Project

Towards a better understanding of Amazonian Aquifer Systems for their protection and sustainable management

GEF ID 11108

Terms of Reference

Position: Water Resources and Groundwater Management Specialist

Project No.: *GEF ID 11108*

Funding Agency: *IDB-UNEP*

Executing Agency: *Amazon Cooperation Treaty Organization (ACTO)*

TERMS OF REFERENCE

Water Resources and Groundwater Management Specialist for the AAS Project

1. Background and Justification

1.1. Background:

The project "Towards a better understanding of Amazonian Aquifer Systems (AAS) for their protection and sustainable management", financed by the Global Environment Facility (GEF) (GEF ID 11108), aims to generate updated scientific knowledge and promote sustainable and coordinated management of Amazonian Aquifer Systems, which extend, to a greater or lesser degree, through the territories of Bolivia, Brazil, Colombia, Ecuador, Peru and Venezuela.

Despite the abundant availability of surface water in the Amazon region, the demand for reliable water sources has increased significantly, making the population and productive sectors heavily dependent on groundwater. However, the true extent, hydrogeological dynamics, and risks facing these aquifers are still not fully understood. Added to this are threats stemming from climate change, extreme weather events, human activities, and population growth, which necessitates the development of sustainable and coordinated transboundary water resource management strategies.

The project addresses four main barriers: a lack of knowledge about transboundary aquifers, the absence of shared governance agreements, the lack of a common protection strategy, and the low level of public awareness about the importance of Amazonian Aquifer Systems (AAS). To address these challenges, five components have been proposed: Component 1: Consolidation and expansion of current knowledge about the functioning of and threats to Amazonian Aquifer Systems (AAS); Component 2: Towards a multi-level management system for AAS; Component 3: Pilot projects to improve the management of transboundary groundwater; Component 4: Development of a Strategic Action Program for AAS, including the country's action plan; and Component 5: Strengthening institutional capacity, incorporating a gender perspective, and improving communication and awareness-raising about AAS.

The project "Towards a better understanding of the Amazon Aquifer System for its protection and sustainable management" seeks to strengthen knowledge and regional cooperation on water resource management in the Amazon basin. To ensure the effective implementation of its technical and scientific components, the hiring of a Water Resources and Groundwater Management Specialist is required.

2. Aim

To provide technical leadership and specialized support in the integrated management of water resources, with an emphasis on Amazonian Aquifer Systems, to contribute to the proper planning, execution, monitoring and reporting of the project's technical and scientific activities at the regional and national levels, in coordination with technical staff from the countries and other key actors, promoting the environmental, institutional and financial sustainability of the interventions.

3. Functions and Responsibilities

Main activities:

- In conjunction with the project coordinator, develop the processes of conceptualization, call for consultancies (Terms of Reference), evaluation and contracting of regional

consultancies/collaborations, supervision, interpretation and reporting of the deliverables of the various activities that make up the products of Component 1:

- **Product 1.1:** An assessment of the current state of underground water resources, based, *inter alia*, on geological, geophysical, hydraulic, hydrodynamic, hydrochemical, isotopic and hydrogeological studies.
- **Product 1.2:** A georeferenced base map of the Amazonian Aquifer Systems, supported by GIS infrastructure, including specific vulnerability maps based on available or new information from each country.
- **Product 1.3:** A water security analysis and modeling of hydrological and hydrogeological scenarios of aquifer behavior, with emphasis on the transboundary areas of the AAS, under different climate change and socioeconomic development scenarios.
- **Product 1.4:** Documented research studies focused on: Hydraulic interconnection with surface waters, with emphasis on border areas, including a study of recharge mechanisms. Understanding of contamination threats to groundwater (i.e., As, Pb, Hg, and others to be determined by Member Countries).
- **Product 1.5:** An agreed transboundary diagnostic analysis of AASs by the RADA (Amazon Network of Water Authorities).

- In conjunction with the project coordinator and the technical focal points in the countries, develop the processes of conceptualization, call for consultancies (Terms of Reference), evaluation and contracting of regional consultancies/collaborations, supervision, interpretation and reporting of the deliverables of the various activities that make up the products of Component 3 (national pilots):
  - **Pilot i:** Innovative approaches to the management of groundwater wells between Bolivia and Brazil (Cobija, Brasiléia / Epitaciolândia).
  - **Pilot ii:** Strategy to assess the impacts of alluvial gold mining on the aquifers and ecosystems of the Madre de Dios basin in Bolivia.
  - **Pilot iii: Promotion of** multi-community cooperation mechanisms for groundwater management and aquifer protection (recharge zone and water quality) in 3 municipalities, Puerto Asis, Valle del Guamuez and San Miguel, Putumayo region (Colombia).
  - **Pilot iv:** Thematic mapping, vulnerability identification and protection of the Aquifer System, as well as recharge zones in the Napo River Basin (Ecuador).
  - **Pilot v:** Testing innovative approaches for the sustainable management and protection of transboundary sedimentary aquifers (Guyana and Suriname).
  - **Pilot vi:** Hydrogeological assessment to determine protection and sustainability measures in order to reduce vulnerability and risk in the supply of water for population purposes in the districts of Callería and Manantay of the province of Coronel Portillo, Ucayali region (Peru).
  - **Pilot vii:** Identification of good practices to promote drinking water security through groundwater protection in small indigenous communities in Suriname.
  - **Pilot viii:** Promotion of natural recharge areas and protection of aquifers through integrated water management and environmental management to improve water security in San Carlos de Río Negro-Casiquiare (Venezuela).
- Review technical and scientific reports from consultants, national, regional and international collaborators.

