



ADAPTATION FUND

## ADAPTATION FUND BOARD SECRETARIAT TECHNICAL REVIEW OF PROJECT/PROGRAMME PROPOSAL

PROJECT/PROGRAMME CATEGORY: Pre-Concept for a Regional Project

<b>Countries/Region:</b>	Malawi, Mozambique, and Zambia	
<b>Project Title:</b>	Upscaling Groundwater-Based Natural Infrastructure (GBNI) to Support Water Resilience in Selected Transboundary Aquifers (TBAs) of Southern Africa	
<b>Thematic focal area:</b>	Transboundary water management	
<b>Implementing Entity:</b>	International Fund for Agriculture Development	
<b>Executing Entities:</b>	SADC Groundwater Management Institute	
<b>AF Project ID:</b>		
<b>IE Project ID:</b>		<b>Requested Financing from Adaptation Fund (US Dollars):</b> 14,000,000
<b>Reviewer and contact person:</b>	Hugo Remaury	<b>Co-reviewer(s):</b>
<b>IE Contact Person(s):</b>	Claus Reiner	

<b>Technical Summary</b>	<p>The project "Upscaling Groundwater-Based Natural Infrastructure (GBNI) to Support Water Resilience in Selected Transboundary Aquifers (TBAs) of Southern Africa" aims to reduce the adverse impacts of climate variability and change through joint management of shared surface water and groundwater, identification of groundwater-dependent ecosystems and livelihoods diversification. This will be done through the five components below:</p> <p><u>Component 1:</u> Baseline assessment: Establishing the baseline and understanding of solutions (USD 1,754,546)</p> <p><u>Component 2:</u> Groundwater protection zoning of GDEs and Ecosystem Restoration (USD 750,000)</p> <p><u>Component 3:</u> Managed Aquifer Recharge (MAR) solutions in the Shire River Aquifer System/Sand and Gravel Aquifer (USD 4,000,000)</p> <p><u>Component 4:</u> Effective conjunctive land-use and water management (USD 4,000,000)</p> <p><u>Component 5:</u> Aquifer governance (USD 950,000).</p> <p><u>Requested financing overview:</u></p>
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	<p>Project/Programme Execution Cost: USD 1,272,727  Total Project/Programme Cost: USD 12,727,273  Implementing Fee: USD 1,272,727  Financing Requested: USD 14,000,000</p> <p>The proposal includes a request for a project formulation grant and/or project formulation assistance grant of USD 33,000.</p> <p>The initial technical review raises some issues, such as the alignment with the Fund's Environmental and Social Policy, as well as guidance on Unidentified Sub-Projects, as discussed in the number of Clarification Requests (CRs) and Corrective Action Request (CAR) raised in the review.</p>
Date	28 January 2025

Review Criteria	Questions	Comments First Technical Review 28 January 2025	Response
Country Eligibility	1. Are all of the participating countries party to the Kyoto Protocol and/or the Paris Agreement?	<b>Yes.</b>	
	2. Are all of the participating countries developing countries particularly vulnerable to the adverse effects of climate change?	<b>Yes.</b>  Climate change is expected to significantly affect water resources in all three participating countries, with more frequent hydrological droughts and extreme rainfall events. The dynamic and declining water availability under future climate projections will lead to greater pressure to exploit untapped and little-known groundwater resources in the participating countries' river basins.	
Project Eligibility	1. Have the designated government authorities for the Adaptation	<b>Yes.</b> As per the Endorsement letter dated 18 <sup>th</sup> December 2024 (Malawi),	

	Fund from each of the participating countries endorsed the project/programme?	17 November 2023 (Mozambique), and 8 <sup>th</sup> August 2024 (Zambia).	
	2. Has the pre-concept provided necessary information on the problem the proposed project/programme is aiming to solve, including both the regional and the country perspective?	<b>Yes.</b>	
	3. Have the project/programme objectives, components and financing been clearly explained?	<p><b>Yes.</b></p> <p><b>CR1:</b> The proposal should briefly clarify how the Managed Aquifer Recharge (MAR) solutions are expected to support community resilience and improved livelihoods (Component 3 expected outcome).</p> <p><b>CR2:</b> Although the proposal states that one of the project's objectives is to implement early warning systems (EWS), investments in such EWS are not mentioned anywhere else in the proposal. Please kindly clarify whether the project intends to establish or support existing EWS.</p>	<p><b>Response CR1:</b> Additional text below has been added on paragraph 3 in the tracked changed version.</p> <p>“Managed Aquifer Recharge (MAR) ensures a reliable and sustainable groundwater supply, even during drought or dry seasons, reducing reliance on unpredictable rainfall or surface water sources. By storing water underground during wet seasons, MAR provides an essential reserve for communities during water shortages, ensuring access to water for drinking, agriculture, and industry. MAR also supports year-round farming, enabling multiple cropping cycles and diversifying income sources. Groundwater is a natural storage system, providing a buffer against climate variability. Community-led MAR projects, such as recharge wells and check dams, have successfully restored groundwater levels in regions under</p>

