



ICPAC

TERMS OF REFERENCE

Enhancement, Harmonisation and Integration of Existing IGAD Food Security, and Resilience Information and Early Warning Systems

Contracting institution	IGAD Climate Prediction and Applications Centre (ICPAC)
Location	ICPAC Office, Nairobi, Kenya
Assignment Type	INDIVIDUAL CONSULTANCY
Contract Duration	6 months
Reporting	IFRAH Coordinator

1 Background and Context

Food security and nutrition in the IGAD region continue to deteriorate, with 40.3 million people estimated to face high levels of acute food insecurity in 2026 up from 14.1 million in 2016. Acute malnutrition is also a major concern, affecting an estimated 9 million children and over 2 million pregnant and lactating women. Meanwhile, 19 million people are forcibly displaced across the region, the majority in Sudan. This worsening situation is driven by recurrent climate shocks, conflict, political instability, and economic pressures, which disrupt livelihoods and undermine resilience.

In response to these challenges, the Food and Agriculture Organization (FAO) of the United Nations and the IGAD Climate Prediction and Applications Centre entered into a Letter of Agreement under the Technical Cooperation Programme (TCP SFE 4102).

The agreement aims to strengthen food security and resilience data systems – a priority area identified in the 2023 Intergovernmental Authority on Development (IGAD)-FAO Aide-Mémoire. Specifically, it seeks to enhance the capacity of IGAD member states to generate, monitor and analyse climate, food security and resilience data to support timely and evidence-based decision-making.

The agreement focuses on four outputs – strengthening digital and earth observation capacities; enhancing integrated early warning and information systems; improving institutional coordination and stakeholder engagement; and advancing knowledge management and evidence-based decision support.

ICPAC intends to engage an individual consultant to support the enhancement, harmonization and integration of existing IGAD food-security, resilience and early-warning systems into a single, coherent and interoperable regional architecture.

The consultant will support a systematic assessment of existing systems, platforms, data flows, information products and institutional arrangements to identify opportunities for integration, overlaps, gaps and interoperability challenges.

Working closely with ICPAC technical teams, relevant IGAD units, member states and relevant FAO teams, the consultant will facilitate the harmonization of user requirements, priority indicators, business processes and information-sharing arrangements. The consultant will also support the translation of stakeholder needs into functional requirements and an implementation roadmap for the proposed regional architecture.

In addition, the consultant will contribute to socio-economic, market, livelihoods and conflict analysis to strengthen insights for planning and evidence-based decision-making. Other responsibilities include stakeholder coordination and capacity development.

The consultant will work closely with ICPAC's food-security, GIS, remote-sensing, crop- and range-lands- modelling, and data-systems specialists.

2 Purpose of the assignment

The purpose of this assignment is to support ICPAC in enhancing, harmonizing and integrating existing IGAD food-security, resilience and early-warning systems into a single, interoperable regional architecture that strengthens regional information management, early warning and evidence-based decision-making.

The consultant will assess existing systems and institutional arrangements, identify integration opportunities and information gaps, facilitate stakeholder consultations, and support the development of harmonized business processes, data and indicator standards, user requirements and data-sharing arrangements. The consultant will also contribute to defining the functional requirements and implementation roadmap for the integrated architecture, ensuring that the proposed approach builds on existing systems, minimizes duplication and responds to the needs of IGAD institutions and member states.

Complementary responsibilities will include supporting the integration of socio-economic, market, livelihoods and conflict-related information into regional food-security analysis; coordinating contributions to regional knowledge products; capacity development; and supporting project planning, monitoring and reporting.

The consultant will work closely with ICPAC technical specialists, who will retain responsibility for technical integration and system architecture design.

3 Scope of work

Under the supervision of the IFRAH Coordinator and the designated Project Manager, the consultant will work closely with ICPAC's technical teams, relevant IGAD units, member states and relevant FAO teams. The primary responsibility will be to coordinate and support the functional and institutional processes required to integrate existing food-security, resilience and early-warning systems into a harmonized regional architecture.

