularly to support the diagnostics, the M&E framework, and additional analytics and TA as needed.



ANNEX 2: RCRP SOP-1's Detailed Sectoral Context and Project Descriptions

1. This Annex presents a detailed description of the project in each participating country and regional organization under SOP-1. It is organized into two parts: (a) sectoral and institutional context, and (b) detailed project description.

A. SECTORAL AND INSTITUTIONAL CONTEXT: RCRP SOP-1

COMOROS

2. **Despite progress over the last ten years in strengthening the national DRM system, the approach towards DRM remains more focused on emergency management rather than on an integrated risk management** in the territorial and sectoral planning and development. Cyclone Kenneth tested the countries' emergency preparedness and response system and the utility of the National Multi-risk Contingency Plan. Community-based dissemination of early warning and availability of community-shelter was largely in place, which minimized casualties. However, in spite of a strategic framework in place, there were significant challenges in its operationalization, due to a lack of information and capacity to adequately collect, organize, process, and analyze information. There remains a significant financing gap (up to 84 percent) to implement the National Strategy for Disaster Reduction. Substantial support is being provided through the World Bank's Post Kenneth Recovery and Resilience Project (P171361) to increase disaster and climate resilience of select public and private infrastructure in the areas affected by Cyclone Kenneth, including resilient recovery of the housing sector, enhancing coastal resilience and strengthen the capacity of the Government to manage and respond to disasters. Cyclone Kenneth exposed the vulnerabilities of critical public infrastructure, especially that located on the coastline and exposed to sea-level rise and coastal erosion. Insufficient drainage and poor overall maintenance cause accelerated degradation. Building codes also need to be significantly updated and disseminated from a multi-hazard perspective, along with improving government capacity to manage implementation of building codes. Long-term recovery planning and budgeting remain weak, and both have demonstrated the need for an integrated management of disaster and climate-related risks. An assessment by the IMF indicated that, because of limited risk mitigation options, the country would enhance revenue mobilization to increase fiscal space available for disaster recovery. Rebuilding and strengthening coastal defense systems is key for the archipelago of the Union of Comoros (UoC) in order to strengthen its resilience to future similar events and against continuous erosion and sea level rise.

3. **The organizations that are directly involved in disaster risk management** are the DGSC – the main government body responsible for DRM (decree of March 2012 with Regional Civil Protection Directorates), the National Agency for Civil Aviation and Meteorology (ANACM), the Karthala volcanic observatory (OVK), the General Directorate of Environment and Forests (DGEF), the National Directorate of Land Use, Housing and Town Planning (DNATHU), the Ministry of Higher Education, Basic Research Education (MEN), the Comoros Red Crescent (CoRC), and the Comorian Coast Guard (GC). DRM in the UoC is currently institutionalized under the National Platform for Disaster Risk Reduction (NPDRR) that was created in 2010. However, despite the official establishment of such a platform, the government did not use it during Cyclone Kenneth, preferring an ad-hoc inter-ministerial committee. COSEP is instrumental in the coordination and management of the emergency response down to the local level. There has been significant capacity building within COSEP/DGSC, particularly within the Information Analysis and Processing Center (Centre d'Analyse et de Traitement de l'Information – CATI). Connected to the regional and international meteorological institutions, COSEP is in charge of monitoring and forecasting the cyclone's trajectory as the core elements of the Early Warning System to be put in place and led by the DGSC. The analysis and monitoring of hydrometeorological risks are handled by the Technical Department of Meteorology (la Direction Technique de la Météorologie, DTM), which is under the supervision of ANACM. The agency has four synoptic stations including two on the Grande Comore, one in Anjouan and one in Mohéli,



accompanied by observers who take the measurements daily, 15 automatic stations in the least accessible areas of the islands or with heavy precipitation, a SYNERGIE workstation, which enables the DTM to understand complex meteorological situations and produce short-term meteorological forecasts, allowing the competent authorities to issue the relevant alerts. The Global Fund for the Environment and UNDP and implemented by UNDP and DGSC, are providing support for the analysis and mapping of multiple risks in 20 areas, and strengthening of the surveillance and information capacities of the State institutions.

4. Nationally, water supply access is also facing a number of critical threats primarily linked to climate change. Though 80 percent of households nationally have access to basic water supply (UNICEF/WHO 2021), as rainfall patterns continue to change, flooding is increasing in some areas, whereas dry season shortages are increasing in others. The current systems, which are largely reliant on single sources, makes this approach precarious. For example, in Moroni, SONEDÉ (the recently created national water utility) relies on a single well with infrastructure dating back to the colonial era and located on a highly flood-prone site. The situation is further threatened by low levels of investments in storage (e.g., only 2,500 m³ for Moroni, which is equivalent to roughly three hours of water supply). With no existing large-scale storage in place, most rain that falls on the islands, causes flooding, and is then quickly lost to the sea, which also results in significant damage to critical infrastructure (including roads, houses, and water supply infrastructure). In light of climate change, rising sea levels and high reliance on groundwater, Comoros is also facing challenges with saline groundwater, due to saltwater intrusion in aquifers. The extent of the problem – and trends in future years – are not yet fully understood and require further study.

5. The country's social safety net (SSN) system for vulnerable people is still in its infancy and depends almost solely on support from the World Bank. The World Bank-financed Social Safety Net project (SSNP, P150754) was approved in 2015 and covers four types of support: (a) productive cash-for-work programs, (b) nutrition services, (c) livelihood support and recovery grant; and (d) crisis response. Following the outbreak of the COVID-19 pandemic, the project allocated US\$6.5 million to support the Government of Comoros (GoC) to address the socioeconomic effects of the pandemic through Social Cash Transfers (SCTs). The SSNP has grown progressively in recent years and has helped the Comoros expand the coverage and build a national safety net system, focusing on household resilience and increasing self-employment, the protection of human capital, women's empowerment, and economic inclusion, as well as strengthening crisis response. The coverage by existing safety net programs and public expenditure in the sector is still insufficient to meet the country's needs. Covering only seven percent of the population, and 44 percent of the poorest, the coverage of SSN programs have increased but significant gaps remain.

6. Households comprise (on average) 5.8 people and largely make a living from subsistence farming; 40 percent are female headed households (2012 statistic). Only 20 percent of the food produced locally is sold, therefore access to cash is difficult for farmers. In compensation, most own some areas of vanilla, which generate cash once a year by selling vanilla to exporters. Statistics indicate that each working individual supports 3.4 inactive or unemployed people. In such circumstances, the lack of savings often prevents people from taking measures to reduce their natural hazard vulnerability. Ten percent of households live in makeshift houses (walls in pisé, straw roof, and beaten-earth floor), which are structurally weak. Permanent structures may also be unsafe. Only 53.6 percent of households have access to electricity, so wood is the main source of energy for cooking. Running water at home or at neighbors' homes is accessible for only 19 percent of the population. Other people access water through private tanks (57 percent), public fountains (22 percent), wells (1.8 percent) and rivers (0.2 percent). The difficult access to water resources partially explains the fear of new ash falls that would pollute water supplies. 56 percent of children contribute to domestic chores and work at least three hours a day. Illiteracy is widespread (33 percent of men and 43 percent of women over 15 years old), a serious concern for risk communication. Health standards are extremely poor; for instance, 22.2 percent of children are affected by malnutrition. Professionals are often trained abroad and are then reluctant to return to Comoros due to the poor

working conditions. Malaria and cholera are endemic. 23 percent of women who have been pregnant have given birth to at least one stillborn child (44.2 percent in rural areas).

7. **The RCRP in Comoros provides key support to successfully achieve a key condition of the National Plan for Emerging Comoros (PCE 2030) which pertains to resilience to climate change and disasters.** This would be achieved through interventions in the areas of strengthening early warning systems and disaster risk management, urban resilience and adaptive social protection, leveraging the existing efforts of the government through the various ongoing projects in these sectors. The RCRP will also support enhancing the technical and institutional capacities of key institutions - MLUUP, MOIDTA (including DGSC/COSEP), the Ministry of Health, Solidarity, Social Protection and Gender Promotion (MAFE), and the National Agency for Civil Aviation and Meteorology (ANACM).

MADAGASCAR

8. **Madagascar is particularly vulnerable to natural disasters and is among the top five countries most vulnerable to climate change globally, with serious socioeconomic consequences.** While the island receives an average of 1,513 mm of precipitation per year, strong disparities between regions cause some areas to suffer from water shortages while others face recurring floods. The eastern part of the island is the wettest, with annual precipitation exceeding 2,000 mm,³¹ while the western part has a drier climate, with the average rainfall decreasing towards the South (less than 400 mm of water per year).³² The southern part of Madagascar is plagued by increasingly frequent and lengthy droughts, mostly due to deforestation/catchment degradation combined with the lack of hydraulic infrastructure to capture rain from the region's upstream watersheds and exacerbated by climate change. These droughts have serious impacts on food security (due to diminishing harvests) and on health, with high rates of malnutrition and associated childhood diseases. A quarter of the Malagasy population live in areas highly prone to natural disasters.³³ As the climate crisis progresses, chronic food insecurity is expected to deepen, affecting more people.³⁴

9. **Despite the country's rich water endowment, poor water resources management, climate change, and environmental degradation have exacerbated water insecurity.** Only four percent of available water is used,³⁵ and dam capacity is low, at 19.3 m³ per inhabitant in 2017.³⁶ Rivers and rainfall are the primary source of water for agricultural use, household consumption, and energy generation, and will be particularly vulnerable to projected increases in temperature³⁷ and reduction in rainfall, further exacerbating droughts and threatening the capacity to generate hydroelectricity. Air and water pollution, resulting from transportation, industries, poorly managed urban waste, deforestation, floods, and bush fires, also contribute to environmental degradation and global warming, degrading the quality and availability of water resources.

10. **Madagascar is facing one of the worst water crises in the world, suffering deeply from climate variability impacts.** The South of the country is currently experiencing its worst drought in four decades,³⁸ which is one of the root

³¹ Météo Madagascar- Atlas climatologique de Madagascar, Mars 2014

³² La sécheresse dans le Grand Sud : éléments d'analyse de la crise, 2021.

https://www.pseau.org/outils/ouvrages/frgroup_elements_de_comprehension_sur_le_contexte_du_grand_sud_de_madagascar_2021.pdf

³³ World Food Program, Madagascar. <https://www.wfp.org/countries/madagascar>.

³⁴ Programme alimentaire mondial, MADAGASCAR. <https://www.wfp.org/countries/MADAGASCAR>.

³⁵ USAID (U.S. Agency for International Development). 2016. *Climate Change Risk Profile*. Madagascar.

³⁶ FAO Aquastat 2017. Accessed on October 1, 2021.

³⁷ By 2065, temperatures are projected to increase between 1.1°C and 2.6°C, with the lowest projected increases along the northern coastal regions and the highest projected increases for the southern part of the country. From *WBG Climate Change Knowledge Portal, Madagascar Country Profile*.

³⁸ Subramanian, Samanth. 2021. "Madagascar is Suffering from a Climate Change Famine." *World Economic Forum*, September 3, 2021. Accessed on October 26, 2021. <https://www.weforum.org/agenda/2021/09/how-climate-change-is-causing-famine-in-madagascar/>.



causes of the ongoing famine. An estimated 1.3 million people are food insecure, with 30,000 facing ‘catastrophe-level’ food insecurity.³⁹ Long-term resilient solutions could be considered, such as capturing the abundant rain in upstream watersheds in the southern regions before it reaches the sea to increase aquifer recharge through land management and rivers flow regulation. The water scarcity suffered by many towns⁴⁰ in recent years during the dry season calls attention to the lack of water resources management at a national scale, as existing surface water sources are drying up and the potential for groundwater is not well known. Competition between uses—mainly irrigated rice, potable water supply, and electricity generation, is already heated and relatively unmediated, with potential to lead to serious conflicts. Rising climate change impacts put a considerable part of the population at risk as droughts and floods can lead to water supply infrastructure deterioration and energy cuts, impacting the number of people served as well as the reliability and quality of service provided to urban residents. Existing water infrastructure is not equipped to deal with power outages; as recent cyclones Ana, Batsirai, and Emnati repeatedly knocked out electricity networks, cities plunged into darkness, and water treatment and distribution were severely impacted.

11. **Tropical cyclones are the most significant disaster risk in Madagascar;** they cause average direct losses estimated at around US\$87 million per year, among the total estimated average annual loss (AAL) of US\$100 million,⁴¹ and are expected to become more intense.⁴² Flooding is the next largest risk, accounting for approximately US\$13 million of losses per year.⁴³ Projected temperature increase, reduced and more variable precipitation as well as sea-level rise constitute other climate stressors threatening people and the economy.⁴⁴

12. **Multiple factors contribute to Madagascar’s high vulnerability to disasters and climate-related shocks.** These include rapid population growth, high levels of poverty and food insecurity, unplanned urbanization, internal migration, weak enforcement of existing construction and infrastructure standards, prominence of weather-dependent agriculture, unsustainable environmental management (such as pervasive deforestation and uncontrolled waste management) as well as governance and institutional weaknesses. Limited hydrological and meteorological equipment, institutional fragmentation, the lack of integrated information management and knowledge on the application of Standard Operating Procedures, constitute stumbling blocks in the operationalization of Early Warning Systems (EWS) and preparedness. Incomplete disaster and climate risk knowledge and the lack of a comprehensive Disaster Management Information System (DMIS) hinder risk-informed decision-making.

13. **Poorer households, including those living in informal disaster-prone urban areas and relying essentially on weather-dependent agriculture for their livelihood are disproportionately affected by disaster and climate shocks.** An estimated 25 percent of the Malagasy population lives in areas exposed to extended drought periods, increased rainfall variability, cyclones, and/or floods. Disasters contribute to food insecurity, water scarcity, malnutrition, and damage to livelihoods, especially in rural areas where poor households depend on rainfed agriculture, livestock, or fishing.⁴⁵ Among the poorest quintile in rural areas, climate shocks are the most important determinant of reduced household consumption and can lead to more significant asset losses and longer-term poverty.⁴⁶ Focusing on empowering women and girls in Madagascar goes beyond their own well-being. According to World Bank projections, poverty is expected to

³⁹ Harding, Andrew. 2021. “Madagascar on the Brink of Climate Change-induced Famine.” *BBC News*, August 25, 2021. Accessed on October 26, 2021. [](https://www.bbc.com/news/world-africa-58303792)

⁴⁰ This was the case in the towns of Ambovombe, Taomasina, and Fianarantsoa, and the Analamanga Region.