			<p>water stress, thereby allowing farmers to cultivate crops throughout the year and enhancing rural livelihoods.”</p> <p><b>Response CR2:</b> Existing early warning system for MAR will be supported for maintaining MAR operations' effectiveness, sustainability, and safety. This system facilitates monitoring and predicting potential risks, including water quality concerns, over-recharge incidents, or system malfunctions, enabling prompt and appropriate interventions.</p>
	<p>4. Has the project/programme been justified in terms of how:</p> <ul style="list-style-type: none"> <li>- it supports concrete adaptation actions?</li> <li>- it builds added value through the regional approach?</li> <li>- it promotes new and innovative solutions to climate change adaptation?</li> <li>- it is cost-effective?</li> <li>- it is consistent with applicable strategies and plans?</li> <li>- it incorporates learning and knowledge management?</li> <li>- it will be developed through a consultative process with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and</li> </ul>	<p><b>Yes.</b></p> <p><b>CAR1:</b> Please add in the proposal a commitment for the project to comply with the Fund's Environmental and Social Policy, in addition to IFAD's SECAP.</p> <p><b>CAR2:</b> The Environmental and Social Policy implies that all environmental and social risks related to a project are identified by the time of submission of a proposal. Activities that have not been formulated at the time of submission to the extent that their environmental and social risks can be identified are called Unidentified Sub-Projects</p>	<p><b>CAR1:</b> Additional text on paragraph 9 in the revised track changed document has been added to comply to Funds Environment and Social Policy.</p> <p>“The project commits to full compliance with the Adaptation Fund’s Environmental and Social Policy, in addition to IFAD’s Social, Environmental, and Climate Assessment Procedures (SECAP). Environmental and social risks will be systematically identified and , assessed at concept note and proposal stages and managed</p>

	<p>Social Policy of the Adaptation Fund?  - it will take into account sustainability?</p>	<p>(USPs). Given that their concrete activities will rely on the outcomes of feasibility studies carried out during implementation, such USPs are inevitable for activities planned under components 3 and 4. USPs may only be allowed under certain conditions described in the Updated guidance for IEs on the use of USPs. Please describe how IFAD will ensure compliance with such guidance on USPs when developing the concept proposal.</p>	<p>throughout implementation, ensuring adherence to both IFAD and the Fund's safeguard requirements.</p> <p><b>CAR2.</b>Additional text on paragraph 9 also indicated below describes how IFAD will ensure compliance with USPs.</p> <p>'IFAD will integrate an environmental and social risk assessment framework. This will include a screening mechanism to classify USPs based on potential environmental and social risks at concept note level and proposal stages, ensuring that feasibility studies incorporate comprehensive risk identification and mitigation strategies. IFAD will also establish a monitoring system with clear review and approval processes for USPs before implementation, ensuring alignment with the Adaptation Fund's safeguard requirements. Additionally, stakeholder engagement and participatory planning will be prioritized to assess risks at local levels and integrate adaptive management measures. Capacity-building initiatives for executing partners, particularly SADC-GMI and national focal institutions, will ensure</p>
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			adherence to the USP guidelines throughout project implementation'.
	5. Does the pre-concept briefly explain which organizations would be involved in the proposed regional project/programme at the regional and national/sub-national level, and how coordination would be arranged? Does it explain how national institutions, and when possible, national implementing entities (NIEs) would be involved as partners in the project?	<b>Yes.</b>  <b>CR 3:</b> Unless IFAD intends to act as executing entity during implementation of the project, please remove from pages 1 and 5 references to IFAD being the "PFG executing entity".	CR3: No amendment needed based on communication with AF Secretariat 2/3/2025".
Resource Availability	6. Is the requested project / programme funding within the funding windows of the programme for regional projects/programmes?	<b>Yes.</b>	
	7. Are the administrative costs (Implementing Entity Management Fee and Project/ Programme Execution Costs) at or below 10 per cent of the project/programme for implementing entity (IE) fees and at or below 10 per cent of the project/programme cost for the execution costs?	<b>Yes.</b>	
Eligibility of IE	8. Is the project/programme submitted through an eligible Implementing Entity that has been accredited by the Board?	<b>Yes.</b>  IFAD's accreditation expiration date is 21 December 2025.	