- In conjunction with the project coordinator, lead the development of scientific articles based on activities from components 1 and 3, where consultants/collaborators to the project may be authors or co-authors of these scientific publications.
- In conjunction with the project coordinator, lead the preparation of scientific presentations at national, regional and international conferences/symposia and congresses, where project consultants/collaborators may be authors or co-authors.
- Lead emerging scientific activities or necessary updates to the project during its execution.
- Lead the development of technical training (virtual or in-person) for ACTO staff, member countries and collaborators.
- To provide technical and methodological guidance for the development and execution of activities related to groundwater management.
- Ensure that the georeferenced information of the project can be integrated into the AAS module in the Amazon Regional Observatory (ARO).
- Monitor compliance with GEF indicators 4, 7 and 11 and technical goals described for the project.
- In conjunction with the project coordinator, conduct field missions and technical visits to monitor the implementation of activities in national and regional pilot projects.

Secondary activities:

- Contribute to the generation of strategies for the transboundary management of aquifers (Component 2), participating in the preparation of the base document (White Paper) with technical and governance recommendations.
- Support the formulation of the Strategic Action Plan (Component 4), aligning strategies for the protection and rational use of aquifers.
- Support the organization of scientific meetings, conferences and technical workshops.
- Represent the project at scientific and technical events, regional and international forums.
- Support in the organization and development of the certification (diploma) in groundwater with the participation of regional and international academic collaborators.
- Support in the generation of relevant technical information for Components 1 to 5 and their key products to generate knowledge exchange and capacity building, awareness, science-based communications, and increased participation during the implementation of the Project.
- Support the implementation of the Project's Gender Action Plan in project activities, especially those related to pilot projects and training processes.
- Support the project coordination in the preparation of quarterly and annual reports, the annual operating plan with its respective budget, various presentations, and other technical coordination activities with ACTO, IDB, UNEP, GEF and collaborators.
- Support other activities to promote a greater impact of the activities of components 1, 2, 3, 4 and 5.

Note: The water and groundwater management specialist must prepare and respond to the reports corresponding to the outputs and results required by the project, in coordination with the Project Coordinator.

4. Requirements and Professional Profile

4.1. Academic Background:

- Professional in Water Resources Engineering, Geology, Environmental Sciences, Environmental Engineering, Sanitary Engineering, or related fields.

- Hold a PhD in water resources, geology, environment or a related field.

4.2. Professional Experience:

- Minimum experience of at least 5 years as a researcher, with proven record of publications in international scientific journals and participation in scientific events.
- Experience in research projects in the Amazon.
- Experience in writing technical proposals for funding.
- Proven experience in developing regional and/or international collaborations.

4.3. Personal Skills:

- Self-management, leadership and initiative.
- Ability to analyze and prepare informative documents.
- Experience in inter-institutional coordination and synergy with multiple actors.
- Ability to work in a team.
- Ability to work under pressure with high quality standards.
- Proactivity, flexibility and results orientation.
- Excellent writing and communication skills, good analytical skills and presentation of informative documents.
- Excellent computer skills (Word, Excel, PowerPoint, Outlook, LaTeX, Python, GIS, etc.).
- Ethics, confidentiality and responsibility in the handling of information.
- Fluency in spoken and written Spanish and English, and proficiency in Portuguese is desirable.

5. Remuneration and Employment Conditions

As this position is part of the key staff of the Project Implementing Unit, the reports will be prepared monthly and will be delivered to and approved by your supervisor.

For Brazilian citizens or residents, the employment contract and remuneration will be governed by the terms and conditions of the Brazilian Labor Law (CLT). The contract type is CLT - consulting, and fees will be paid in Brazilian reais (BRL), which includes legally mandated benefits.

In the case of citizens of other nationalities and not residents in Brazil, the employment contract will comply with the provisions of the PS/ACTO financial administrative instrument where the consultancy contract modality applies and the fees will be paid in USD dollars.

The fees are all-inclusive, including insurance and accommodation expenses at the location where the service is provided.

6. Supervision and Reporting

He will act under the direct supervision of the General Coordinator of the project in close coordination with the Administrative Directorate of the ACTO and in accordance with the procedures defined by the PS/ACTO Administration.

7. Submission of applications

Proposals must include at least:

- Letter of application mentioning the motivation for your application and your scientific interests within the AAS Project.
- Resume (CV).
- Copies of 2 publications in international journals related to the topics of the AAS Project.

- Information from at least 3 references.
- Other documents that support your experience.

Proposals should be sent to the following email address: seleccao@otca.org

8. Location

The Water Resources Management Specialist will primarily be based at the PS/ACTO headquarters office in Brasilia, DF, Brazil. The specialist must be available for travel. Due to the nature of the project, occasional travel to ACTO member countries will be necessary.

9. Deadlines for submission of applications and schedule

Candidates must submit their application by email to the institutional address: selecao@otca.org, indicating in the subject line [**WATER RESOURCES AND GROUNDWATER MANAGEMENT SPECIALIST FOR THE AAS PROJECT**].

Delivery time: June 21, 2026.