⁴¹ Ibid

⁴² Christensen, J.H., K. Krishna Kumar, E. Aldrian, et al., *Climate Phenomena and their Relevance for Future Regional Climate Change* (Cambridge and New York, 2013)

⁴³ World Bank, 2016.

⁴⁴ Direction Générale de la Météorologie de Madagascar, *Climate Change scenarios for Madagascar*, (Madagascar, 2019).

⁴⁵ World Bank. 2020. *Madagascar Economic Update*.

⁴⁶ 2016. *Shifting Fortunes and Enduring Poverty in Madagascar: Recent Findings*. Washington, DC: World Bank.



increase in Madagascar because of COVID-19 with populations in urban areas particularly affected. The average cyclone, which Madagascar faces 3-4 times annually, decreases total consumption by 12 percent and increases the probability of being poor by 7.4 percent.⁴⁷ Climate risks are not limited to rural areas, with poor urban neighborhoods often facing the highest exposure to flooding. The Government has begun reinforcing its social safety net to respond to disaster and climate shocks but the coverage remains low.

MOZAMBIQUE

14. **The Government of Mozambique (GoM) has several planning documents at both national and basin level, which include options for improved water management:**

- At national level, the National Infrastructure Development Plan 2020-2040, the Master Plan for Water Resources Management (Plano Nacional de Recursos Hídricos, PNRH) prepared in 2018, and the National Irrigation Plan, amongst others, have been prepared. At the basin level, Strategic Plans exist for most basins, including the Lurio, Licungo, Zambezi, and Limpopo. These documents are aligned with the Water Law (Law 16/91) and the National Water Resources Development Strategy, prepared 40 years ago. The PNRH is the key planning document, from which other planning documents for shorter timeframes emanate (like the 2018 National Water Resources Plan);
- Water Sector Action Plan (Plano de Acção de Águas, PASA) for Implementing the Sustainable Development Goals (SDGs). This document considers a subgroup of dams, perhaps less ambitious in terms of feasibility, and simultaneously considering that they help satisfy the SDGs and the National Development Strategy (Estratégia Nacional de Desenvolvimento, ENDE). However, this subgroup of dams is also mentioned in the PNRH;
- Governmental Five-Year Program (Programa Quinquenal do Governo, PQG) 2020-2024. This is the road map of the current legislature. The projects inscribed there have a high certainty of having a budgetary allocation, or, if they do not, they are imbued with such political will that intense efforts will be made to raise financing; and
- Social and Economic Plan (Plano Económico e Social, PES) de 2020 e de 2021 (dated September 29, 2020). This is the yearly planning of the implementation of the PQG, with priorities for the year.

15. **The GoM has selected some priority interventions from these Plans for improving water management.** The GoM has prepared a list of priority investments, which includes both the rehabilitation/improvement of existing dams and new multipurpose dams (Nhacangale Dam, 47Mm³, Revebue Dam, 597Mm³, Lurio dam, 2,109 Mm³), amongst other investments for flood control and information systems. Recently, the Mozambican government expressed its intention to mobilize over US\$700 million to build a new multipurpose dam at Mugeba (650 Mm³), in Mocuba district, in the central province of Zambezia, for flood management, water supply, irrigation, and hydropower. Other dams are also in the government pipeline, mostly planned for boosting hydropower production. Amongst these dams feature the Lurio or Cuaria dam (2,500Mm³) for hydropower – though they would be multipurpose dams - and the Mapai dam in Gaza (11,200 Mm³) for irrigation and large single-purpose infrastructure.

16. **The safe planning, design, and management of the Mozambican's dams will contribute to securing water for people and production, while safeguarding life, property, and the environment.** A sound and tailor-made Dam Safety Management Program is therefore paramount to ensure that safe dams contribute to resilient and sustainable economic

⁴⁷ Andrianarimanana, D. 2015. "The Role of Inter-Household Transfers in Coping against Post-disaster Losses in Madagascar." In Disaster Risk Financing and Insurance: Issues and Results, edited by Daniel Clarke, Alain de Janvry, Elisabeth Sadoulet, and Emmanuel Skoufias. <http://www.ferdi.fr/en/publication/ouv-disaster-risk-financing-and-insurance-issues-and-results>.



growth and social development. Given the large program on dams (19 large dams in operation according to ICOLD register /36 dams, including 11 dams to be completed according to GoM's dams inventory), it is essential to build capacity, embed good international practice to assure safe dam operations and to reduce the risk of infrastructure failure. One objective of this assistance is to reinforce the dam safety regulatory framework in the country by assisting the Mozambican authority (DNGRH) and the Regional Water Administrations (ARA) in supervising the safety of dams and water retaining facilities, which today are weak. The GoM adopted the Dam Safety Regulation of Mozambique (DSRM) in 2017. The latter establishes: (i) criteria for dam safety control; (ii) the functions assigned to the entities that participate in the safety control activities; and (iii) the requirements to be met during the different life stages of the dam: design, construction, reservoir, first filling, normal operation, and decommissioning. Enforcement of this new regulation seems to be problematic, and actions are needed to ensure a rapid implementation of this dam safety regulation.

17. **In Mozambique, water agencies (ARAs) struggle to properly maintain the infrastructure.** The water law/act from Mozambique dates from 1991, and the present water resources fee only stipulates fees for water abstraction. Yet, there are no stipulations for effluent discharge (water quality) and neither for water protection (flood management). Hence, there is a need to update water resources regulations so that the water resources fees incorporate the 3 components and the corresponding ARAs (North, Center, and South)⁴⁸ can accomplish the full mandate of water resources allocation, quality monitoring and protection. Discussions have been held, and ARA-Sul has presented a draft decree to Treasury for a review of the tariffs with a 30 percent increase over the coming 5 years.

18. **Regarding flood management, a dike manual with clear guidelines on design, construction as well as O&M have been elaborated in 2022 by DNGRH with support from the Dutch Government.** Previous projects ended up lowering the design of the dikes to a very low return period (e.g., 5-10 years) due to budget limitations and hence the dikes were washed away soon after construction. This should be clearly avoided in the future. The guidelines also insist on the importance of ensuring the management and payment protection capacity from the early stages of the implementation process (whether it is rehabilitation or construction).

19. **Nearly two-thirds of Mozambique's workforce is linked to agriculture, with the sector employing 90 percent of national working-age women and girls.** Climate disasters have a direct impact on women and girls, making them more susceptible to food insecurity, poverty, and gender-based violence, and increasing their dependency on male partners, family, and landowners for their livelihoods. People living in poverty are more likely to live in larger female-headed households, especially where the head is single, separated or divorced. Female-headed household are more likely to work in agriculture, have less secure access to land, to be self-employed in the informal sector, and to have less formal education.⁴⁹ Indicators on income, education, and longevity are all exceptionally low, and the poverty headcount of 63 percent among female-headed households is considerably higher than that of male-headed households, which is 52 percent, with the discrepancy on the rise. According to UNESCO's Institute of Statistics data from 2013, the literacy rate for the total population is 56 percent. The literacy rate for women is 54 percent, which is a remarkable increase from 12 percent in 1980, but this is still much less than 74 percent of adult men that are literate.

⁴⁸ For example, the present budget (2022) of ARA-Sul is in the order of US\$3 million and has 360 staff. Most of the budget comes from the water extraction fees. With the proposed increase of fees, the budget would be raised up to US\$5 million per year. Even a hydropower fee could/would be considered.

⁴⁹ Mozambique Multidimensional Poverty Analysis Status and Trends, SIDA ,2019.
<https://cdn.sida.se/app/uploads/2020/12/01095839/mozambique-mdpa.pdf>



SOUTH SUDAN

20. The history of continued conflicts – both within South Sudan and in neighboring countries – has resulted in a significant number of refugees, asylum seekers, and internally displaced persons (IDPs) and created refugee camps and IDP settlements across the country. According to UNHCR data as of December 31, 2022, South Sudan hosted 308,374 refugees and 64,225 refugee households, with the vast majority – over 90 percent – located in two locations: Jamjang in Pariang County in the Ruweng Administrative Area and Bunj Town in Maban County in Upper Nile State.⁵⁰ The Sudanese refugee population is by far the largest, with 289,840 individuals, or 94 percent of the hosted population, followed by 10,944 refugees from the Democratic Republic of Congo (3.5 percent), with further populations from Ethiopia, Central African Republic, Burundi, and elsewhere. Just over half – 52 percent – of refugees are female, and women and children represent 81 percent of refugees. Most – 60 percent – of refugees are under 18, with 38 percent between 18 and 59 and the remainder over 60. The prospect of these refugees returning to their countries of origin in the near term is limited, and the trauma endured, assets lost, and livelihoods destroyed in fleeing conflict in their host country has created unique development challenges for refugees in reestablishing their lives in South Sudan. Despite these challenges, refugees often have better access to basic services and support like health, education, and food rations in refugee camps administered by UNHCR than members of host communities,⁵¹ which tend to live in isolated areas where government services and market-based opportunities are either highly lacking or non-existent. Indeed, due to these deprivations, UNHCR makes specific efforts to support host community members themselves, to the extent resources allow.



21. The Government of South Sudan has maintained an open-door policy and reaffirmed its commitment to address vulnerabilities and respond to shocks for both refugees and host communities. Considered to have one of the most progressive refugee policy frameworks in East Africa, South Sudan has acceded to the 1951 Refugee Convention and its 1967 Protocol, as well as the 1969 OAU Convention Governing the Specific Aspects of Refugee Problems in Africa. South Sudan is also a state party to several other international and regional human rights instruments relevant to the protection of refugees and has adopted the draft East African Community Refugee Management Policy. The Refugee Act of 2012, which provides the central legal framework for refugee protection in South Sudan, incorporates provisions that are in line with international and regional treaties. The government has also maintained a policy of granting refugees' access to its territory, land for cultivation and livelihoods, and practical arrangements for their initial reception and

⁵⁰ UNHCR. 2022. Operations Data Portal – Refugee Situations: South Sudan. <https://data.unhcr.org/en/country/ssd>

⁵¹ UNHCR defines a host community as “the local, regional, and national governmental, social and economic structures within which refugees live. In the context of refugee camps, the host community may encompass the camp, or may simply neighbour the camp but have interaction with, or otherwise be impacted by, the refugees residing in the camp”. <https://www.unhcr.org/en-us/protection/resettlement/4cd7d1509/unhcr-ngo-toolkit-practical-cooperation-resettlement-community-outreach.html>



registration. Refugees are granted freedom of movement and in principle free to settle anywhere in the country. The Commission for Refugee Affairs (CRA) plays the leading role in developing government policy on refugee issues, including protection, and coordinating government and external support for refugees. The CRA is present in all refugee-hosting areas, even as capacity limitations impede its ability to fully fulfill its designated responsibilities.

22. Recent months have seen both further positive steps and continued challenges in South Sudan's progressive refugee protection framework. On the former, the Government's Commission of Refugee Affairs (CRA) adopted a five-year Strategic Plan that provides a roadmap and institutional reforms that will help CRA mobilize Government ownership to strengthen coordination of services to refugees, asylum seekers, and host communities. Moreover, incidents of arbitrary arrest and detention of refugees and asylum seekers have slightly decreased, and CRA has made efforts to address these issues in coordination with relevant government bodies. Despite these positive signs, some incidents of pushback of persons of concern at southern border points have been observed, children continue to face serious protection risks, GBV risks and reported incidents facing refugees have not reduced, and implementation of the Government's pledges at the 2019 Global Refugee Forum remains low even as gains have been made. While further progress is needed, the World Bank, following consultation with UNHCR, confirms that the protection framework for refugees continues to be adequate in South Sudan.⁵²

23. Since gaining eligibility to the WHR under IDA19, the Government of South Sudan has made important progress in fostering longer-term benefits for refugee and host communities. With one of the most progressive refugee policy frameworks in East Africa and perhaps globally, the primary challenge in promoting durable solutions in South Sudan centers less on fostering further policy reforms – even as that remains important – than on implementing policies that have already been set, which, *inter alia*, grant refugees the right to work, movement, and access to public services provided through national systems. In this regard, South Sudan has made important progress since WHR eligibility was established. First, the Government has allocated some 4,000 hectares of land to refugees for agricultural cultivation, a step taken in support of its Global Refugee Forum pledge of expanding equitable economic opportunities in refugee-hosting areas. Second, the Government has recently contributed a significant number of textbooks to schools serving refugees, a step taken in support of implementing its policy commitment to full integration of refugees into the national education system. Third, in late 2021, as part of the Intergovernmental Authority on Development (IGAD)-led Solutions Initiative for South Sudan and Sudan, the Government finalized its Durable Solutions Strategy and Plan of Action for Refugees, Internally Displaced Persons, Returnees and Host Communities that was prepared in the context of the. The plan is now being put forward for endorsement by heads of state of IGAD member countries, at which point the Government intends to allocate budgetary resources for its implementation. Fourth, in September 2022, the Government finalized discussions with the Government of Sudan on the so-called 'Four Freedoms' agreement, which would guarantee people from both countries 'freedom of residence, freedom of movement, freedom to undertake economic activity and freedom to acquire and dispose property.' While these freedoms are not limited to refugees and hosts, their proximity to the border with Sudan means they would attract disproportionately refugees and host communities in South Sudan by allowing them to capitalize on trade networks and broader economic opportunities on both sides of the border. Finally, but crucially, the country has continued to uphold in practice its strong policy commitment to refugee protection, granting refuge not only to the hundreds of thousands of Sudanese and other refugees who have been in South Sudan since its independence in 2011 but to new inflows of refugees from recent and ongoing conflicts in the Horn of Africa. To ensure South Sudan's refugee policy remains robust and continues to improve both *de jure* and *de facto*, the World Bank is working with UNHCR and the Government to prepare a baseline assessment for South Sudan under the Refugee Policy Review Framework that will promote and monitor the design and implementation of pro-refugee policy over time.