## PRE-CONCEPT FOR A REGIONAL PROJECT/PROGRAMME

### PART I: PROJECT/PROGRAMME INFORMATION

**Title of Project/Programme:** Upscaling Groundwater-Based Natural Infrastructure (GBNI) to Support Water Resilience in Selected Transboundary Aquifers (TBAs) of Southern Africa

**Countries:** Malawi, Mozambique, and Zambia

**Thematic Focal Area<sup>1</sup>:** Transboundary water management

**Type of Implementing Entity:** Multilateral Implementing Entity

**Implementing Entity:** International Fund for Agriculture Development

**Executing Entities:** SADC Groundwater Management Institute and (International Fund for Agriculture Development as PFG Executing Entity only)

**Amount of Financing Requested:** 14,000,000 (in U.S Dollars Equivalent)

**Project Formulation Grant Request:** Yes  No

**Amount of Requested financing for PFG:** 33 000 (in U.S Dollars Equivalent)

**Letters of Endorsement (LOE) signed for all countries:** Yes  No

*NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: <https://www.adaptation-fund.org/apply-funding/designated-authorities>*

**Stage of Submission:**

- This pre-concept has been submitted before
- This is the first submission ever of the pre-concept

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

**Please note that pre-concept should not exceed 5 pages (in addition to this first cover page)**

<sup>1</sup> Thematic areas are Food security; Disaster risk reduction and early warning systems; Transboundary water management; Innovation in adaptation finance.

## Project Background and Context:

1. Joint development and management of shared waters are widely acknowledged for increasing resilience and enhancing water security. The importance of transboundary water cooperation is reflected in Sustainable Development Goal (SDG) 6.5 and considered a critical component to ensuring water and sanitation for all (SDG6) and a critical requirement and catalyst for achieving other SDGs on poverty, food security, health and wellbeing, sustainable energy, climate action, ecosystem protection and peace<sup>2</sup>. However, many Member States in the Southern African Development Community (SADC) show deepening water scarcity and food and energy insecurity crises with limited implementation of climate change adaptation. The predictions are that climate change will significantly impact water resources globally and in Southern Africa, with more frequent hydrological droughts and extreme rainfall events. Projected and continuing variability of the amount, intensity, and predictability of rainfall in much of Southern Africa due to climate change will change how the region views its groundwater resources to support climate resilience. The dynamic and declining water availability under future climate projections will lead to greater pressure to exploit untapped and little-known groundwater resources. The Shire River Aquifer system within the Zambezi River Basin in southern Malawi and central Mozambique is experiencing high inter-annual climate variability<sup>3,4</sup>. The average annual temperature shows a statistically significant increasing trend<sup>3,5</sup> and rainfall patterns may continue to change. The Sand and Gravel Transboundary Aquifer (TBA) shared between Malawi and Zambia faces similar water insecurity issues. In addition, the impacts of existing climate extremes, including severe floods, are extensive, as illustrated by Cyclones Idai (2019) and Freddy (2023). The limited amount of infrastructure for regulating the flow of the Shire River Aquifer System, save the Kamuzu Barrage in Liwonde, indicates that natural infrastructure solutions for storage and flood attenuation, including aquifers, hold a lot of potential<sup>5</sup>. Further, the growing reliance on groundwater calls for understanding the biodiversity status of groundwater-dependent ecosystems (GDEs) to inform decisions around groundwater management.

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## Project Objectives:

- To reduce the adverse impacts of climate variability and change (i.e., floods and droughts) through joint conjunctive management of shared surface water and groundwater, including using natural infrastructure (e.g., aquifers and wetlands) and implementing early warning systems.
- To identify GDEs in transboundary settings, their role in ecological functioning and minimum thresholds of GDEs to respond to disturbances.
- To promote catchment management (e.g., reducing overexploitation, revitalising natural vegetation) to enhance water quality, stream flow and groundwater retention.
- To diversify and strengthen the livelihoods of the most vulnerable communities through piloting and demonstrating concrete climate change adaptation measures based on Groundwater Based Natural Infrastructures (GBNIs) in local Resilience Hubs.