The consultant's work will combine systems assessment, business process harmonization, user-requirements development and data governance, complemented by socio-economic and market analysis, knowledge management, capacity development and stakeholder engagement.

The specific key responsibilities will include the following:

3.1 Regional systems assessment and integration planning

- Inventory and document existing IGAD food-security, resilience and early-warning systems, platforms, databases, analytical tools and information products, including their objectives, functions, users, institutional ownership and operational arrangements.
- Assess existing systems to identify overlaps, gaps, fragmentation, duplication of functions, interoperability challenges and opportunities to build on existing investments.
- Map the flow of information across regional and national systems, including data sources, processing arrangements, analytical outputs, dissemination channels and their use in decision-making.
- Identify priority integration needs and opportunities for harmonizing system functions, information products, indicators, reporting processes and user access.
- Facilitate consultations with ICPAC technical teams, relevant IGAD institutions, member states and partners to validate the assessment findings and agree on priority integration requirements.
- Prepare a systems integration assessment report setting out the baseline, key findings, recommended integration priorities, institutional considerations and proposed implementation steps.
- Contribute to the preparation of a phased roadmap for the enhancement, harmonization and integration of existing systems into a single regional architecture, including priority actions, responsibilities, milestones and dependencies.
- Coordinate with the relevant technical specialists to ensure that recommendations are technically feasible, build on existing systems and align with the agreed regional architecture.

3.2 Harmonisation of business processes, data and user requirements

- Document and compare existing business processes, workflows and information requirements associated with food-security monitoring, resilience analysis and early warning across relevant IGAD systems and institutions.
- Facilitate agreement on common business processes, priority indicators, definitions, reporting requirements and information products to support regional consistency and comparability.
- Engage intended users to identify their operational needs, decision-making requirements and expectations regarding the integrated regional architecture.
- Translate stakeholder needs into clear business requirements, functional specifications, user stories and acceptance criteria for review by ICPAC's technical specialists.
- Support the identification of priority datasets, data standards, metadata requirements, update frequencies and information-sharing arrangements needed to facilitate integration.
- Facilitate validation of proposed requirements with stakeholders and maintain a consolidated record of agreed requirements, outstanding issues and proposed resolutions.

3.3 Support to integrated regional architecture development and implementation

- Work with ICPAC's data-systems and other technical specialists to translate the systems assessment and stakeholder requirements into inputs for the design and refinement of the integrated regional architecture.
- Support the definition of the architecture's functional components, including data access and exchange, information management, analytical outputs, visualization, dissemination and decision-support functions.
- Identify dependencies between existing systems and proposed integration components, and document the institutional, operational and data-related requirements for interoperability.

- Support the preparation of a phased implementation plan that prioritizes feasible integration actions, identifies responsible institutions and technical teams, and establishes milestones for implementation.
- Coordinate stakeholder reviews and validation of proposed system enhancements and integration arrangements.
- Prepare user guidance, operational procedures and documentation to support the effective use and sustainability of the integrated regional architecture.

3.4 Data interoperability and systems integration support

- Assess and document data flows, system interfaces, exchange requirements and dependencies between existing platforms, and work with the relevant technical specialists to define practical approaches for facilitating data exchange and linking information across systems.
- Support the development of common data standards, metadata specifications, indicator definitions and data-exchange requirements to improve the consistency, comparability and interoperability of information across the integrated regional architecture.
- Maintain a consolidated register of interoperability gaps, system compatibility issues, data-exchange constraints and proposed solutions.

3.5 Integration of socio-economic, market, livelihoods and conflict-related analysis

- Identify and document relevant sources of socio-economic, market, livelihoods, trade, conflict, environmental and food-security data that can strengthen integrated regional monitoring and early warning.
- Examine the relationships between market dynamics, livelihood pressures, climate and environmental risks, conflict and food-security outcomes to generate insights relevant to early warning, anticipatory action and resilience planning.
- Identify opportunities to incorporate relevant socio-economic and market indicators into existing regional information systems and decision-support products.
- Contribute to the integration of the markets, conflict and livelihoods interface into existing regional information systems and decision-support products by defining its priority indicators, data sources, analytical requirements, intended user and applications for decision-making.