⁵² UNHCR Refugee Protection Assessment, February 28, 2023



Together, these actions constitute good progress in advancing the strategy South Sudan submitted as part of the IDA19 WHR eligibility process and in promoting durable solutions for refugees and host communities more broadly.

Sectoral and Institutional Context

24. **The development of water sector policies and institutional frameworks in South Sudan dates to pre-independence, but implementation has been limited due to the eruption of civil war and prolonged conflict.** The Ministry of Water Resources and Irrigation (MWRI) has an overall responsibility for water policy and management in the country. However, the sector's institutional landscape is fraught with human and financial resource constraints, overlapping institutional responsibilities between ministries and across stakeholders, and fragile planning, monitoring, and management systems. A Water Bill was formulated in 2013 but it has yet to be enacted. Furthermore, while local government is mandated with some water resources management and service delivery functions, it lacks the institutional capacity and sufficient funding to carry out this mandate. The recurrence of conflict and natural disaster and the dominance of humanitarian actors in the sector has further slowed sector institutional development.

25. **Efforts to advance disaster risk reduction policies and strategies face severe institutional constraints.** A National Disaster Risk Management (DRM) Policy was developed by the Ministry of Humanitarian Affairs and Disaster Management (MHADM) in 2021 and tasks MWRI as a lead institution with respect to disasters arising from floods, water supply, and dams. Other institutions involved include MHADM; MEF; the Ministry of Agriculture and Food Security (MAFS); and the South Sudan Meteorological Authority (SSMA). While these institutions play varied roles from risk identification to mitigation, all are challenged by severe capacity constraints and limited physical infrastructure to carry out their mandates.

26. **The country lacks flood forecasting and early warning systems to provide accurate and timely information to its population, while also hindering regional efforts to improve basin-wide forecasting.** There are currently only five operational hydrometric monitoring stations in the entire country, none of which have automatic data transmission mechanisms (telemetry), and there is no systematic data management tool to store and process the data. Long-term flood management is further limited by the lack of strategic flood hydrology models. A coarse-resolution flood hydrology model developed by the Nile Basin Initiative (NBI) is the only model available. Lack of information on flood dynamics in South Sudan also compromises the ability of downstream riparian countries to develop flood management strategies and hampers dialogue with upstream countries. Improved information exchange with riparian countries and improved dissemination of information to communities are additional elements of the country's water information system that need to be strengthened.

27. **Earth embankments are currently the dominant mechanism for flood control.** There is limited information on location and technical details of existing flood control structures. Dikes and other flood management measures such as river dredging and channelization, are often constructed in haste in response to rising floodwaters but are thereafter poorly maintained and provide only a temporary solution. There are no technical standards and guidelines for O&M for dikes and other hydraulic structures. Small-scale surface storage structures (*haffirs*) are commonly used to harvest floodwaters and provide a source of water supply during dry periods. However, many recently constructed *haffirs* are reported to be non-functional due to inadequate site selection, design, and maintenance, thus limiting their potential to support flood-based livelihoods. There are no large dams or reservoirs in South Sudan with a flood control function or a storage capacity greater than 0.1 km³ flood control function. Natural systems, particularly wetlands, play a key role in controlling flooding in the country, with the Sudd wetland covering at least 5 percent⁵³ of the 7 percent total wetland



cover in South Sudan. Moving forward, the government has identified watershed management and water storage at multiple scales as priorities for flood risk reduction mechanisms.

28. **Successive years of flooding have destroyed homes and crops, with debilitating impacts on women and female-headed households who have a primary role in food production and have limited access to ‘movable’ livestock assets compared to men.⁵⁴** Flooding has also disrupted women in collecting water and firewood – the major source of energy in 96 percent of households – leading them to traverse ever longer distances in search of functioning water points and dry wood for cooking, putting them at greater risk of GBV.⁵⁵

29. **The impact of flooding on refugee communities is particularly acute.** While damage to critical infrastructure (roads, bridges, WASH facilities, schools, etc.) and disruptions to markets and livelihoods affects refugee and non-refugee communities alike, refugee communities have fewer resources and less coping capacity. In addition, some of the specific risks faced by refugee communities include: (i) homes constructed of natural materials or plastic sheets that are easily destroyed in floods; (ii) impassable access roads and destruction of crops in surrounding areas leads to increased prices for food and fuel and fewer deliveries of basic food items leading to high levels of food insecurity among refugee communities dependent on food distribution; (iii) increased incidence of water-borne disease and other public health hazards caused by standing water and flooding of sanitation facilities, which affect refugees disproportionately due to the low quality of housing and infrastructure. In the context of a protracted and complex crisis, compounding shocks caused by conflict, displacement and flooding devastate fragile development gains and hinder humanitarian access to communities whose day-to-day survival often depends on the services provided by these agencies, eroding an already vulnerable population’s capacity to cope and recover from shocks.

30. **Limited access to land and property, as well as credit and savings, further impacts women’s and female-headed households’ resilience and ability to cope with floods.** Recent floods have also destroyed a fifth of women and girl-friendly spaces nation-wide, as well as over 56 percent of health facilities and some 400 schools. More than half of all IDPs and returned refugees live in partially damaged housing or makeshift shelters, increasing women’s exposure to GBV as well as their vulnerability to flood events and recurring displacement. Incidents of GBV perpetrated against women and girls with inadequate shelter are pervasive and were reported by more than half of respondents in a 2017 study. Those without adequate shelter are also more exposed to disease. Women and girls also experience high rates of malnutrition and constrained access to health services during floods due to social norms and gender disparities in mobility and assets. Even in comparatively well provided camps, in 2021, there was still a differential between men and women: 23 percent of women in humanitarian situations cited food assistance and 13 percent cited health assistance as their most urgent need, compared to 16 and 13 percent of men, respectively. Previous research in South Sudan has shown that women and girls are usually the last to eat in their households and often first to reduce food consumption during shocks. Female-headed households, whose share in the population has increased on account of recurring and complex crises (well beyond 30 percent in some countries), are at particular risk of food and health insecurity. Poor access to shelters and limited access to information and communication technologies also compound women’s vulnerability to floods and reduce their preparedness and coping capacity in the aftermath of such events. Evidence from other regions suggests that women are likely to be excluded from the economic benefits of integrated watershed management projects, despite taking on a greater share of the construction work compared to men.

⁵⁴ Building Resilience and Adaptation to Climate Extremes and Disasters (BRACED), 2017. Building Climate Resilience in Fragile Contexts: Key Findings of BRACED Research in South Sudan. UK AID.

⁵⁵ Ibid.,

**NILE BASIN INITIATIVE (NBI) – ENTRO**

31. **The NBI provides the only basin-wide platform for regional dialogue, transboundary water management, and water-related development services in the Nile Basin.** The NBI is an intergovernmental body composed of three entities, the Nile Basin Initiative Secretariat (Nile-SEC), the Nile Equatorial Lakes Strategic Action Program -- Coordinating Unit (NELSAP-CU), and the Eastern Nile Technical Regional Office (ENTRO). Since its establishment in 1998 with support from the World Bank, the NBI has facilitated jointly agreed national projects, built countries' capacity, and supported its member states in preparing cooperative water resources investment programs and projects. The World Bank is providing ongoing support to the NBI through the Nile Cooperation for Climate Resilience (NCCR) project (P172848) funded by the Cooperation in international Waters in Africa (CIWA) trust-fund. NCCR aims to improve mechanisms for cooperation on water resources management and development in the Nile Basin. This project supports one of the NBI centres, ENTRO, to capture several opportunities identified through NCCR. First, ENTRO needs to strengthen its engagement with South Sudan. Despite continued inclusion of South Sudan interests in the identification of regional investments, South Sudan has been too fragile until recently to mobilize actions. Given South Sudan's geographic position in the Nile Basin, RCRP's investments in South Sudan's transboundary Baro-Akobo-Sobat basin will only be sustainable if they are coordinated with riparian neighbors through ENTRO. Second, NCCR's focus on strengthening the capacity and the tools of ENTRO (and other NBI centres) means that more support is needed to actually leverage this strengthened and empowered ENTRO to the benefit of its lower capacity member countries. ENTRO's footprint and networks mean that it is well positioned to help achieve RCRP objectives by facilitating regional dialogue and collaboration between member countries and lay the ground for potential inclusion of other Nile riparians in subsequent operations of the RCRP. ENTRO also has a relatively strong record of gender inclusion in capacity building which will be leveraged for the project.

SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC)

32. **SADC plays a key role as facilitator of long-term cooperation and regional cooperation in the AFE region, including information and knowledge sharing that is key to enhance regional preparedness.** SADC's role will be key to the project's regional resilience-building approach by helping address the countries' demand for coordinated solutions that strengthen institutional capacity on climate preparedness. SADC established a Disaster Risk Reduction Unit responsible for coordinating regional preparedness and response programs for trans-boundary hazards and disasters. The SADC Regional Platform for Disaster Risk Reduction was inaugurated in 2011. SADC also has in place a Climate Services Centre with the mandate to reduce the negative impacts of adverse weather and climate conditions such as drought, floods, and other extreme events on sustainable socio-economic development. The Centre aims to achieve this goal through generation and dissemination of meteorological, environmental, and hydro-meteorological products. This program is well aligned with ongoing SADC projects, including the Disaster Risk Management Strengthening in the Southern Africa Development Community (DRMSS) Project and the SADC/GIZ Global Initiative on Disaster Risk Management Project.

B. DETAILED PROJECT DESCRIPTION: RCRP SOP-1

33. This first operation under the SOP will focus on establishing the foundations for increasing resilience to climate change risks through enhanced preparedness to shocks (i.e., floods, droughts, and cyclones), including small-scale investments to protect vulnerable communities and preparation of large transformational infrastructure investments that will be financed in subsequent operations of the SOP. It has four interrelated components supporting the project's development objective: (1) Risk Management and Climate Financing; (2) Infrastructure Investments and Sustainable Asset Management for Climate Resilience; (3) Adaptive Climate Services for Resilient Communities; and (4) Project Management. In South Sudan, Madagascar and Comoros; there is also a fifth component, the contingency emergency



response component (CERC). The proposed Components approach and the strong integration between regional and national dimensions provides a platform for policy and regulatory harmonization, joint knowledge generation, capacity development, standardization of climate resilient infrastructure, cooperation, and coordination between countries aiming toward achieving increased climate preparedness with social and economic benefits that will go beyond each country's boundaries. Funding envelopes for each component and subcomponent are summarized in the cost tables at the end of this Annex, showing funding type and the breakdown for each country and regional organization.

Component 1. RISK MANAGEMENT AND CLIMATE FINANCING (US\$26 million)

34. **The overall objective of Component 1 is to build institutional capacity and strengthen cooperation on climate risk management and climate financing.** A diagnostic covering all countries to address gaps, identify lessons learned and solutions, has recently been launched as part of preparation with the EPIC Response framework⁵⁶ and will inform the best way to bring participating countries at the same level in terms of access to financing and early warning systems, and maximize collaboration across country boundaries. This first component will support both institutional development and project implementation through the following sub-components:

35. **Sub-Component 1.1. Climate and Disasters Risk Management.** This sub-component will finance support to early warning systems (EWS), including hydromet, in participating countries and their coordination at the regional level. It will help identify and cover gaps in all four EWS components to harmonize standards across countries and maximize regional synergies and learning exchange. The four EWS components include (i) disaster risk knowledge; (ii) detection, monitoring, analysis, and forecasting; (iii) warning dissemination and communication; and (iv) preparedness and response capabilities. At the regional level, EWS capacity also needs to be strengthened for countries to play a key role in advancing the Continental Multi-Hazard Early Warning Systems (MHEWS) framework.

36. **In all participating countries,** this subcomponent will finance the development of EWS, including acquisition, supply, installation and rehabilitation of hydromet stations and monitoring equipment, software and technical assistance to national hydromet agencies and their regional counterparts (SADC, ENTRO),⁵⁷ support to integration of remote sensing and satellite-based monitoring in early warning systems where appropriate; and capacity building for increased participation in regional knowledge and data sharing for hydromet and early warning systems, including advancing the Continental Multi-Hazard Early Warning Systems (MHEWS) framework. Involving communities in data collection and dissemination - such as through citizen science initiatives - can help generate access to site-specific data on droughts and floods while simultaneously imparting information on climate risks for improved early warning systems. This set of activities will include knowledge sharing events as well as investments to ensure long-term data sharing arrangements. Finally, the sub-component supports information exchange and experience sharing with riparian countries on topics of mutual interest, including Flood and drought Risk Management, river basin planning, disaster risk management, flood forecasting, hydrological and metrological data exchange. In addition, each country will have specific activities covering identified gaps in the early warning components. Generally, the standard warning templates and protocols will include methods to better share warning information and data with all members of communities, including women (who have lower literacy levels and therefore have specific needs for these communications), refugees or minority groups who may not be part of existing leadership structures, and persons with disability. The use of innovative tools developed in collaboration and seeking feedback from different stakeholder groups, including tools such as community early warning radio run by women can be piloted, and would contribute to the ownership and effectiveness of such early warning systems.

⁵⁶ <https://www.worldbank.org/en/topic/water/publication/an-epic-response-innovative-governance-for-flood-and-drought-risk-management>

⁵⁷ In South Sudan, three hydro-met stations installed under project integrate into other ongoing activities being implemented by NBI, CREWS (Climate Risk and Early Warning Systems) and by the DRM commission.



37. In **Comoros**, this subcomponent will finance: (i) conducting feasibility study for a cellular system/application for the rapid dissemination of alerts and access to meteorological information based on the findings of the ongoing pilot to develop a mobile app-based alert system and the study related to cell-based EWS for fishermen; (ii) training of ANACM staff; (iii) acquisition of Automated Weather Stations (AWS), tide gauge and buoys; (iv) rehabilitation of data receiving station and strengthen the maintenance capacity of ANACM, acquisition of equipment such as servers; (vi) Operationalization of the Marine Meteorology and Oceanography Service; and (vii) enhancement of the preparedness and response capacity of DGCS/COSEP at the territorial and community level through training of staff, technical specifications for acquiring equipment for NEOC and search and rescue; development of the emergency management database, (c) development of regional and municipal contingency plans and community-based DRM plans the explicitly consult women and women's groups, (d) feasibility study, design and bidding documents for territorial offices of the DGCS, and (e) a national emergency operations plan that is informed by assessments of community characteristics including family size, access to resources, gender, and disabilities.