## Project Components and Financing:

Project Components	Expected Outcomes	Expected Outputs	Countries	Amount (US\$)
1. Baseline assessment: Establishing the baseline and understanding of solutions	Technical assessment of GBNI solutions	1.1 TDA and Joint Strategic Action Plans (JSAPs) for the Shire River Aquifer System Sand and Gravel Transboundary Aquifer 1.2 Situational analysis undertaken and GBNI Solutions identified 1.3 GDEs mapped, and ecological functions understood 1.4 Flood and drought-prone areas mapped 1.5 Water Storage Scenarios Defined and decision criteria established	Malawi/ Mozambique/ Zambia	1,754,546

<sup>2</sup> <https://unece.org/environmental-policy/events/contribution-transboundary-water-cooperation-achieving-sustainable>

<sup>3</sup> IWMI, & SADC-GMI. (2018). Transboundary Diagnostic Analysis for the Shire River-Aquifer System.

<sup>4</sup> MoAIWD. (2015). Thematic Assessment: Climate change - Development of a Basin Planning Framework Report on Climate Change Analysis

<sup>5</sup> IWMI & SADC-GMI (2019). Strategic Action Plan for the Shire River-Aquifer System.



Project Components	Expected Outcomes	Expected Outputs	Countries	Amount (US\$)
2. Groundwater protection zoning of GDEs and Ecosystem Restoration	Ecosystem protection Sustainability criteria and threshold limits	2.1 Groundwater protection zones or source water protection areas delineated in the Shire River Aquifer System and Sand and Gravel Transboundary Aquifer, incorporating ecosystem-based approaches to ensure sustainable management and protection.	Malawi/ Mozambique/ Zambia	750,000
3. Managed Aquifer Recharge (MAR) solutions in the Shire River Aquifer System/Sand and Gravel Aquifer	Infrastructure resilience Community resilience and improved livelihoods	3.1 Pre-feasibility studies conducted at ten (10) potential MAR sites 3.2 5 Feasibility studies and detailed designs conducted 3.3 5 MAR schemes implemented, with groundwater monitoring <u>and early warning systems</u>	Malawi/ Mozambique/ Zambia	4,000,000
4. Effective conjunctive land-use and water management	Improved food security Improved groundwater use efficiency Groundwater protection from contamination Climate shock buffering	4.1 Pre-feasibility studies conducted at ten (10) current community gardens 4.2 5 Feasibility studies and optimisation of current conjunctive use schemes conducted 4.3 Conjunctive land-use and water management practices implemented (reforestation, gully reclamation, sustainable land use) 4.4 Farmer awareness raised	Malawi/ Mozambique/ Zambia	4,000,000
5. Aquifer governance	Improved groundwater governance and management Sustainability criteria and threshold limits implement	5.1 Multi-Country Cooperation Mechanism for Groundwater established 5.2 Model agreements on aquifer utilisation shared with riparian countries for adoption 5.3 Local groundwater management institutions based on GESI considerations conducted 5.4 Citizen science groundwater monitoring programmes implemented.	Malawi/ Mozambique/ Zambia	950,000
6. Total				11,454,546
7. Project Execution cost				1,272,727
8. Total Project Cost				12,727,273
9. Project Cycle Management Fee charged by the Implementing Entity (if applicable)				1,272,727
<b>Amount of Financing Requested</b>				<b>14,000,000</b>

**Project Duration: (5 YEARS)**

## PART II: PROJECT JUSTIFICATION

2. In Malawi, Mozambique and Zambia, the populations living in TBAs face high poverty levels and vulnerability to floods and droughts. Climate change will increase temperature and intensify rainfall variability. Water quality is likely to decrease due to increased economic activity and population. Several barriers exist to the sustainable, cooperative and equitable use of transboundary groundwater resources for climate change adaption. These include<sup>6</sup>:
- Insufficient transboundary collaboration and cooperation structures for coordinated sustainable use of TBAs.
  - Insufficient technical understanding of transboundary groundwater resources and future climatic scenarios for policy and investment decision-making at national and regional levels.
  - Insufficient knowledge on how groundwater over-abstraction and watershed degradation affect community livelihoods in a changing environment. This restricts farmers' and agribusinesses' access to climate-resilient methods and infrastructure for sustainable groundwater use.
  - Focus on new water storage often overshadows maximising current systems through rehabilitation, reoperation, and retrofitting.
  - Climate change may require water storage systems to fulfil new performance standards to provide the same services and safety to handle rising flood risks.

### Integrated Storage Planning Framework

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<sup>6</sup> World Bank. 2023. "What the Future Has in Store: A New Paradigm for Water Storage." World Bank, Washington, DC.

