



TERMS OF REFERENCE (TOR)

One Earth Observation and GIS data Analysis Expert - Integrated Water Resources Management Ethiopia (IWRM-Ethiopia) - CUP_B57F24000180005

Background and Context

CIMA Research Foundation (Centro Internazionale in Monitoraggio Ambientale, CIMA) is a scientific organization governed by Italian public law. Established in September 2007, CIMA evolved from the existing CIMA Research Inter-university Centre, preserving and enhancing the knowledge and experience of its original researchers and professors. In 2012, CIMA was designated as the Competence Centre of the Italian Civil Protection System for the hydrometeorological sector, forest fire risk, and legal liability of civil protection operators. In 2018, CIMA was recognized as an operational structure of the National Service of the Civil Protection Department under decree law 1/2018 (Civil Protection Code).

The Integrated Water Resources Management Program for Ethiopia (IWRM-Ethiopia) aims to enhance integrated water resources management in three river basins: the Webi Shebele, the Lower Awash, and the Danakil. The program seeks to improve drought resilience and reduce climate change vulnerability. This four-year intervention is funded by the Italian Agency for Development Cooperation (AICS) within the framework of the EU-supported Contribution Agreement NDICI AFRICA/2023. Implementing agencies include CIMA and the Italian National Research Council (CNR).

To achieve its objectives, the IWRM-Ethiopia program focuses on strengthening the capabilities of federal, basin, and sub-basin institutions, particularly the Ministry of Water and Energy (MoWE) and the Basin Development Offices (BDOs). The program supports the development of basin plans, improves integrated information systems, and enhances governance for better data utilization and institutional coordination. It also includes learning sites and outreach activities to promote efficient and sustainable water resource management by local communities in the targeted basins.

In Ethiopia, the program is overseen by the AICS Program Management Unit (PMU), comprising the AICS Program Manager, AICS Admin & Financial Expert, AICS Technical Expert, and the Project Leader. The CIMA Component is implemented through a CIMA-dedicated Program Coordination Unit (PCU), which includes the CIMA Project Coordinator, CIMA Financial Manager, CIMA Local Expert, and the Project Leader in Ethiopia.

Position Description

CIMA is seeking one Expert in Earth Observation and GIS data Analysis to support in conducting a baseline survey on logistic/infrastructure, offices and stakeholders relevant of satellite remote sensing data for environmental monitoring, and extraction of key datasets for land management and IWRM. In addition, the expert will review pre-existing High and Very High Resolution satellite and geospatial data, web-based solution/GIS platforms available for the three river basins of Wabi Shebele, Lower Awash, and Danakil. This technical assignment includes the identification of the main gaps and the exploration of existing opportunities (needs) for exploiting existing data and it requires extensive travel to the three river basins.

The activities position is Addis Ababa, Ethiopia.

Major Duties and Responsibilities:

The Earth Observation and GIS data Analysis Expert will:

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1. provide a baseline survey on Remote Sensing (High Resolution / Very High Resolution satellite data and Unmanned Aircraft Vehicles-UAV (drones) logistic/infrastructure, offices, stakeholders, ICT, Human knowledge for environmental monitoring, and extraction of key datasets (input data for models) for land management and IWRM.
2. Provide and evaluation of remote sensing data related to environmental indicators for surface analysis, Land Degradation and Desertification-LDD, topsoil mapping and agro-pastoralism issues, land use/land cover, flooding, surface water quality, landscape monitoring issues. Special regards on existing topographic productus (e.g. DEMs), georeferenced based datasets (GIS and geodatabases) and surface analysis in the context of IWRM.
3. Provide a survey on existing web-based datasets on grazing, soil, vegetation, land use and land cover (e.g. ISRIC-SoilGrids and WoSIS).
4. Provide connections and manage meetings with institutions on mentioned topics for cooperation, data procurement and integration on BaSRINET project.
5. Provide a baseline survey of existing satellite-based data within open global products as delivered by ESA and NASA but also as derived open product as the one from project (i.e FAO WaPOR) and, finally, inquire on the availability of image and derived product from Ethiopian satellite program.

Deliverable and Payment

No.	Deliverable	Timeframe	Payment
1	Detailed Workplan for the implementation of the assignment	Within 1 week of contract signature	15%
2	Draft Report: assessment of topics mentioned in the three-river basin, and procurement of first datasets, links and connections. Initial knowledge of gaps and needs.	Within 1 months of contract signature	40%
3	Validation workshop completed	Within 1.5 months of contract signature	20%
4	Final Report and data procurement: assessment and recommendation on improvement of the project regarding gaps and needs	Within 2 months of contract signature	25%

Other Duties

1. Participate actively in meetings and discussions with program and project partners.
2. Lead and attend country missions, including those outside of the duty station (Addis Ababa) within Ethiopia. Expenses incurred to travel under this assignment will be reimbursed by CIMA, ONLY upon presentation of valid receipts.

Minimum Qualifications

- At least 5 years of solid professional experience in earth observation, GIS, soil and land degradation monitoring; prior working experience in Ethiopia is mandatory. An academic background in geology, engineering, environmental sciences, or a closely related field is required.
- Proven knowledge and operating principles of remote sensing tools, soil mapping and geospatial approach to environmental issues.
- Proven expertise in producing high-quality reports and documents in English and Amharic (both oral and written).
- Ability to work effectively in the field, coordinating with local agencies.
- Excellent communication and presentation skills in English and Amharic (both oral and written).



Overview of the Assignment

- **Location of activities:** Addis Ababa, Ethiopia.
- **Position:** Earth Observation and GIS data Analysis Expert.
- **Duration:** 2 months.
- **Contract value:** 5000 € lump sum paid as described in the table above, including taxes and VAT, if due.
- **Contract nature:** TBD in the interview phase
- **Expected Start Date:** as soon as possible.

Interested candidates should submit their CV together with a one -page cover letter to **iwrm@cimafoundation.org** by **24/10/2024 12.00 A.M. CEST (Rome time)**. The subject of the email should be: **Earth Observation and GIS data Analysis Expert – Integrated Water Resources Management Ethiopia (IWRM-Ethiopia)**.

- Only applicants of further interest to CIMA will be contacted. Based on the interview outcomes, a proposal for the assignment or the position within CIMA will be made to the candidates.
- CIMA declares that until the assignment is awarded, or until the relationship is established, it may interrupt and even cancel the procedure, without the participants having any claim whatsoever.
- Any questions related to this call can be directed in English to Nicola Berni via email at: **iwrm@cimafoundation.org**.

Data Protection

With this document, CIMA Foundation is authorized to process the personal data of the subjects involved in the relationship referred to the object, exclusively for the purpose of carrying out the relationship, pursuant to art. 13 of Legislative Decree 196/2003 (EU Reg. 2016/679). The data will be collected, processed, and stored by the CIMA Foundation, preferably in digital format, through systems owned or controlled by third parties, with which the Foundation has agreements to ensure adequate technical standards of protection. The maximum data retention time will not exceed two years from the end of the relationship. The data controller is CIMA Foundation.

Savona, 10/10/2024

The Managing Director

Luisa Michela Colla

A handwritten signature in black ink, reading "Luisa Michela Colla".

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