38. In **Madagascar**, this subcomponent will finance: (i) strengthening of hydrometeorological systems managed by the Meteorological Delegation; (ii) strengthening of EWS, including the establishment and operationalization of the regional offices of the National Risk and Disaster Management Office (BNGRG) and the installation of water resources monitoring networks in the Mandrare basin, to more adequately monitor rainfall variability and better able to prepare and manage climate-related droughts and water scarcity and operate the new storage infrastructure that will come online; (iii) capacity building of the concerned entities and elaboration of maintenance and management protocols for water resources monitoring networks; and (iv) operationalization and mobilization of national disaster fund (FNC, pending advancement of the CAT-DDO).

39. In **Mozambique**, complementing ongoing national DRM projects, this subcomponent will finance: (i) the establishment of river basin and city-centered early warning and information flow systems that are accessible to vulnerable people; (ii) the establishment of a river basin and city-based risk reduction strategy, and related preparedness and emergency response plans; (iii) the updating of existing flood models of the transboundary river basins Limpopo and Zambezi to incorporate flood forecast components; and (iv) the development of flood maps and flood risk assessments in key areas.

40. In **South Sudan**, this subcomponent will finance: (i) establishment of a water information management system and (ii) development of a hydro-informatics program housed at MWRI. In addition to the supply, construction and rehabilitation of hydrometric stations in select sub-basins, including those benefiting refugee and host communities, this includes data collection, curation, and calibration of hydrologic and meteorological models to enable flood and drought forecasting, integration of remote sensing and satellite-based monitoring, and strengthening of MWRI's capacity to prepare, disseminate and communicate hydro-meteorological early warning forecasts to other government entities, local authorities, CRA and UNCHR in refugee hosting areas, the general public and regional entities (NBI); (iii) capacity improvements for flood forecasting at MWRI will include additional technical staff, offices, and equipment; and (iv) Development of flood risk models in South Sudan under this subcomponent will contribute to overall improvement in NBI basin-wide models for both short and long-term planning.⁵⁸

41. At **SADC level**, this subcomponent will support the operationalization of the Continental Multi-Hazard Early Warning System (MHEWS) Framework via a diagnostic on EWS level across SADC members (except of SOP-1 participants who already carry it out under the RCRP). In addition, with respect to SADC members, it will support: (i) development of standardized data and information sharing formats and procedures at the national level, including standard warning templates and protocols for climate risk identification systems to prioritize areas of social protection risk reduction

⁵⁸ This model would then feed into the NBI models being constructed under NCCR, which largely ignore flood dynamics within South Sudan, with direct benefits at the regional level.



interventions; (ii) South-South knowledge exchange and cooperation, including for strengthening regional capacity and data sharing for hydromet information; (iii) dissemination and communication of specialist sectoral products produced by the Regional Specialized Meteorological Centers (RSMCs). Moreover, it will develop consistent drought severity designations for the region and procedures for triggering of assistance across boundaries, in concert with SHOC operationalization.

42. Under this subcomponent, **ENTRO** will validate the NCCR-supported flood risk assessment models in selected areas of South Sudan and enhance uptake of its forecasts among local governments and stakeholders. Recent need assessments⁵⁹ suggest that South Sudan lags behind the rest of the Nile basin in terms of understanding and modelling of flood dynamics. This gap is not being addressed through NCCR.

43. *Sub-Component 1.2. Climate financing.* This subcomponent aims to strengthen participating countries' capacity to access climate financing. In all participating countries and at the regional level, this sub-component will support strengthening clients' capacity to access mitigation and adaptation financing, or Global Public Goods funds, for example for the protection of wetlands and rangeland conservation, and to steer and benefit from carbon market opportunities, via the creation of regional and country-based platform for climate advocacy and financing; supporting deliberate outreach, and roundtables. Under the coordination of **SADC** and **ENTRO**, this sub-component will promote regional risk financing solutions and support regional/global exchanges to African countries where the monitoring, reporting and verification (MRV) systems are more advanced, like Mozambique and Ethiopia, and bring in global expertise to support countries to access climate finance.

44. **In Mozambique**, this subcomponent will also finance: (i) strengthening of MRV capacity for forest degradation, and reforestation, and also expand this MRV capacity to cover other sectors; and (ii) supporting building blocks of the regional "Integrated Miombo Management" initiative, including regional coordination bodies, regional exchanges, update national/ provincial forest inventories – with benefits beyond the current SOP for countries in the region. This last activity will be supported at the regional level by **SADC**, who will coordinate the regional dialogue across countries, including the development of a roadmap and action plan.

Component 2. INFRASTRUCTURE INVESTMENTS AND SUSTAINABLE ASSET MANAGEMENT FOR CLIMATE RESILIENCE (US\$316.4 million)

45. This component aims to contribute to closing the regional water infrastructure gap (storage and protective assets) critical to increase preparedness to water-related climate shocks. This will be achieved via a combination of three interrelated components (i) institutional development and planning; (ii) infrastructure development and rehabilitation; and (iii) sustainable asset management. A diagnostic will be launched in all participating countries. Though reforms for (i) and (ii) will have to occur at the national level, maintaining a regional dimension will be a fundamental part of the implementation of this sub-component. At the end of the project, participating countries are expected to reach certain harmonized institutional standards and strengthened integration for managing water resources and climate impacts, which are key for increasing resilience at the regional level.

Sub-Component 2.1. Enhancing Institutional capacity for long-term climate risk management

46. **In all participating countries**, this subcomponent will finance technical assistance to strengthen the legal, regulatory, institutional framework for climate-resilient water resources management, including on what is needed to strengthen regional and transboundary collaboration; capacity building activities at national and sub-national levels, including to CRA and county/community level committees, will include: (i) flood infrastructure technical aspects, including design standards, dam and embankment safety, technical review and management; and (ii) integrated water

⁵⁹ ENTRO Final Report (2020): Flood Forecasting and Early Warning System (FFEW) Assessment for South Sudan.



resources management for building climate change resilience, including transboundary water management and, where applicable, strengthening climate-resilient Public Investment Management (PIM) capacity (spatial and multisectoral system approach for) planning, prioritization, siting, design (regional, national, local hotspots), and execution. Finally, it will finance regional knowledge exchanges and events on related topics. A diagnostic similar to the EPIC Response Framework will be carried out at the start of implementation, which will help develop benchmarking across participating countries and identify specific gaps and opportunities that they need to exploit to mainstream climate risk management in the respective water resources management institutions and interventions. Finally, this subcomponent will finance institutional strengthening and South-South exchanges as well as sharing successful regional experiences in the SADC, ENTRO, and NELSAP countries.

47. Each country has identified priority specific activities related to strengthening institutional capacity on climate preparedness. In **Comoros**, this subcomponent will finance a national water security diagnostic and strategic studies – incorporating technical, financial, environmental and policy implications – to support the government's medium and long-term planning for water supply access in the country and identification of flood/drought hotspots. Moreover, it will finance planning under climate resilience strategic studies, like the upgrading of the urban drainage network and development of risk-informed urban development plans in Mutsamudu, and Fomboni, including improved land use planning.

48. In **Madagascar**, this subcomponent will finance the development of climate-resilient master urban plans followed by climate vulnerability assessment studies of the 5 most vulnerable cities (particularly to climate-related water events, like cyclones, flooding, and water scarcity), including recommendations to improve their resilience to climate shocks and variability. Moreover, it will finance the development of a city-level options guide to help communes/municipalities cope with climate change, and a diagnosis of the current situation for maritime spatial planning.

49. In **Mozambique**, this subcomponent will finance: (i) improving the hydrometeorological and hydrogeological network and information system in selected basins; (ii) the development of climate-resilient basin plans in the Northern part of the country (such as Licungo, Meluli, and Monapo), affected by climate variability (rainfall variability and increased frequency of extreme events), high fragility and cross border movement of people due to instability and poverty; (iii) the update of the hydrogeological Map of Mozambique, including transboundary aquifers, and (iv) implementation of the recommendation of an ongoing dam safety plan (dam safety assessments, trainings, capacity building, etc.).

50. In **South Sudan**, this subcomponent will finance the development of a climate-resilient national water resources master plan; capacity building and technical assistance to: (i) conduct a capacity needs assessment of the MWRI and the water sector and strengthen their capacities to manage water resources and water-related climate impacts, including strengthened citizen engagement and gender-inclusive approaches to reach these ends; (ii) develop national technical standards and guidelines related to the project (e.g., climate-resilient flood protection, water storage structures, retention/infiltration basins), (ii) establish procedures for review and approval of technical and financial feasibility studies, and for oversight of environmental and social risks associated with water resources management investments, including climate-related risks, (iii) develop a regulatory framework for watershed management to support flood risk management, such as land zoning, riparian buffers, conflict-sensitive and gender-sensitive approaches to resettling communities living in highly flood-prone areas, (iv) undertake strategic studies to address knowledge gaps within integrated water resources management framework, including for mainstreaming climate considerations, and (v) facilitate stakeholder consultations on revisions to the 2015 Water Bill and accompanying legislation to enhance coordination across governance levels for water resources management and align the water sector policy and regulatory framework.

51. Under this subcomponent, **SADC** and **ENTRO** will organize regional and South-South knowledge exchanges and provide technical assistance, including coordinating efforts on transboundary water management (integrated planning,



training on the state-of-the-art World Bank Decision Tree Framework and other guidelines for mainstreaming climate resilience in planning and design);⁶⁰ scaling up the activities and outcomes of the Southern Africa Drought Resilience Initiative (SADRI) initiative; and support participating countries in exploring nature-based solutions and integrating them into planning.

52. Moreover, **SADC** will pilot a Transboundary Distributional Impact of Investments methodology in the Okavango basin, with the Permanent Okavango River Basin Water Commission (OKACOM). This component will include: (i) development of a tool to prioritize pro-poor and resilient investments at the transboundary and country level; (ii) assessment of the contribution of basin activities to job creation, economic growth and environmental and social benefits; and (iii) distributional effect of different benefit sharing strategies (e.g., natural capital, allocation across economic sectors).

53. *Sub-component 2.2. Closing the climate-resilient infrastructure gap.* This sub-component will finance both preparatory studies (from feasibility to detailed design, including social and environmental assessments) and construction/rehabilitation of critical infrastructure to mitigate climate risks, with focus on regional and transboundary climate impacts like rainfall variability, cyclones, floods, and droughts. No works will be financed under SOP-1 in Comoros and Madagascar. In all countries, investments will be selected via a risk-informed decision-making concept to ensure that (i) grey infrastructure is constructed where most needed; and (ii) mainstream consideration of alternative interventions (i.e., Nature-Based Solutions), that will also focus on increasing livelihood opportunities in flood areas.

54. Specifically, in **Comoros**, this sub-component will finance studies on water storage for drinking water supply in Moroni, on alternative sources of drinking water for Anjouan and Mohéli (groundwater, storage, etc.), on possible future applications of desalination systems (for saline groundwater), and on priority investments for water supply based on the national water security diagnostic. Feasibility study, design and bidding document preparation will be undertaken for four drainage sites (two in Moroni, one in Mutsamudu and one in Fomboni).

55. In **Madagascar**, this sub-component will support feasibility studies, detailed design, bidding documents, and E&S instruments for critical drought and flood management infrastructure in the South and in the Eastern parts of the country. In the *South*, these studies will focus on investments for a large multi-purpose reservoir, and associated water supply, access roads, irrigation, energy, and storage works along the Mandrare river (all built according to national standards and international best practices), in a region affected by extreme poverty and water scarcity, and humanitarian interventions. The preparatory work for this dam and ancillary investments is set to provide an example for the Africa region, including the participating countries, on how to transition from emergency aid to building resilience. Feasibility studies will be financed by the Madagascar National Water Project (P174477), and the SOP-1 will finance the preparation of the chosen option and the associated investments, including ESIA and RAPs. In *Eastern Madagascar*, the investments to be studied will be selected as part of an ongoing detailed multi-hazard risk assessment. Priorities cities include Toamasina and Mananjary, which were chosen based on a high risk and vulnerability criteria, as per the SWIO-RAFI risk profile for Madagascar, World Bank's analysis of the exposure and vulnerability of 40 cities to various hazards and impacts, including impact from the recent spate of regional cyclones in January-February 2022, which destroyed 90 percent of Mananjary.⁶¹ This sub-component will also finance a dam safety assessments and formulation of action plans for selected dams and targeted JIRAMA water supply infrastructure. Finally, this sub-component will finance the provision of technical assistance, including recruitment of a panel of experts (POE), to review technical documents, provide capacity building, and advise the government

⁶⁰ World Bank, 2015. Confronting Climate Uncertainty in Water Resources Planning and Project Design: The Decision Tree Framework. Washington, DC: World Bank. doi:10.1596/978-1-4648-0477-9.

⁶¹ <https://reliefweb.int/report/madagascar/cash-assistance-vulnerable-populations>



56. In **Mozambique**, this sub-component will finance:

- a) Feasibility studies, detailed design, and environmental and social assessments for increasing dam safety and flood protection in transboundary basins. Dam safety studies focus on critical storage in Southern Mozambique, including the Corrumana, Pequenos Libombos, and Massingir dams. Dikes will be primarily located in the transboundary rivers Incomáti, Limpopo, Buzi, Save, Zambezi, and Licungo.⁶²
- b) Feasibility, detailed designs, and social and environmental assessments for new storage in the North, including options for supplementing Nampula and Pemba's water supply; two more feasibility studies for multipurpose storage to be identified in an ongoing multicriteria analysis and that will focus on strategic basins in the Center and North (Licungo and Lurio).
- c) High priority remedial works to ensure the safety of existing storage and rehabilitation of flood protection infrastructure. The project will support recovery of dikes damaged by cyclones, which were overtopped and damaged at various sections due to flooding. The proposed support will focus on resilient repair and upgrading of dikes in the districts, such as Nicoadala and Maganja da Costa in the Licungo river basin, and in the districts of Marromeu in Sofala Province, Mopeia (Luabo) in the Zambezia province, etc. These investments will provide adequate protection to local population in towns and irrigation schemes such as Intabo, Munda-Munda and Mziva totaling more than 1,000 hectares. Moreover, the project will also finance high priority small remedial works for increasing dam safety of critical storage in transboundary basins in Southern Mozambique. The exact number and location of dikes to be rehabilitated, and the priority dam safety works, have not yet been identified. However, in this operation, only works with substantial or lower environmental and social risk will be executed, prioritizing those that would help improve management of transboundary flood risk and infrastructure severely affected by recent regional cyclones, and benefit from synergies with ongoing projects.
- d) A Panel of Experts (PoE) will be recruited to review technical documents.