3. The World Bank developed an Integrated Storage Planning Framework to address the water storage gap efficiently while being cognizant of the environmental and social risks inherent in water resources planning and development<sup>7</sup>. The framework recognises that managing and optimising groundwater storage increases resilience during droughts and controls floods during periods of heavy rainfall. Based on this framework, the project's first component establishes baseline conditions by characterising the current system and the potential for additional water management options or other solutions. The second component identifies source water protection areas and delineates them in the Shire River Aquifer System and Sand and Gravel Aquifer. The third component implements managed aquifer recharge solutions in the Shire river Aquifer System/Sand and Gravel Aquifer. MAR ensures a reliable and sustainable groundwater supply, even during drought or dry seasons, reducing reliance on unpredictable rainfall or surface water sources. By storing water underground during wet seasons, MAR provides an essential reserve for communities during water shortages, ensuring access to water for drinking, agriculture, and industry. MAR also supports year-round farming, enabling multiple cropping cycles and diversifying income sources. Groundwater is a natural storage system, providing a buffer against climate variability. Community-led MAR projects, such as recharge wells and check dams, have successfully restored groundwater levels in regions under water stress, thereby allowing farmers to cultivate crops throughout the year and enhancing rural livelihoods. Existing A-robust early warning system for groundwater will be supported is essential for maintaining groundwater and MAR operations' effectiveness, sustainability, and safety. This system facilitates monitoring and predicting potential risks, including early detection of depletion, water quality concerns, over-recharge incidents, or system malfunctions, enabling prompt and appropriate interventions. The fourth component will select and implement climate-smart solutions in the TBAs. The fifth component focuses on improved food security through improved groundwater use governance. Optimising GBNIs assists with water security and regulating floods so that communities quickly adapt to shocks and stresses. Furthermore, there are shared benefits of cooperative, integrated management and groundwater system development across international boundaries to deal with water risks as proposed in the fifth component.

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*Added value through a regional approach*

4. GBNIs actively use and manage groundwater and subsurface systems and processes to increase water storage, retention, quality, and environmental functions or services for water security, human resilience, and environmental sustainability. They include subsurface floodwater storage, sand dams, and natural stormwater treatment. Using a regional strategy makes interventions easy to scale and implement across SADC and beyond. Because aquifers, rivers and climate change traverse borders, a regional strategy is needed. SADC-GMI has a regional presence, mission for regional integration, and expertise to develop collaborations in water resource management to improve transboundary socio-economic livelihood activities and ecological services.

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*Alignment with regional and national strategies and policy*

5. The supreme law in each participating country is its respective Constitution, providing a broad framework for legislation on water management. The Constitution of the Republic of Malawi of 1994 (as amended) recognises water or access to water as a human right, implicitly in the Bill of Rights that provides for the rights to life, dignity, and social and economic development, among other rights. The Constitution of the Republic of Mozambique of 1990 (as amended) frames water as a resource vested in the state. It is operationalised through the Five-Year Plan 2020 – 2024 and the National Sustainable Development Plan (PNDS) for Rural, Sustainable and Inclusive Growth with a time horizon of 2030. In Zambia, the vision of the National Policy on Climate Change (NPCC) of 2016 is "A prosperous and climate-resilient economy by 2030". The countries' plans emphasise inclusive, agriculture-led and gender-equitable green growth and the need for health and drinking water services.

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*Innovation*

6. Historically, countries used aquifers nationally without considering the impact on water resources across borders. Recharge and protection have been neglected in favour of groundwater abstraction. Nature-based infrastructure will be developed, and opportunities for scaling will be identified. The use of transboundary aquifers to improve livelihoods, promote climate resilience, and form a collaborative monitoring network is novel in Southern Africa and Sub-Saharan Africa, where groundwater is underutilised and underdeveloped.

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*Cost-effectiveness*

7. The proposed GNBI solutions will undergo a detailed cost-benefit analysis to achieve the highest environmental and social gains during the feasibility assessment. About USD 8.0 million of the Project Funds (62%) will be allocated to Components 3 and 4 to implement concrete actions for climate change adaptation measures that will put sustainable groundwater development, ecosystems, and improved livelihoods in place.

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*Consultative process and adherence to environmental and social norms, policies, and safeguards*

<sup>7</sup> Ibid

8. The SADC Groundwater Management Institute (SADC-GMI) serves SADC Member States and promotes international cooperation. As amended, the SADC-GMI is a section 21 not-for-profit business registered under the South African Companies Act No. 71 of 2008. A Board of Directors from SADC Member States, the University of the Free State, an Executive Director, and the SADC Secretariat's Water Division Chair runs the institute. The SADC-GMI implements infrastructure projects in all 16 SADC Member States based on its robust Stakeholder Engagement Strategy (2023–2028) and SADC regional policies and legislative frameworks for participatory sustainable development, regional integration, and resilience building. The proposed project will include stakeholder identification and analysis, timely disclosure of project information, inclusive dissemination and access to information, public participation, discussions and feedback, and a grievance mechanism. Using its Gender Equality and Social Inclusion (GESI) Mainstreaming Strategy, SADC-GMI can engage its civil society and government partners to identify 'left behind' groups for targeting and inclusion. Women, the elderly, youth, the disabled, and other vulnerable populations will be heard when choosing climate-resilient interventions.

