PEACE, PROSPERITY AND
REGIONAL INTEGRATION

TERMS OF REFERENCE

INDIVIDUAL CONSULTANCY
ENHANCING THE IGAD FOOD SECURITY, NUTRITION AND RESILIENCE
INFORMATION PORTAL

1. Background

The Intergovernmental Authority on Development (IGAD) is a regional economic community (REC) that forms one of the building blocks of the African Union. It is comprised of eight member states – Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda. These member states face interlinked challenges and share the common objective of advancing their development and achieving regional integration.

The IGAD Food Security, Nutrition and Resilience Analysis Hub (IFRAH), hosted by the IGAD Climate Prediction and Application Centre (ICPAC), was established in 2018 following a recognition of the multi-faceted, repetitive and overlapping nature of shocks that affect food security, nutrition and resilience in the IGAD region, and that require that analyses are conducted at various levels in a continuous, integrated and coordinated way.

IFRAH integrates some of the food insecurity and resilience analysis mechanisms existing within IGAD, that is the:

1. Food Security and Nutrition Working Group (FSNWG)
2. Resilience Analysis Unit (RAU)
3. Integrated Phase Classification (IPC)

Its overall goal is to contribute to efforts by IGAD and member states to achieve strengthened analytical capacities and institutional mechanisms needed to support decision-making processes on food security, nutrition and resilience in the region.

Every year, weather extremes, conflict and insecurity, and macro-economic shocks drive millions into food security and nutrition crises across the IGAD region. This is against a background of chronic vulnerabilities owing to recurrent stressors, protracted conflicts in parts of the region, high levels of poverty and low resilience capacities. The recurrence and strong upward trends in the severity of these crises underscore the need for early warning, better preparedness, and above all anticipatory action to reduce and prevent their scale, reduce the amount of resources spent responding to them each year, and strengthen the resilience of communities.

Guided by the IGAD Food Security, Nutrition and Resilience Information Framework, IFRAH has, since 2022, been developing an IGAD Food Security, Nutrition and Resilience Information System (portal) to serve as a one-stop online shop for data and information

pertaining to food security, nutrition and resilience in the region. So far, a prototype of the portal has been developed with three main functionalities:

1. Routine monitoring and early warning
2. Periodic| seasonal analysis
3. Data depository for action research

Going forward, IFRAH intends to enhance the portal by on-boarding additional functionalities, including strengthening the early warning component through integration of triggers and thresholds.

It is against this backdrop that IFRAH seeks to engage a consultant, for a period of nine (9) months, to support data collation, creation of new data sets and refinement of existing ones, visualisation and further integration of data, and the overall enhancement of the portal in order to optimise its performance.

2. Overall objective

To transform the IGAD Food Security, Nutrition and Resilience Information System (portal) into a web-based platform that stakeholders can depend on for timely and reliable data and information, facilitating coherent and evidence-driven decision making.

The portal should provide this data and information in an interactive and easy to use manner.

3. Scope of work

This shall entail on-boarding additional analytical functionalities to the portal (at the discretion of IFRAH), integrating triggers and thresholds to the early warning component of the portal, and ensuring the fulfilment of the go-live criteria specified below.

Category	Features
General functionality	• Cross browser compatibility • Responsive web design across web interfaces, mobile devices and tablet devices among others • Fast loading pages
Content management system (CMS) functionality	• API capability to link with IGAD member states institutions and partners applications • Allow a dedicated team to upload content such as data, text, photos, contact details among others • Content storage management of different types of content • Distribute authorship of portal content across relevant parties • Management of review, approval, publishing and archiving processes in an easy and automated manner • Email notifications for admin(s)
User management functionality	• User access management (levels of access) developed on the basis of role

	• Broadly, the users are expected to be, but not limited to admin(s), IGAD, IGAD member states institutions and partners, and the general public
Analytics functionality	• Set up Google analytics to analyse user behavior and pull reports such as geo-locations and sectors of users • Intelligent tagging of users to improve search functionality
Interactive functionality	• Search features (users should be able to search for content within the portal, advanced search, based on multiple filters should be provided) • Integrate machine learning techniques
Partnership functionality	• Listing of partners
Security	• Adherence to approved national and international security guidelines
Technical functionality	• Portal should open in various ways • It should run on multiple instances • Passwords should not be hardcoded in any website configuration files or stored in plain text. Rather they should be properly hashed and salted to reduce risk of cracking

4. Delivery

The consultant is expected to deliver a portal that meets all the functional and technical requirements specified above.

Specifically, concerning the early warning component, they are expected to deliver a dashboard that will display the different indicators' performance using a traffic-light coding (RAG rating), informed by rankings or thresholds.

At the end of the contract, the consultant should ensure that IFRAH has exclusive access to and control of the data on the portal in an acceptable format. Additionally, they should provide a maintenance schedule for the portal, post-handover, to ensure that there is no fall in service quality. Routine maintenance shall include server and software upgrades, solution stability monitoring, trouble shooting, and addressing any functionality, availability or performance issues.

5. Duration and location

The consultant will be expected to carry out the assignment within **nine (9) months** from the date of contract signing. They will perform their duties at the IGAD Climate Predication and Application Centre (ICPAC). When necessary, they should be available to travel to IGAD member states.

6. Reporting

The consultant will be under the overall supervision of the Director of ICPAC, with technical reporting to the Coordinator of IFRAH.

7. Education qualifications and experience

- Bachelor's degree in computer science, Data Science, Geo-Informatics, Software Engineering, Information Technology (IT) or other related fields
- Minimum of three (3) years' experience in geo-data applications design and development
- Proficiency in data management, web application development and geo-applications development, demonstrated through a portfolio of developed products (provide links to at least two (2) samples of previous work and | or Github code)
- Experience working on early warning systems is desirable

Technical qualifications

- Solid and demonstrated experience working with scripting languages (e.g. Python) to automate geo-processing data workflows
- Demonstrate experience in development and use of data management systems in various applications
- Relevant experience in graphic design and| or web design
- Experience in backend development using various languages and frameworks including Django, Go and NodeJS
- Demonstrated experience with application containerization (Docker) and deployment on cloud infrastructure
- Experience working on a variety of software development projects and developing responsive front-end web solutions
- Proven experience (deployed projects, Github code) with designing and developing production ready scalable geospatial web applications with open-source industry standard technologies such as Node.js, React, Mapbox GL, Leaflet, Carto, python, Geoserver, Mapserver, GDAL
- Sound knowledge of SQL and PostGIS spatial database;
- Experience developing REST API and a good understanding of microservices architecture
- Advanced knowledge of OGC geospatial standards like WMS, WFS, WCS, WPS, Simple Features for SQL
- Experience working with Go Language and NoSQL databases is an added advantage
- Experience manipulating and analysing Earth Observation data in different data formats is desirable

8. How to apply

Qualified candidates should send their proposals, including a portfolio of their previous relevant experience, a financial bid (in USD and password-protected), copies of their education and| or qualifications certificates, copies of their passports or identification (ID) cards, and contact information of three (3) independent referees, to procurement@igad.int with copy to procurement@icpac.net by 22 November 2024. Please indicate "**IGAD Food Security, Nutrition and Resilience Portal**" on the subject line of your email application. Only shortlisted candidates will be contacted.

IGAD is an equal opportunity employer.