57. In **South Sudan**, this sub-component will finance preparatory studies and works on new and existing flood management structures to strengthen resilience to floods in select river sub-basins, ensure structural integrity, safety and enhance functionality in the context of climate change. Activities are expected to benefit the refugee and host community populations residing in Bunj Town in Maban County in Upper Nile State. This includes:

- a) Feasibility studies, ESIA, and engineering designs for high-priority flood management interventions, that will provide a pipeline of investments for the project and a basis to leverage other sources of finance (e.g., co-financing, partner financing, private sector, etc.). Studies for investments with regional benefits will be prioritized. Both conventional infrastructure investments and nature-based solutions for flood management will be considered and more detailed technical assessment will be supported, including mapping and baseline data collection of hydrological, topographical, and geotechnical information from cross-sectional surveys and LIDAR mapping to identify and delineate areas at risk from flooding, and populations and assets exposed. Studies will also include options for new multipurpose storage.
- b) Construction and rehabilitation of priority flood and drought management infrastructure in target river sub-basins, with a focus on protecting forcibly displaced populations, refugees, and host communities. A preliminary typology of flood and drought management solutions includes embankments/dikes, small floodwater harvesting structures (haffirs), and wetlands restoration. Infrastructure typologies and additional functionalities (e.g., transport, livestock bridges, livelihood opportunities) will be identified in dialogue with

⁶² All TORs for the studies on infrastructure in transboundary basins will be subject to prior review. . In reviewing the ToRs the World Bank will check that they include examination of potential riparian issues as required by paragraph 7 (b) of the Policy. This requirement will also be included in the respective PIMs



the affected communities and local government to ensure that works respond to needs and priorities. For works, the project uses a framework approach with eligibility criteria to identify, prioritize and screen flood management interventions including considerations for: (i) potential for impact on project outcomes, including regional benefits; (ii) environmental and social impact, including downstream; (iii) cost-effectiveness; (iv) sub-basin level clustering; (v) accessibility and security; (vi) maximize synergies with community-level interventions and opportunities for sustainable O&M of the new and rehabilitated structures; (vii) gender impacts; and (viii) synergies with ongoing World Bank and other development partner engagements, such as the Enhancing Community Resilience and Local Governance Project (ECRP-II; P177093). Additional refugee hosting areas beyond Maban County may become eligible for flood management interventions during the project period based on these criteria.

- c) High-impact interim flood protection solutions. In the context of an ongoing emergency requiring crisis response, there is a need for long-term solutions to be complemented with interventions that can provide immediate relief from flood and/or drought impacts. These interventions will be based on contingency planning and rapid needs assessment in flood-affected areas, including in refugee hosting areas in target sub-basins, and could include rehabilitation of damaged infrastructure, construction of community-based infrastructure, among other high-impact interventions to protect communities from water-related climate impacts.

58. Under this sub-component, **ENTRO** will develop integrated flood management plans for transboundary basins shared by South Sudan and upstream riparians to identify measures to reduce flooding in South Sudan. Where appropriate, ENTRO will also identify investments and conduct feasibility analysis of flood hazard reduction sub-projects in these transboundary basins.⁶³ Without these projects, it will not be possible to fully achieve sustainable flood risk management in South Sudan because most of the water comes from upstream Uganda and Ethiopia, thus requiring a regional approach and regional organization to support investment identification. **SADC** will help strengthen the dialogue between riparian countries (i.e., Mozambique, Malawi, and South Africa) on dam safety and coordinated operations. Across participating SADC countries, it will also promote South-South exchanges on best practices for multi-purpose storage development and flood risk management infrastructure, including on how to integrate green and grey solutions, and how to do so in a manner that reduces known gender gaps, while enhancing citizen engagement.

59. *Sub-component 2.3. Sustainable Asset Management.* The objective of this sub-component is to increase the sustainability of existing and new water infrastructure for climate preparedness (storage, protective assets). At the start of the project, a diagnostic will be carried in **all participating countries**, that will include an evaluation of the legal and institutional framework and flow of funds and propose subsequent studies for defining an approach to public asset management and minimal standards setting up a regional/national maintenance fund, and related capacity building.

60. In **Madagascar**, this sub-component will specifically support updating and dissemination of the national standard on construction of flood protection infrastructure (NIHYCRI) and the national directive for climate-resilient drinking water infrastructures as well as design and support for implementation of the national policy on sustainability of infrastructure. In addition, it will finance studies on the O&M and contingency planning for the new infrastructure being prepared under component 2.2.

61. In **Mozambique**, this sub-component will finance (i) the review/update of the legal framework for proposing proper water quality and flood protection principles, and review the hydropower fee/tariff – including eventual support for the revision of the Water Law; and (ii) studies for defining an approach to public asset management and minimal

⁶³ All ToRs for the studies on infrastructure in transboundary basins will be subject to prior review. In reviewing the ToRs, the World Bank will check that they include examination of potential riparian issues as required by paragraph 7 (b) of the Policy. This requirement will also be included in the respective PIMs.



standards setting up a regional/national maintenance fund. This will include study of water fees for different water users to get cost recovery, how to achieve it and establishing an asset maintenance fund (business plan ARA-SUL, Center and North). Moreover, it will support capacity building for the implementation of a dike manual elaborated in 2022 by DNGRH with support from the Dutch Government, which includes, amongst others, clear steps for how to ensure the management and payment protection capacity from the early stages.

62. In **South Sudan**, this sub-component will focus on flood risk management assets, and it will also finance capacity building, technical assistance, preparation of standards and guidelines, and the development of an asset management database to be housed under MWRI.

63. Under this sub-component, **SADC** and **ENTRO** will help organize regional knowledge exchanges as part of the regional technical platform and provide technical assistance. The regional technical platforms will include exchanges on the development of standards and on options for improving maintenance of assets.

Component 3. Adaptive Climate Services for Resilient Communities (US\$17.9 million)

64. The overall objective of Component 3 is twofold. It aims to (i) improve the community outreach to raise climate risk awareness; and (ii) increase the mainstreaming of climate change in social protection functions and empower communities to maintain protective assets. Both objectives aim to decrease displaced people and refugees after a climate-related disaster hits an area.

Sub-Component 3.1. Empowering communities to manage climate risk

65. In all participating countries, this sub-component will focus on enhancing citizen engagement around flood mitigation and maintenance, improving last mile community preparedness through preparation and/or improvement of flood and drought contingency plans and simulation exercises, including gendered approaches to flood and drought management to reduce known gender gaps; and enhancing capacity of beneficiary communities to actively participate in asset operation and maintenance through training and education programs targeting women and youths, leveraging wherever possible existing local governance for O&M of flood and drought infrastructure. Community leaders and women will be trained to participate in effective response and recovery efforts -- capitalizing on programs already underway and the good lessons already learned. This would include an assessment of capacity to engage citizens in climate risk management, which will also lead to the development of a strategy for each area/context/country, including the development of didactic tools and guidance to enhance two-way engagement to participate. Though these programs will be tailored to local context, cross-fertilization and learning across the region will help their design and implementation. Moreover, community members in flood and drought risk areas will be trained to monitor water levels and weather patterns and use communication technology to disseminate alerts to vulnerable residents in the event of a flood.

66. Specifically, in **Comoros**, the activities will contribute directly to the capacity building of communities to manage local climate risks and implementation of the Action Plan of the National Strategy for DRR.

67. In **South Sudan**, this sub-component also supports development and implementation of a national awareness raising campaign on flood adaptation to help sensitize civil society to the range of flood management solutions and ways in which management of water resources can benefit livelihoods with awareness of the different livelihoods for men and women. The awareness campaign will prioritize populations affected by flooding and beneficiaries of project flood management interventions, including refugee and host communities in Maban County, in close coordination with CRA and UNHCR. Given higher levels of illiteracy among women vs. men particularly in rural areas, the gap in technical information reaching female vs. male stakeholders at the community level, and key role that women play in flood response, this campaign will also benefit from innovative mechanisms for raising awareness (referenced under



component 2), including but not limited to interactive didactic tools to understand flood dynamics, maintenance needs, and mitigation, and interactive community radio (as in Farm Radio which can be run by women) to raise such awareness and also to aid in early warning systems.

68. At the SADC level, this sub-component entails support to the implementation of operation and coordination manuals for adaptive social protection and promoting their harmonization across the region for easier communication and more effective implementation. Activities will also include regional exchanges with member countries on adaptive social protection programs.

69. *Sub-Component 3.2. Mainstreaming climate resilience in social protection programs.* This sub-component will invest in supporting social protection systems to mainstream climate change through better identification and targeting of climate-vulnerable population groups, enhancing climate-content of social protection programs, learning effective and efficient service delivery mechanisms, and expanding climate-resilient economic inclusion opportunities. Although these core social protection functions have improved in the last decade in AFE countries, their alignment with Government-wide climate change policies has been lagging despite the strong role of social protection in emergency response.

70. In **Mozambique and Comoros**, this sub-component will include strengthening institutional capacity of social protection agencies to address climate shocks by: (i) improving coordination with DRM agencies, (ii) improving access to climate information, for instance via the development of a multidimensional analysis/evaluation of social protection systems to address high vulnerability to climate risks; climate risk vulnerability and poverty maps to assist in the geographic targeting of intervention areas and linking these maps to the beneficiary register (and later social register); and improved tools for targeting vulnerable households in areas exposed to climate shocks; and (iii) strengthening implementation capacity of adaptive social protection programs at the national, regional, and local level.

71. In addition, in **Mozambique** this sub-component will also finance a study on contingency funding for climate-related disasters (i.e., severe tropical storm Freddy in 2023), and the triggers to access those funds, related to these climate-related disasters, that can be used by the Social Protection sector (linkages with Disaster Management Fund). This is a model which could then be replicated in the other countries joining the RCRP SOP.

72. In **Madagascar**, as the Development Intervention Fund (FID; Fonds d'intervention pour le Développement) already has existing approaches for climate-informed social protection programs and labor-intensive works programs, this operation will focus on technical assistance to develop the specific programs (and their manuals), including strengthening their climate dimension, whose operationalization ,as well as regional knowledge sharing activities, the development of a digitization mechanism for FID systems, the collection of data for the unique social registry in targeted areas, and an assessment of existing SP programs as a basis for an evaluation (to be completed under SOP-2). The latter two activities will be done by the Ministry of Population and Social Protection.

73. In **South Sudan**, these activities are already covered by the Productive Safety Net for Socioeconomic Opportunities Project (SNSOP, P177663). However, this sub-component will help strengthen coordination and participation of water institutions into social protection programs, including bringing expertise on impacts of climate change on water resources and resilient planning. Moreover, it will also complement the existing program by supporting awareness raising activities and promoting generation of jobs prioritized for social protection recipients.

74. **SADC** will support the implementation of operation manuals and coordination across its countries for adaptive social protection, promoting their harmonization across the region for easier communication and more effective implementation. Moreover, the sub-component will finance regional exchanges with other countries and similar type of ASP programs.

Component 4. Project Management (US\$22.1 million)



75. This component will finance all aspects of project management in **all participating countries**, including equipment and materials (including office rehabilitation), technical assistance and capacity building to guarantee compliance with fiduciary (including on internal audit functions), procurement, and environmental and social risk management requirements, security planning and management, remote supervision, M&E, impact assessment, knowledge management and communication, and when needed, technical activities and supervision. It will also finance national grievance redress mechanisms (GRM) set up and operation, and other project operating costs – including capacity building across project management. At the national and regional organizations' level, the activities will be performed by Project Implementation Units (PIUs) and/or project coordination unit (PCUs), established under relevant Ministries, maximizing wherever possible complementarity with existing PIUs. This component will also finance the participation to bi-annual meetings of the Regional Steering Committee, and any eventual trainings related to the program.

76. In **South Sudan**, this sub-component will also support the implementation of security management plans, third-party monitoring (TPM), and coordination with CRA and UNHCR in refugee hosting areas.