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9. The project commits to full compliance with Adaptation Fund's Environment and Social Policy, SADC-GMI's environmental and social policy meets World Bank, Adaptation Fund, and Green Climate Fund standards. Alignment with and IFAD's Social, Environmental, and Climate Assessment Procedures (SECAP) will be confirmed during design. Environmental and social risks will be systematically identified and assessed at concept note and proposal stage and managed throughout implementation, ensuring adherence to both IFAD and the Fund's safeguard requirements. IFAD will integrate an environmental and social risk assessment framework. This will include a screening mechanism to classify USPs based on potential environmental and social risks at concept note level and proposal stages, ensuring that feasibility studies incorporate comprehensive risk identification and mitigation strategies. IFAD will also establish a monitoring system with clear review and approval processes for USPs at proposal stage before implementation, ensuring alignment with the Adaptation Fund's safeguard requirements. Additionally, stakeholder engagement and participatory planning will be prioritized to assess risks at local levels and integrate adaptive management measures. Capacity-building initiatives for executing partners, particularly SADC-GMI and national focal institutions, will ensure adherence to the USP guidelines throughout project implementation.

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*Sustainability*

10. Through improved monitoring systems and data on water flows, decision-makers will be better able to make informed adaptation investment decisions. They will be able to target funds where most needed, where water resources are most vulnerable or affected by climate change, to increase water use efficiencies, climate-proof infrastructure and build resilience.

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*Learning and knowledge management*

11. Component 1 focuses on the learning and knowledge generation required to implement the GBNI solutions. SADC-GMI hosts the SADC Groundwater Information Portal (SADC-GIP), which will serve as a repository and share the data generated by the project. This will be used to generate regional knowledge on adaptation measures to the impacts of climate change. Moreover, SADC-GMI runs annual SADC Groundwater Conferences where regional knowledge and research results are shared. It also has a training calendar on several topics, including the sustainable use of groundwater to support resilient livelihood approaches under climate change impacts. With these offerings, SADC-GMI's value proposition as the implementer of this regional initiative is invaluable as the only regional groundwater institution recognised by all 16 SADC Member countries.

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**PART III: IMPLEMENTATION ARRANGEMENTS**

12. IFAD will be the Implementing Entity with fiduciary and technical oversight. While IFAD will also be the Executing Entity for the PFG, SADC-GMI will be the Executing Entity of the project. Multi-stakeholder Groundwater National Focal Groups (NFGs) in each participating country will coordinate national and local stakeholder participation. Groundwater-NFG stakeholders from different sectors will work together to manage, develop, and use groundwater sustainably. NFG members include mandated government organisations, academic and research institutions, the business sector, NGOs, community-based organisations, service suppliers, and primary users. The Malawi, Mozambique, and Zambian water ministries and National Designated Authorities for the Adaptation Fund will oversee implementation.

**PART IV: ENDORSEMENT BY GOVERNMENTS AND CERTIFICATION BY THE IMPLEMENTING ENTITY**  
**A. Record of endorsement on behalf of the government<sup>9</sup>**

Billy Katonka, NDA, Ministry of Green Economy and Environment, Zambia	Date: 8 August 2024
Emilia Fumo, NDA-Permanent Secretary, Ministerio Da Terra E Ambiente, Mozambique	Date: 17 November 2023

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Robert Mwanamanga, Director Debt Aid, Ministry of Finance, Economic and Affairs, Malawi	Date: 18 December 2024
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**B. Implementing Entity certification**

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans and subject to the approval by the Adaptation Fund Board, <u>commit to implementing the project/programme in compliance with the Environmental and Social Policy of the Adaptation Fund</u> and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the implementation of this project/programme.	
Implementing Entity coordinator: Pierre-Yves Guedez Lead Multilateral Climate & Environmental Funds (AF, GCF, GEF), IFAD	e-mail: <a href="mailto:p.guedez@ifad.org">p.guedez@ifad.org</a>
Mr Juan Carlos Mendoza Casadiegos Director Environment, Climate, Gender and Social Inclusion Division, IFAD	
Date: 12/18/2024	e-mail: <a href="mailto:ecgmailbox@ifad.org">ecgmailbox@ifad.org</a>
Project contact persons:	
Mr Claus Reiner Regional Climate and Environment Specialist, IFAD	e-mail: <a href="mailto:c.reiner@ifad.org">c.reiner@ifad.org</a>

Annex 1 Letters of Endorsement



Telephone: (202) 3705 203  
Telex: (185) 1709 073  
Teletype: FINANC 1219046  
E-mail: [finance@finance.gov.mz](mailto:finance@finance.gov.mz)



MINISTRY OF FINANCE  
AND ECONOMIC AFFAIRS  
DARTS, WILLS,  
P.O. BOX 30009,  
LILONGWE 3  
MALAWI

Ref. No. FIN/DADR/MS/2/124

18<sup>th</sup> December, 2024

The Adaptation Fund  
101 RH Green, NW,  
MSN 7N-700  
Washington, DC 20433,  
USA.

Dear Adaptation Fund Secretariat,

**Subject: Endorsement for the SADC-GMIFAD Regional project titled "Upscaling Groundwater-Based Natural Infrastructure (GBNI) to Support Water Resilience in Selected Transboundary Aquifers (TBAs) of Southern Africa"**

In my capacity as Designated Authority for the Adaptation Fund in Malawi, I confirm that the above regional project is in accordance with our national priorities in implementing adaption activities to reduce adverse impacts of and risks posed by climate change in Malawi, as well as the broader region. The project also advances the role of groundwater in climate proofing vulnerable communities in rural and remote areas.

Taking note of the above, I am pleased to endorse the above project for submission to the Adaptation Fund. I am aware that if approved, the project implementing Entity will be International Fund for Agriculture Development (IFAD), while SADC-Groundwater Management Institute (GMI) shall be the Executing Entity.

Yours faithfully,

  
Ekan Muzandanga  
For: SECRETARY TO THE TREASURY

  
REPÚBLICA DE MOÇAMBIQUE  
MINISTÉRIO DA TERRA E AMBIENTE  
GABINETE DO MINISTRO

To:  
The Adaptation Fund Board  
C/O Adaptation Fund  
Board Secretariat  
E-mail: [secretariat@adaptation-fund.org](mailto:secretariat@adaptation-fund.org)  
Fax: 202 522 3240/5

N/Ref. n.º 10/NTA/GM-SP/2023

Maputo, 17 de Novembro de 2023

**Subject: Endorsement for the SADC-GMIFAD Regional Concept note/Proposal to the Adeptation project titled "Upscaling Groundwater-Based Natural Infrastructure (GBNI) to Support Water Resilience in Selected Transboundary Aquifers (TBAs) of Southern Africa"**

In my capacity as National Designated Authority for the Adaptation Fund in Mozambique, I confirm that the above regional project is in accordance with our national priorities to implement adaptation activities to reduce the adverse impacts of, and risks, posed by climate change in Mozambique, as well as the broader region. The project also advances the role of groundwater in climate proofing vulnerable communities in rural and remote areas.

Taking note of the above, I am pleased to endorse the regional project concept note for submission to the Adaptation Fund. I am aware that if approved, the project will be implemented by the SADC Groundwater Management Institute (SADC-GMI) and the International Fund for Agricultural Development (IFAD).

Please accept the assurances of my highest consideration.

Kind regards

Permanent Secretariat  
  
Emilia Tundo

Telephone: (303) 3765 333  
Telefax: (303) 3765 373  
Telegport: FINR04, LHM04S  
E-mail: finance@finance.gov.mw



MINISTRY OF FINANCE  
AND ECONOMIC AFFAIRS  
CAPITAL HILL,  
P.O. BOX 30049,  
LILONGWE 3,  
MALAWI

Ref. No. FIN/DAD/RM/5/2/124

18<sup>th</sup> December, 2024

The Adaptation Fund  
1818H Street, NW,  
MSN 7N-700  
Washington, DC 20433,  
USA,

Dear Adaptation Fund Secretariat,

**Subject: Endorsement for the SADC-GMIFAD Regional project titled "Upscaling Groundwater-Based Natural Infrastructure (GBNI) to Support Water Resilience in Selected Transboundary Aquifers (TBAs) of Southern Africa"**

In my capacity as Designated Authority for the Adaptation Fund in Malawi, I confirm that the above regional project is in accordance with our national priorities in implementing adaption activities to reduce adverse impacts of and risks posed by climate change in Malawi, as well as the broader region. The project also advances the role of groundwater in climate proofing vulnerable communities in rural and remote areas.