Table A2.1: Budget allocation and source of financing

Allocation and source of financing (US\$, millions)												
	SADC	ENTRO	Comoros		Madagascar		Mozambique	South Sudan				TOTAL SOP-1
	RW	RW	PBA	RW	PBA	RW	CRW	PBA	RW	CRW	WHR	
COMPONENT 1	2	0.5	0.5	1	3	6	5	2	4	1	1	26
1.1.	1.5	0.4	0.4	0.8	2.5	5	3	1.9	3.8	1	1	21.3
1.2.	0.5	0.1	0.1	0.2	0.5	1	2	0.1	0.2	0	0	4.7
COMPONENT 2	1.5	2.5	1	1.4	5	8	110	45	90	34	18	316.4
2.1.	1	2.5	0.6	1.2	2.8	5.6	8	2	4	1	1	29.7
2.2.	0.3	0	0.3	0	1	0	98	42	84	32	16	273.6
2.3.	0.2	0	0.1	0.2	1.2	2.4	4	1	2	1	1	13.1
COMPONENT 3	1	0.3	0.2	0.4	1	2	5	1	2	1	4	17.9
3.1.	0.6	0.3	0.1	0.2	0.5	1	2	0.5	1	1	3.5	10.7
3.2.	0.4	0	0.1	0.2	0.5	1	3	0.5	1	0	0.5	7.2
COMPONENT 4	0.5	0.7	0.3	0.6	1	2	5	2	4	4	2	22.1
COMPONENT 5	-	-	0	-	0	-	-	0	-	-	-	0
TOTAL SOP-1	5	4	2	3.4	10	18	125	50	100	40	25	382.4

RW= Regional IDA, PBA= National IDA, CRW= IDA Crisis Response Window, WHR= IDA Window for Refugees and Host Communities

Table A2.2: Budget allocation along regional IDA criteria

Regional Dimension	Comp.	SADC	ENTRO	Comoros		Madagascar		South Sudan		TOTAL	
		RW	RW	PBA	RW	PBA	RW	PBA	RW	PBA	RW
1. Platform for high level of policy harmonization		2.7	3.0	1.0	2.0	5.5	11	4.1	8.2	10.6	26.9
Resources mobilization (climate financing)	C1.2	0.5	0.1	0.1	0.2	0.5	1	0.1	0.2	0.7	2.0
Collaboration, strategic planning, shared approaches and solutions, knowledge sharing	C2.1, C2.3, C3.1, C3.2	2.2	2.8	0.9	1.8	5.0	10.0	4.0	8.0	9.9	24.8
2. Transboundary water management		0.3	0	0.3	0	1.0	0	42.0	84.0	43.3	84.3
Infrastructure for managing water-related climate impacts	C2.2	0.3	0	0.3	0	1.0	0	42.0	84.0	43.3	84.3



Regional Dimension	Comp.	SADC	ENTRO	Comoros		Madagascar		South Sudan		TOTAL	
		RW	RW	PBA	RW	PBA	RW	PBA	RW	PBA	RW
<u>3. Regional cooperation for water-related climate risk management</u>		1.5	0.4	0.4	0.8	2.5	5	1.9	3.8	4.8	11.5
Regional Early Warning Systems	C1.1	1.5	0.4	0.4	0.8	2.5	5	1.9	3.8	4.8	11.5
<u>4. Project management</u>	C4	0.5	0.6	0.3	0.6	1.0	2.0	2.0	4.0	3.3	7.8
TOTAL		5.0	4.0	2.0	3.4	10.0	18.0	50.0	100.0	62.0	130.4

NOTE that although most of SOP-1 meets the regional IDA criteria, infrastructure investments in Madagascar and Comoros under Component 2.2 do not. Hence, SOP-1 activities in these two countries under this Component will be fully financed by PBA.

**ANNEX 3: RCRP's Added Value and Alignment with Countries' and Regional Portfolios**

1. The aspiration of the project is to build on ongoing national and regional World Bank programming across sectors, as well as on what other development partners are doing, in order to address existing gaps, complement what is in place, and achieve impact at scale. An initial identification of ongoing initiatives in each of the participating countries is included below, highlighting the contribution of the RCRP project in the respective country.

South Sudan

Water Program	URL Program	SPJ Program	Other relevant Programs
Fragility and Water Security Sudan in South Sudan (Regional ASA, P177566) to identify opportunities for the World Bank to leverage water security interventions to strengthen resilience to fragility and climate shocks in Sudan and South Sudan Horn of Africa Groundwater for Resilience Project (Regional LEN, P174867) , to increase the sustainable access and management of groundwater in the Horn of Africa's borderlands	Enhancing Community Resilience and Local Governance Project Phase II & Additional Financing (ECRP II, P177093 & P180785) , to improve access to services, strengthen flood resilience, and enhance institutional capacity for local service delivery and integrated disaster risk management at the national and sub-national levels South Sudan Enhancing Community Resilience and Local Governance Project (P169949) , to improve access to basic infrastructure and to strengthen community institutions in selected counties in South Sudan	South Sudan Productive Safety Net for Socioeconomic Opportunities Project (P177663) , to provide cash transfers and access to income generating opportunities and strengthen the National Safety Net Delivery System. South Sudan Safety Net Project (P169274) , to provide temporary income opportunities to selected poor and vulnerable households and to strengthen safety net delivery tools in the Republic of South Sudan. Closes March 2023.	Public Financial Management and Institutional Strengthening Project (P176761) , to improve and build capacity for budget preparation and implementation Resilient Agricultural Livelihoods Project (RALP, P169120) to respond to the impact of flooding while preventing the current food insecurity situation from deteriorating even further into a major crisis and providing opportunities for resilience to future shocks. South Sudan COVID-19 Emergency Response and Health Systems Preparedness Project Additional Financing (CERHSP AF, P176480) to essential health and nutrition services in flood-prone areas.
<p>The RCRP in South Sudan: The RCRP aims to systematically and sustainably address flooding issues in South Sudan through a focus on sub-basin level solutions to flood and drought management and establishment of the information and institutional foundations to plan for and continuously adapt to flood and drought risks, while working to ensure the long-term integrity and resilience of flood control structures. The project complements existing efforts aimed at flood risk mitigation at the community level through the ECRP II as well as emergency efforts of humanitarian organizations that have dominated the response to date. The RCRP in South Sudan aims to balance flood management and drought infrastructure solutions with opportunities to work with natural processes to enhance flood-based livelihoods and reduce exposure and vulnerability to the impacts of climate change. It will also and will leverage opportunities for alignment with ECRP II, SPJ, RALP and CERHSP activities, particularly those on public works on flood protection and water retention structures and those promoting "climate smart" public works.</p>			

Mozambique



Water Program	URL Program	SPJ Program
<p>Rural and Small Towns Water Security Project (P173518), to increase access to improved water supply and sanitation services in selected small towns and rural areas of Mozambique</p> <p>Mozambique Urban Sanitation Project (P161777), to increase access to safely managed sanitation services and strengthen municipal sanitation service delivery capacity in selected cities</p> <p>Water Services & Institutional Support II (P149377), to: (i) Increase water service coverage in key cities of Mozambique's territory; (ii) Strengthen the institutional and regulatory capacity for water supply services in the northern, central and southern regions of Mozambique's territory; and (iii) Support Mozambique to respond promptly and effectively to an Eligible Crisis or Emergency</p> <p>Improving storage and infrastructure for water security and resilient economic growth in Mozambique (P176506, Programmatic PPA), to optimize public investment management of storage, at the national level, for improving water security and resilient economic growth in Mozambique.</p> <p>Mozambique Urban Water Security Project (LEN, P178653), under preparation</p> <p>National Water Resources Development (closed, P107350), focused on Corumana dam, closed in June 2020</p>	<p>Mozambique Northern Urban Development Project (P175266), to improve basic urban infrastructure and living conditions in selected cities in the North of Mozambique</p> <p>Northern Crisis Recovery Project (P176157), to improve access to basic services and economic opportunities for internally displaced persons and host communities in targeted areas of Northern Mozambique</p> <p>Maputo Urban Transformation Project (P171449), to improve urban infrastructure and strengthen institutional capacity for sustainable urbanization in Maputo</p> <p>Mozambique: Cyclone Idai & Kenneth Emergency Recovery and Resilience Project (P171040), (a) to support the recovery of public and private infrastructure and livelihoods; (b) to strengthen climate resilience in the areas most affected by Cyclones Idai and Kenneth; and (c) to provide immediate and effective response to an eligible crisis or emergency</p> <p>Mozambique Disaster Risk Management and Resilience Program (P166437), to strengthen the Government of Mozambique's program to finance and prepare for disaster response and to increase the climate resilience of vulnerable education infrastructure in risk-prone areas</p> <p>Mozambique Land Administration Project (Terra Segura) (P164551), to a) strengthen land tenure security in selected districts and improve the efficiency and accessibility of land administration services, and b) provide immediate and effective response to the emergency in Northern Mozambique</p> <p>The Emergency Resilient Recovery Project (closed, P156559), which focused on dikes in Centre Mozambique,</p>	<p>Social Protection and Economic Resilience Project (P173640), to improve the effectiveness and efficiency of the social protection system</p> <p>Harnessing the Demographic Dividend (P166100), to support the Government of Mozambique in increasing empowerment, access to education, and employment opportunities for targeted youth</p>



	closed in 2021.	
<p>The RCRP in Mozambique: In Mozambique, the project will build on the large existing program on climate change, for instance on the nature-based investments in Beira – to scale them up at the regional level. Moreover, it will closely dovetail the Urban Water Security PforR which is scaling up access to WASH by supporting preparation of critical large scale bulk water infrastructure (which cannot be financed under PforR but critical for long term urban water security) and develop systems for enhanced asset management. It will complement ongoing URL projects by complementing them with its geographical scope (South, Centre) and help move the country towards preparedness, rather than response. Although teams in Mozambique have often worked across sectors in past and ongoing project, the RCRP aims to mainstream this approach within the government too.</p>		

Comoros

Water Program	URL Program	SPJ Program	Others
--	Comoros Post-Kenneth Recovery and Resilience Project (P171361) which supports recovery and increase disaster and climate resilience of select public and private infrastructure in the areas affected by Cyclone Kenneth	Comoros Social Safety Net Project (P150754) which aims to increase poor communities' access to safety net, nutrition, and community services. Closes June 2023. Shock Responsive and Resilient Social Safety Net Project in Comoros (, P179291) , to protect human capital and strengthen resilience of poor and vulnerable households through social safety net in selected areas. Approval: December 2022.	Support to COVID-19 Vaccine Purchase and Health System Strengthening (P178279) . Comoros Financial Inclusion and Stability Project (P166107) Comoros Solar Energy Access Project (P177646) Comoros Interisland Connectivity Project (P173114)

The RCRP in Comoros is well aligned and complements activities under the Post-Kenneth Recovery and Resilience Project (P171361) and the Comoros Social Safety Net Project (P150754). The RCRP will complement the Post-Kenneth Project by investing in broader urban development and drainage master plans for selected cities, strengthening WRM institutions, strengthening the hydromet system and preparing designs for adaptation civil-works in sites that are not covered under Post-Kenneth project. Post-Kenneth was a recovery project with a primary focus on reconstruction while the RCRP will lay the foundation for future resilience projects. Similarly, the RCRP will complement the Social Safety Net Program as it will include climate sensitization and development of a new registry that will help target climate vulnerable people, and hence directly enhancing to the objective of country projects, which include strengthening the resilience of vulnerable households.

**Madagascar**

Water Program Madagascar National Water Project (P174477), to increase access to water services in the Greater Antananarivo area and select secondary towns and to improve the capacity of the water sector	URL Program Madagascar Disaster Risk Management Development Policy Financing with a Catastrophe Deferred Drawdown Option (Cat DDO) (P167941), to strengthen the Government of Madagascar's institutional, technical and financial capacity to manage disaster and climate-related risks Integrated Urban Development and Resilience Project for Greater Antananarivo (P159756), to enhance urban living conditions and flood resilience in selected low-income neighborhoods of Greater Antananarivo; and to improve the Recipient's capacity to respond promptly and effectively to an Eligible Crisis or Emergency	SPJ Program Social Safety Net Project (P149323), to support the Government in increasing the access of extremely poor households to safety net services and in laying the foundations for a social protection system, and accelerating the COVID-19 social protection response	Other relevant Programs Digital Governance and Identification Management System Project- PRODIGY (P169413), to strengthen the Identity Management ("ID-M") system and government capacity to deliver services in Selected Sectors
<p>The RCRP in Madagascar: The RCRP in Madagascar is well placed to help the country transition away from reactive responses to cyclones in the East and droughts in the South, by providing a system approach and an integrated geographical approach which brings solutions at scale in selected areas. Indeed, the RCRP provides support to medium and long-term solutions for both southern Madagascar (where to date, the approach has focused on emergency response efforts and humanitarian interventions) and cities in cyclone-risk areas of eastern Madagascar, building on emergency response approaches and the ongoing Urbanization review. The SPJ elements will allow for better aligned interventions - leveraging the benefits of SPJ programs to build, and perform priority O&M for key infrastructure, all in support of climate resilience. Until now, although many interventions have already focused on Southern Madagascar, to date not one has managed to harmonize all sectors and think of a large scale, integrated, and transformative project. The project will also support national level changes to empower key institutions (e.g., MEAH, CPGU, FID) to collaborate amongst each other and with regional partners, and create norms of working together to address climate resilience and climate change response at scale, including at a regional scale.</p>			

**Regional Portfolio**

- *Food System Resilience Program MPA*. Phase 1 (P178566) approved in FY22 (including Ethiopia and Madagascar); Phase 2 under preparation includes Tanzania (P179818), Phase 3 under preparation includes Mozambique, Somalia, Comoros, and Malawi (P176816).
- *Kariba Dam Rehabilitation Project* (P146515).
- *Nile Cooperation for Climate Resilience (NCCR) project* (P172848)
- *Horn of Africa Groundwater for Resilience Program MPA*. Phase 1 (P174867) approved in FY22 (including Ethiopia, Kenya, Somalia, and IGAD), Phase 2 (P179833) under preparation.
- *Enhancing Community Resilience and Local Governance Project Phase II* (P177093).
- *AFCRI-Sustainable Groundwater Management* in SADC Member States (P127086, P175355).
- *Ongoing cooperation with the Nile Basin Initiative*, under (i) AFCRI-Nile Cooperation for Results Project (P130694) and (ii) Nile Cooperation for Climate Resilience (P174867).
- *Girls' and Women's Economic Empowerment in Eastern and Southern Africa* (P179293), under preparation

The RCRP at the regional level: The RCRP will complement ongoing regional operations, and build upon the lessons learned from previous ones in multiple ways. For example, (a) it will complement the current focus of the Food System Resilience MPA by establishing robust foundations for large infrastructure, (b) build upon the lessons related to the design and operation of large dams from the Kariba Dam Rehabilitation project, (c) further strengthen the institutional capacity of ENTRO and SADC, enhancing the mechanisms for cooperation on water resources management and development in the region by building on the Nile Cooperation for Climate Resilience project and the AFCRI-Sustainable Groundwater Management in SADC Member States project, (d) ensure a robust Management Information System, building on the experience of the regional HoA Groundwater for Resilience MPA, as well as on the lessons related to the design of resilient rural water supply schemes.



ANNEX 4: Gender Equality in the RCRP

Differential Impacts of Water Related Climactic Shocks

1. Broader reviews at the regional level⁶⁴ have highlighted the differential impact of climactic shocks on women and girls, and how their resilience to these shocks is influenced by underlying gender inequality, and social norms. For example, women are particularly vulnerable to flood risk and other associated deprivations as they depend more heavily on agriculture and natural resources, shoulder the bulk of household and caregiving responsibilities, reside more often in disaster prone locations, tend to be more engaged in the informal economy for income, and lag behind men in terms of mobility, economic assets, and access to disaster-related services and information.
2. Over time, this “resilience gender deficit” has costly broader societal impacts, that risk reversing decades of human capital improvements. For example, studies have linked drought or decreased rainfall to an increased incidence of female child marriage by 3 percent in Sub-Saharan Africa, and to an increase in female child marriage, in school drop-out rates and in reports of gender-based violence in Mozambique.⁶⁵
3. Along similar lines, natural disasters in low- and middle-income countries have a more negative impact on women’s life expectancy than on men’s, with greater effect the stronger the disaster and the lower one’s socioeconomic rank.⁶⁶ Although men are overrepresented in risky and rescue professions in countries with large gender inequalities, gender gaps in access to information on disaster preparedness, access to public shelters and limits to mobility seem to contribute more to gendered mortality outcomes, putting women at a disadvantage.⁶⁷
4. There are roughly seven categories of gender gaps that influence whether men and women are equally impacted by floods and droughts; able to benefit from measures to enhance their resilience and minimize the impacts of such events; allowed to participate in post-disaster economic opportunities; and empowered to understand and influence decisions, investment planning and policies.
5. **South Sudan:** In South Sudan successive years of flooding have destroyed homes and crops, with debilitating impacts on women and female-headed households who have a primary role in food production and have limited access to ‘movable’ livestock assets compared to men.⁶⁸ Flooding has also disrupted women in collecting water and firewood – the major source of energy in 96 percent of households – leading them to traverse ever longer distances in search of functioning water points and dry wood for cooking, putting them at greater risk of GBV.⁶⁹ Limited access to land and property, as well as credit and savings, further impacts women’s and female-headed household’s resilience and ability to cope with floods. Recent floods have also destroyed a fifth of women and girl-friendly spaces⁷⁰ nation-wide, as well as

⁶⁴ Gender Responsive Disaster Risk Management, An Analysis of Gender Integration in National and Regional Disaster Risk Management Frameworks in Eastern and Southern Africa; 2021, UNICEF, IFRC.

⁶⁵ I.B.I.D. In Uganda, enrolment in the highest grade of primary school for girls was reduced by 5 percent, following a 15 percent reduction in rainfall,²² and child marriage was seen to rise in Sub-Saharan Africa by 3 percent following a drought.²³ In Mozambique, following the El-Niño induced drought, CARE found increased rates of child marriage rates, school drop-out rates among girls, reports of sexual and GBV, and increased reports of women and girls having to trade sex for food and money.

⁶⁶ Eric Neumayer & Thomas Plümper (2007) The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981–2002, Annals of the Association of American Geographers, 97:3, 551-566, DOI: 10.1111/j.1467-8306.2007.00563.x

⁶⁷ Gender Dynamics of Disaster Risk and Resilience. 2021. World Bank Group/GFDRR MDTF.

<https://openknowledge.worldbank.org/bitstream/handle/10986/35202/Gender-Dimensions-of-Disaster-Risk-and-Resilience-Existing-Evidence.pdf?sequence=1&isAllowed=y>

⁶⁸ BRACED, 2017. Building Climate Resilience in Fragile Contexts: Key Findings of BRACED Research in South Sudan. UK AID.

⁶⁹ Ibid.,

⁷⁰ A Women and Girls Friendly Space (WGFS) is a formal or informal place where women and girls feel physically and emotionally safe, comfortable,



over 56 percent of health facilities and some 400 schools.⁷¹ More than half of all IDPs and returned refugees live in partially damaged housing or makeshift shelters, increasing women's exposure to GBV as well as their vulnerability to flood events and recurring displacement.⁷² Incidents of GBV perpetrated against women and girls with inadequate shelter are pervasive and were reported by more than half of respondents in a 2017 study. Those without adequate shelter are also more exposed to disease.⁷³ Women and girls also experience high rates of malnutrition and constrained access to health services during floods due to social norms and gender disparities in mobility and assets. Even in comparatively well provided camps, in 2021, there was still a difference between men and women: 23 percent of women in humanitarian situations cited food assistance and 13 percent cited health assistance as their most urgent need, compared to 16 and 13 percent of men, respectively.^{74, 75} Previous research in South Sudan has shown that women and girls are usually the last to eat in their households and often first to reduce food consumption during shocks. Female-headed households, whose share in the population has increased to over 50 percent in some locations⁷⁶ on account of recurring and complex crises, are at particular risk of food and health insecurity.^{77, 78} Poor access to shelters and limited access to information and communication technologies also compound women's vulnerability to floods and reduce their preparedness and coping capacity in the aftermath of such events.⁷⁹ Evidence from other regions suggests that women are likely to be excluded from the economic benefits of integrated watershed management projects, despite taking on a greater share of the O&M and construction work compared to men.⁸⁰

6. Mozambique: Like South Sudan, many Mozambicans contend with extreme weather events, in the form of recurrent flooding, cyclones, and droughts. The 2011 Climate Change Vulnerability Index ranked Mozambique as the fifth most at-risk country in the world; in the last 42 years, 15 droughts, 20 floods and 26 tropical cyclones have been registered. Mozambique is fairly advanced in the integration of gender into legal frameworks (83 percent promote, enforce, and monitor gender equality, with a focus on violence against women) and with 42 percent of seats in parliament held by women. However, only 42 percent of indicators needed to monitor the SDGs from a gender perspective were available, with gaps in key areas, in particular: unpaid care and domestic work, key labor market indicators, such as the gender pay gap and information and communications technology skills. Nearly two-thirds of Mozambique's workforce is linked to agriculture, with the sector employing 90 percent of national working-age women and girls. Female headed household are more likely to live in poverty, work in agriculture, have less secure access to land, to be self-employed in the informal sector, and to have less formal education.⁸¹ Indicators on income, education, and longevity are all exceptionally low, and the poverty headcount of 63 percent among female-headed-households is considerably higher than that of male-headed households, which is 52 percent, with the discrepancy on the rise. The literacy rate for women

and able to express themselves. Depending on the context, WGFS can provide an opportunity for women and girls to gather and socialize informally and/or can be used as a platform for conducting more structured group activities.

⁷¹ UNOCHA, 2021. Humanitarian Needs Overview: South Sudan. UNOCHA.

⁷² Oxfam, 2019. No simple solutions: Women, Displacement and Durable Solutions in South Sudan. Oxfam International.

⁷³ Oxfam, 2017. South Sudan Gender Analysis: A snapshot situation analysis of the differential impact of the humanitarian crisis on women, girls, men, and boys in South Sudan. Oxfam International.

⁷⁴ UNOCHA, 2021. Humanitarian Needs Overview: South Sudan. UNOCHA.

⁷⁵ World Bank, 2020. Disasters, Conflict and Displacement: Intersectional Risks in South Sudan. GFDDR Knowledge Note.

⁷⁶ UN Volunteers, 2019, Supporting the livelihoods of women in South Sudan with UNDP

⁷⁷ Stockholm International Peace Research Institute, 2022. Climate, Peace and Security Fact Sheet: South Sudan.

⁷⁸ Hoth Mai, N. et al., 2018. Climate Change and Gender in South Sudan. The Sudd Institute.

⁷⁹ Erman, A. et al., 2021. Gender Dimensions of Disaster Risk and Resilience: Existing Evidence. World Bank/GFDDR.

⁸⁰ Singh, S. and Bhardwaj, N., 2020. Gender Gaps Under Integrated Watershed Management Project in Uttarakhand, India. FAO/Indian Council of Agricultural Research.

⁸¹ Mozambique Multidimensional Poverty Analysis Status and Trends, SIDA ,2019.

<https://cdn.sida.se/app/uploads/2020/12/01095839/mozambique-mdpa.pdf>



is 54 percent, which is a remarkable increase from 12 percent in 1980, but this is still much less than 74 percent of adult men.

7. **Madagascar:** Madagascar is particularly vulnerable to climactic shocks as one of the poorest countries in the world, with 78 percent falling below the poverty line in 2012 (the last available survey in the country), significantly below the regional average of 41 percent. High levels of stunting are closely linked to extremely poor sanitary conditions. In 2018, 70 percent of the population was employed in the agricultural sector, which is particularly vulnerable to disaster and climate-related shocks. However, Madagascar boasts a very narrow gender gap in literacy (76 percent women and 79 percent men according to UNESCO) and similar access to mobile phones (around 35 percent), however recent increases in internet access are much more attributed to men (55 percent) versus women (33 percent). Malagasy women and girls experience more significant impacts on school test scores and enrollment of girls and economic impacts of natural disasters are greater on women who are predominantly engaged in most precarious agriculture and informal sector activities and have lower rates of insurance and of adoption of climate-smart technologies. Madagascar has room for improvement in terms of the integration of gender into integrated water resources management (scoring a 40 out of 100 under SDG indicator 6.5.1). Important data gaps remain on women's role in water resources, flood planning, and disaster risk management at both the community and national level.

8. **Comoros:** Cyclones threaten Comoros every year and heavy rains cause flooding of rivers, and in concert with deforestation also promote instability of the land, causing landslides and rock falls, especially on the islands of Anjouan and Mohéli. Illiteracy is widespread (33 percent of men and 43 percent of women over 15 years old), a serious concern for risk communication. Health standards are extremely poor; for instance, 22.2 percent of children are affected by malnutrition. Professionals are often trained abroad and are then reluctant to return to Comoros due to the poor working conditions. Malaria and cholera are endemic. 23 percent of women who have been pregnant have given birth to at least one stillborn child (44.2 percent in rural areas). Comoros has a significant gender gap in terms of the integration of gender into integrated water resources management (20 out of 100), and in terms of the participatory processes in water resource management at either local or national levels.

Rationale for a Framework Approach to Improving Resilience of Women and Girls to Water-Related Climatic Shocks

9. Significant weaknesses remain in the quantification of these gaps, and in the application of consistent frameworks and feedback loops to benchmark over time and across countries. The degree of gap, and specific drivers vary both within and among countries based on cultural and social norms, capacity, past efforts at female empowerment and educational attainment, and level of integration of gender considerations into policies, processes, and practices. One of the few cross-country data sources (UN SDG 6.5.1) draws largely from assessments of policies (versus outcome or beneficiary data).

10. Bringing a broad range of Government and non-Governmental stakeholders together to undertake a standardized diagnostic can play an important role in enhancing country and line agency level ownership of efforts to improve gender equality in resilience planning and mitigation. Efforts to impose gender equality without building adequate buy-in, and without looking at underlying gender norms, levels of social and economic empowerment, or institutional incentives often encounter problems. For example, reviews of gender efforts in South Sudan, point to past efforts to use quotas on gender representation in local development committees that have not met their target or led to substantive increases in voice because of the need for a more holistic approach that addresses social norms, processes, and incentives. In order to address this heterogeneity, as well as the need to build ownership for nationally or even locally adapted gender actions, a framework approach will be used, which build up the lacking evidence base through local assessments.

Approach to Strengthening Gender Resilience in RCRP

11. The project will approach gender via three tracks: (i) a Women in Water Resilience Framework diagnostic for each country; (ii) implementation of a regional action plan to increase the representation of women in technical and leadership



positions in participating regional water organizations, and (iii) Gender mainstreaming in investment activities and in guidance.

The Women in Water Resilience Framework

12. A standardized Women in Water Resilience diagnostic would assess and rate the level of maturity of a national-level DRM/Flood/Drought program according to seven most typical gender gaps. The process of the diagnostic would identify and build consensus around which gap area is most important to tackle within the specific country context and based on past experience. Participatory discussion would bring in the experience not only of line DRM, water resource agencies, but also of Ministries responsible for gender, CSOs with community-level experience in trying to empower women, and women's organizations. Further, the diagnostic provides benchmarked data across the region following a structured (and therefore comparable) framework/set of indicators on the degree of development of gender in DRM/flood/drought planning and mitigation. The output of the diagnostic would be the commitment to a specific national-level actions, targets, and indicator(s) to be tracked in this and or subsequent SOPs. Table A4.2 provides a preliminary list of gender gaps based on previous studies, some of the drivers of those gaps, the respective potential activities (based on the scope of the project) to mitigate gaps, and suggestions for indicators. Clients can utilize this matrix to formalize planning for gender sensitive work, allowing early planning for budget and procurement.