Taking note of the above, I am pleased to endorse the above project for submission to the Adaptation Fund. I am aware that if approved, the project Implementing Entity will be International Fund for Agriculture Development (IFAD), while SADC-Groundwater Management Institute (GMI) shall be the Executing Entity.

Yours faithfully,

For: **SECRETARY TO THE TREASURY**



REPÚBLICA DE MOÇAMBIQUE  
MINISTÉRIO DA TERRA E AMBIENTE  
GABINETE DO MINISTRO

To:  
The Adaptation Fund Board  
C/O Adaptation Fund  
Board Secretariat  
E-mail: [secretariat@adaptation-fund.org](mailto:secretariat@adaptation-fund.org)  
Fax: 202 522 3240/5

N/Ref.º n.º 105/MTA/GM-SP/2023

Maputo, 17 de Novembro de 2023

**Subject: Endorsement for the SADC-GMI/IFAD Regional Concept note/Proposal to the Adaptation project titled "Upscaling Groundwater-Based Natural Infrastructure (GBNI) to Support Water Resilience in Selected Transboundary Aquifers (TBAs) of Southern Africa"**

In my capacity as National Designated Authority for the Adaptation Fund in Mozambique, I confirm that the above regional project is in accordance with our national priorities to implement adaptation activities to reduce the adverse impacts of, and risks, posed by climate change in Mozambique, as well as the broader region. The project also advances the role of groundwater in climate proofing vulnerable communities in rural and remote areas.

Taking note of the above, I am pleased to endorse the regional project concept note for submission to the Adaptation Fund. I am aware that if approved, the project will be implemented by the SADC Groundwater Management Institute (SADC-GMI) and the International Fund for Agricultural Development (IFAD).

Please accept the assurances of my highest consideration.

Kind regards

Permanent Secretariat



Emilia Yumo



**Revised PFG Submission Form<sup>1</sup>**  
**Project Formulation Grant (PFG)**

**Submission Date:**

**Adaptation Fund Project ID:**

**Country/ies:** Mozambique, Malawi, Zambia

**Title of Project/Programme:** Upscaling Groundwater-Based Natural Infrastructure (GBNI) to Support Water Resilience in Selected Transboundary Aquifers (TBAs) of Southern Africa

**Type of IE (NIE/RIE/MIE):** MIE

**Implementing Entity:** International Fund for Agricultural Development (IFAD)

**Executing Entity/ies:** International Fund for Agricultural Development (IFAD) for the PFG, SADC Groundwater Management Institute for the project

**A. Project Preparation Timeframe**

<b>Start date of PFG</b>	Upon Pre-Concept Note approval date
<b>Completion date of PFG</b>	(10 months) after Pre-Concept Note approval date

**B. Proposed Project Preparation Activities (\$)**

<b>List of Proposed Project Preparation Activities</b>	<b>Output of the PFG Activities</b>	<b>US\$ Amount</b>	<b>Budget note<sup>2</sup></b>
Workshops	3 National Stakeholder Consultation Reports based on National workshops with stakeholders and local communities	6,000	Stakeholder workshops
Consultants	A full Concept Note document for submission to AF	18,500	Consultancy fees for proposal development
Travel	Travel expenses for project activities	5,200	

<sup>1</sup> As presented in AFB/PPRC.33/40 Annex 1.

<sup>2</sup> The proposal should include a detailed budget with budget notes indicating the break-down of costs at the activity level. It should also include a budget on the Implementing Entity management fee use.




<b>Project formulation grant for concept note</b>		29,700	Total PFG allocation for concept preparation
<b>Implementing Entity (IE) Fee (10.0%)</b>		3,300	IE fee based on 10% of total PFG
<b>Project Formulation Grant + IE fee</b>		33,000	Total PFG budget inclusive of IE fee

Please describe below each of the PFG activities and provide justifications for their need and for the amount of funding required:

### C. Implementing Entity

IFAD will be the Implementing Entity with fiduciary and technical oversight. While IFAD will also be the Executing Entity for the PFG, the SADC Groundwater Management Institute will be the Executing Entity of the project.

This request has been prepared in accordance with the Adaptation Fund Board's procedures and meets the Adaptation Fund's criteria for project identification and formulation

Implementing Entity Coordinator, IE Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Addresses
Mr Pierre Yves Senior Climate Finance Specialist ECG Division, IFAD		12/16/2024	Mr Claus Reiner Regional Climate and Environment Specialist, IFAD	+254 11 5492302	email: p.guedez@ifad.org  e-mail: c.reiner@ifad.org