Table A4.2: Preliminary list of gender gaps

Type of Gap	Potential Impact of Gap	Potential Actions	Potential Indicators
Lack of systems to collect data and design for sex disaggregated differences	Programs developed under Master Planning do not have sufficient sex disaggregated data at design or during implementation to understand and therefore integrate subsequent actions to address underlying gender inequalities.	Collect data for baselines on key gender gaps (on representation in sector institutions and decision-making/technical positions at national and community level, access to information and recovery services), and institutionalizing systems to collect and share such data by relevant Ministries/partners.	Completion of Baseline - Women in Water Resilience Diagnostic System for regular collection of sex disaggregated data on resilience in place
Flood/drought/disaster planning, response and mitigation policies and national or transboundary investment program design fail to integrate gender responsive elements and supporting actions, capacity building or human resources to implement those elements.	Programs developed under Master Planning fail to account for/integrate actions to mitigate underlying gender inequalities, and therefore fail to improve access to information, services, infrastructure, voice and livelihood opportunities (in sum, resilience) for women and men equally. This can stem from a lack of sex disaggregated data, from a lack of political will, from lack of understanding of the links between such gaps and resilience outcomes, from lack of participatory policies or entry points for women's organizations to provide input on such policies, or from underlying social norms prevalent among policymakers themselves (lack of an enabling environment). ²¹ Gaps in implementation of gender-	Public consultations and participatory development with national women-led organizations and women and youth committees on Master Plans (and allocation of resources for such processes) Gender audit of Draft Master Plans by third parties and/or Ministries responsible for Gender Equality Sensitization of policymakers of impact of lack of gender responsive programs and larger social and economic impact Capacity building for line Ministries and implementing agencies in gender responsive DRM, Flood and Drought management Capacity building for sub-national implementing bodies on gender-responsive DRM, Flood, drought management	Rating of Master Plan according to one of several potential frameworks on gender equality in DRM.



	responsive policies can stem from lack of translation of such policies into accessible and feasible operational guidance, lack of resource allocation, lack of capacity building for front-line service providers, or lower prioritization relative to other issues.		
Lack of equal representation at technical and decision-making levels in disaster risk management, hydromet or water resource institutions	Unequal employment within the sector Policies and programs do not reflect an understanding of specific gender challenges in hiring and retaining female technical staff.	See Equal Aqua	Change in % of technical and management staff in target institutions Change in % women staying in positions compared to baseline Change in % promotions for women compared to baseline
Lack of equal voice or agency to influence the design of resilience, DRM interventions [tied to lack of political power or representation on relevant decision-making committees, bodies]	DRM interventions less likely to respond to the specific needs of women who often play a central role in household recovery, and who may have different preferences than men in terms of the types of solutions offered, and the design of local investments.	Require local Emergency Flood Warning, DRM committees, include minimum quota female members Reserve % leadership positions in these committees for women Provide training for women and girls on technical aspects of DRM Provide sensitization for men and boys on the importance gender equality in DRM.	Number of committees with quotas met. Number of females participating in training and education. Number of males participating in gender equality sensitization.
Women are not able to equally access information on flood early warning, on disaster risks, on preparedness or response strategies OR on technical education on flood or drought dynamics.	Women are not able to shift behavior (planting, for example) to minimize damage, to participate effectively in community-level decision-making. In emergencies women are often tasked with moving households, thus making this information critical. Lower levels of literacy (including in dominant languages when there are regional differences), lower access to cell phones, or lower access to government extension services may contribute. ²²	Test the best delivery modes available to women and girls and engage them in design of such programs Support interactive flood early warning systems [for example some targeted community radio programs such as Farm Radio] Develop interactive programs, didactic tools to target women and girls to build technical knowledge on flood or drought dynamics Engage female community mobilizers to impart flood preparedness information to women and girls Train community leaders on flood preparedness and support them in organizing wider informational events/community meetings for women and girls.	Percentage of sampled beneficiaries reporting increased flood preparedness due to informational activities
Lower level of access to post-disaster recovery funding and livelihood restoration activities following drought/flooding event.	Women's income decreases to a greater degree than men. Can be driven by lower levels of registration (for example with IDs, in existing safety net programs), lower levels of land title (if benefits	Provide work for cash opportunities that explicitly recruits women and has quotas for women in public works on flood protection structures and those promoting "climate smart" public works	Change in % of eligible women receiving Social Protection benefits relative to baseline change in % of women vs. % of men participating in SPJ activities and reporting food insecurity relative to baseline



	derive to the person whose land is listed in title), time constraints.		
Inadequate or poorly designed flood emergency shelter (lack of lighting, locks, separate sanitary facilities, GBV services and prevention efforts) and lack of protective social networks/structure during emergency relocation.	Linked to higher rates of gender-based violence, link to lack of livelihood support further can be linked to other coping mechanisms (increased child marriage, sextortion etc.), increased school drop-out rates, etc.	<p>Integrate feedback from women on security issues in design decisions on emergency shelters.</p> <p>Support the construction of flood shelters with women-only showers, latrines, and MHH facilities.</p> <p>Ensure equipment of shelter sanitation facilities for MHH to support and protect women and girls.</p> <p>Create women- and girl-friendly spaces at flood shelters, where beneficiaries can obtain information and referrals to health, nutrition and GBV response services</p> <p>Design and implement GBV prevention and mitigation strategies – with a specific focus on flood shelters and risk communication.</p> <p>Ensure that the awareness campaigns include elements to reduce GBV in disaster situations.</p>	<p>Share of shelters managed by female community organizers/women's groups (% of total)</p> <p>Share of shelters meeting basic requirements to reduce GBV (lighting, separate sanitary and WASH facilities with locks, women and girl friendly spaces with referrals to health, nutrition and GBV response services (target: XX% of total)</p> <p>Share of shelters with GBV response and referral protocols in place/staff trained on GBV case management approaches (target: XX% of total)</p>

Increasing Women's Technical and Leadership in Regional and Transboundary Water Organizations

13. The increasing frequency of drought, recurrent flooding, and climactic disasters because of climate change, has elevated the importance of transboundary water resource management. A key project objective is therefore to strengthen organizations facilitating regional collaboration on flood mitigation, early warning, hydromet and water resource management. Despite the unequal impact of these phenomena on women, they are not well represented in technical and decision-making positions within the committees and transboundary water organizations. A pilot assessment (in progress) of several Eastern Africa transboundary water organizations suggests that there are significant gender gaps in this sector: aggregated data from two institutions are that 19 of 59 core staff are women (32 percent); however, only 2 of 12 (17 percent) are engineers, and one of 11 (9 percent) are managers.

14. Under this activity (see below for further detail), a series of assessments of driving factors, benchmarking using the Equal Aqua framework,⁸² and training/mentorship/internships would be used to increase the representation of women in leadership and technical positions within the regional organizations. Leveraging the support of regional peer networks will help to stimulate change and provide needed networking support to women in these institutions. A specific targeted percent change in the proportion of technical level and leaders in the partner organizations has been included in the results framework.

Mainstreaming gender actions across investment programs

15. In parallel to the diagnostics referenced above, the project will integrate actions where gaps have already been identified. For example, interventions that will strengthen capacity for community-level understanding of floods and droughts, and community-level engagement in operations and maintenance of flood mitigation infrastructure, can be

⁸² Equal Aqua is a partnership platform hosted by the Water Global Practice in the World Bank and includes the largest global database and standardized measures of women in water institutions, in addition to capacity building and peer to peer exchange.



adapted to better target women by providing training for women and girls on flood management (or watershed/groundwater/river basin management) and using didactic tools or models accessible to less literate populations so that they are competent to use information for making decisions and are well-informed to contribute to investment planning and operations and maintenance. Along similar lines, design of systems for flood early warning, would account for differences in information accessibility by women, including by using delivery mechanisms more likely to reach women (e.g., community radio). Component 4 will reach out to women-led households in countries such as South Sudan where they have been confirmed to be a growing and particularly vulnerable category post-disaster.

Increasing Women's Technical and Leadership in Regional and Transboundary Water Organizations

16. Gender inequalities are often reflected in education and employment patterns within the water sector, where women's representation in higher-level, technical, and higher-paid positions is low compared with that of men, but higher across unpaid and voluntary positions (IOM, 2020). Depending upon the context, barriers to women's employment (hiring, retention, and promotion) in WRM and development and related disaster planning starts all of the way back to secondary and tertiary education completion (both of which intersect with household economics and expectations for marriage), to education in engineering, ICT or related fields, to access to networks that are critical for early career development, lack of professional and family support for career progression, job recruitment processes that limit women applicants or that do not equitably recognize their experience, and inadequate or nonformalized maternity leave policies and practices. Beyond preventing women from working in the water sector, these barriers also have consequences for women who do manage to enter the sector and face lower salaries, lack of training opportunities, and sometimes lack of safety in the workplace.

17. Regional WRM careers often cross over with tracks in government and suffer from the same gender gaps as those found at other levels (e.g., national units, county and state offices, river basin offices, university, and others). Activities in the Regional Climate Series of Projects will both work with national and local institutions and regional or transboundary water organizations such as the Southern Africa Development Community Secretariat, the Nile Basin Initiative centers, and possibly others. A pilot assessment of five African transboundary institutions related to WRM and development indicates significant gender gaps in leadership representation and technical staff; however, it should be caveated that there are large differences in the types and numbers of technical staff in these organizations. Some in the pilot assessment noted that there are very low numbers of women from the Member States with the needed education that the regional institution can pull from.

18. According to UNESCO most countries reporting the lowest proportions of women in engineering and technology are in Africa.⁸³ However, in Sub-Saharan Africa, South Africa has attained gender parity, with women accounting for 45 percent of researchers in these fields since 2015. Mauritius also attained gender parity in 2015. Senegal stands out for having raised the share of women from 10 percent to 29 percent of the research pool between 2006 and 2015.

Table A4.3: Share of female tertiary graduates in engineering, ICT, and natural sciences (not including health science) as of 2018

	Engineering (%)	Natural Sciences (%)	ICT (%)
Comoros	Not reported	Not reported	Not reported
Madagascar	19	37	34
Mozambique	29	45	21
South Sudan	Not queried	Not queried	Not queried
SSA Average	24	37	31

⁸³ UNESCO Science Report: The race against time for smarter development (2021)



19. Less is known about post university outcomes. Comoros and South Sudan do not report the percentage of female researchers as a share of total researchers by field in the UNESCO Science Report. Regular sex-disaggregated data on researchers are not being collected regularly by most countries in sub-Saharan Africa. Madagascar and Mozambique report 25 percent and 24 percent of female researchers, respectively, in engineering and technology.

20. Even for countries that do report on the number of women enrolled in tertiary education in engineering, ICT, and natural sciences, it is not known what percentage of graduates are women. There is insufficient information on the barriers that women in these countries face in early WRM careers but broadly women who study STEM fields are less likely to enter STEM careers and exit these careers earlier than male peers.⁸⁴ Early career appears to be a critical period if we extrapolate from Kenya's data that there are far less registered female engineers than females in engineering schools. While it is out of scope of the RCRP program to address barriers such as family expectations and social pressures, there are many other factors that likely contribute to determining if women continue from their education to a career in their field.

21. Mobility tends to be beneficial for a technical specialists' output and career. Yet, in a recent survey of 7,513 African scientists, the largest gender difference in mobility was found in the field of engineering and applied technologies: 85 percent of women but only 63 percent of men had obtained their PhD in Africa and only 23 percent of female respondents had studied or worked abroad in the past three years.⁸⁵ Other factors that intersect with mobility are relationships with mentors and access to professional networks. Numerous interventions have been implemented to help increase the number of women in engineering (Women in Tech Africa, based in Accra, Ghana, which hosts an annual event dedicated to women in machine learning, and the Nairobi chapter of Women in Machine Learning and Data Science, for example). Studies have reported differing levels of efficacy of such programs, but the very different designs of these programs do not readily allow aggregation. For example, it is not known if mentors would be male or females -- studies suggest that female mentors help more to reduce the stigma felt by women engineering students; however, may have less ability to help with networking in male dominated fields (see Dennehy and Dasgupta, PNAS 2017, for example).

22. In the Nile Basin, the Eastern Nile Technical Regional Office, in Addis Ababa has been hosting internships for the four Member States (Egypt, Sudan, South Sudan, and Ethiopia) since 2011.⁸⁶ ENTRO actively recruits women to the Internship and Young Professionals (YP) Program, and while a gender gap did persist, it gradually narrowed over time. In the most recent three cohorts, women comprised 38 percent of participants on average, which is an increase from 24 percent in the first three cohorts. Recent South Sudanese interns and YPs consisted of 5 women and 3 men. An assessment through this project would be undertaken to determine if participation in the internship or YP programs is associated with career outcomes.

23. The RCRP will address the gap in women in medium- and high-skilled technical positions at water resource management and relevant disaster risk management organizations to increase the voice and influence of women in regional flood/drought/disaster planning. The project will address the gap in women in medium- and higher-skilled jobs at partner⁸⁷ regional organizations by creating a network between tertiary education institutions, regional water institutions, and local/national DRM and water institutions to provide international internship and young professional training to women in relevant technical fields, and to improve mentorship and networks while reducing barriers, such as social stigma. A second stream of action will be taken to mitigate barriers that women experience in the workplace.

⁸⁴ The Equality Equation: Advancing the Participation of Women and Girls in STEM. World Bank Group, 2020

⁸⁵ Heidi Prozesky & Catherine Beaudry, 2019. "Mobility, Gender and Career Development in Higher Education: Results of a Multi-Country Survey of African Academic Scientists," *Social Sciences*, MDPI, vol. 8(6), pages 1-14, June.

⁸⁶ <http://entro.nilebasin.org/entro/internship-program>

⁸⁷ Regional institutions in phase 1 are the SADC Secretariat and the Nile Basin Initiative. Future phases may bring in additional regional organizations.



Regional institutions in the program will work with Equal Aqua (EA)⁸⁸ to initiate institutional reforms that would enhance the retention of women specialists. EA provides participating water organizations the framework, diagnostic tools and knowledge on step-by-step processes, human resource policies, and promising approaches to boost female recruitment, retention, and promotion in water sector jobs.

24. This work will begin with assessments of women in relevant tertiary education programs, institutional gender representation, a baseline of the number of men and women applicants for recent technical specialist positions at regional institutions, and EA's assessment of workplace practices for participating regional institutions. The assessments will be used to design programs institutional steering committees and councils of ministers will inform the details of the implemented design. The RCRP will measure the number of women applicants and women in medium- and high-skilled jobs related hydrology and informatics and managerial positions at partner institutions before, at mid-term, and at project completion. The project will target a 5 percent reduction in the gap between medium- and high-skilled/management positions in targeted regional and transboundary water institutions.

25. The results from this work will be useful for project scaling up and future SOP design. Quantifying the change in the gender gap from tertiary education institution enrollment to women having a position in these fields, and the drivers of the worsening of the gender gap at this stage will be a major contribution to the work in women's empowerment. Achievement of the outcome equates to more women experts working in climate-resilient planning and water management. It is a fact that water shocks impact people differently, depending on their identity (gender, socioeconomics, marital status, age, disability, etc.). Yet there is an almost absence of women informing decisions within the water management institutions. If more women are contributing to implementing flood early warning systems and planning flood management infrastructure, these core assets are predicted to be more effective and sustainable. Therefore, closing this gender gap will contribute to the project outcomes *Improved regional information systems in use for decision making related to droughts, flood and/or cyclones* and *Manuals/maps developed for climate sensitive/informed social protection programs approved at the technical level*.

⁸⁸ <https://www.worldbank.org/en/topic/water/brief/inclusive-water-institutions-platform>