4 Deliverables and schedule

No	Deliverable	Minimum contents	Due date	Indicative share
1	Inception report and work plan	Methodology, work plan, stakeholder engagement approach, deliverables schedule and risk register.	30 November 2026	10%
2	Existing systems assessment and integration report	Inventory and assessment of existing systems, information flows, overlaps, gaps, interoperability challenges and integration opportunities.	15 January 2027	20%
3	Harmonized business processes and functional requirements	Harmonized business processes, priority indicators, user requirements, functional specifications, data standards and information-sharing needs.	15 February 2027	20%
4	Regional systems	Phased integration roadmap, data-exchange requirements,	28 February 2027	20%

	integration roadmap and interoperability framework	interoperability standards, metadata specifications, data governance arrangements, institutional responsibilities and implementation milestones.		
5	Socio-economic, market, livelihoods and conflict analysis report	Inventory of relevant data sources, analysis of relationships between market dynamics, livelihood pressures, and conflict and food-security outcomes, priority indicators, and functional requirements for integrating markets, conflict and livelihoods data and information into existing regional information systems and decision-support products.	31 March 2027	20%
6	Final report and handover package	Summary of achievements, progress towards the integrated regional architecture, stakeholder validation outcomes, lessons learned, outstanding gaps and recommendations for sustainability and further implementation.	30 April 2027	10%

5 Required qualifications and experience

Education

- Master's degree in Environmental and/or Natural Resources Management, Climate Change, Sustainable Development, Agriculture, Economics, Development Studies, Data Science, or a related discipline.

Experience and competencies

- At least seven years of relevant professional experience in information systems, data management, food security, resilience analysis, early-warning systems or a related field.
- Demonstrated experience assessing existing information systems, mapping information flows, identifying system gaps and overlaps, and developing integration roadmaps.
- Proven experience in harmonising business processes, documenting user needs, and translating stakeholder requirements into functional specifications and implementation plans.
- Practical experience in data interoperability, data-sharing arrangements, metadata standards, indicator harmonisation or information-system governance.
- Knowledge of food-security, socio-economic, market, livelihoods, trade, climate and conflict-related data, indicators and analytical approaches relevant to regional early warning and decision support.
- Experience engaging government institutions, regional organisations, development partners and technical teams to facilitate consultations, validate requirements and coordinate implementation.
- Experience preparing technical assessments, analytical reports, policy briefs, knowledge products and decision-support materials for different audiences.
- Strong analytical, facilitation, coordination, organisational and professional writing skills, with the ability to translate complex technical information into practical recommendations.

- Knowledge of the IGAD region, its food-security and resilience information systems, and experience working with IGAD member states or regional institutions are desirable.
- Familiarity with GIS, Earth observation and digital early-warning platforms is an advantage.
- Excellent command of written and spoken English is required. Knowledge of French is an added advantage.

7 Reporting and working arrangements

The consultant will report to IFRAH Coordinator and the designated ICPAC Project Manager or Supervisor and will work closely with the project's food-security, GIS, remote-sensing, crop-modelling, data-systems, communications, finance and administrative personnel. The consultant will provide senior analytical and coordination support, attend meetings as required and submit concise written progress updates. GIS, earth observation, software development, data engineering and crop-modelling products must be prepared or validated by the relevant technical specialists.

8 Duration

The consultancy will run for six months from 25 November 2026 to 25 May 2027. The assignment is expected to be full-time unless otherwise agreed in the contract.

9 Remuneration

Remuneration will be agreed in the individual consultancy contract and paid against satisfactory completion and acceptance of the deliverables set out in Section 4.

10 Confidentiality and ownership

All documents, data, analytical materials and other outputs produced under this assignment will remain the property of IGAD| ICPAC and FAO in accordance with the Letter of Agreement and the consultant's contract. The consultant will maintain confidentiality, apply appropriate data-protection practices and will not disclose or reuse project information without prior written authorization.

11 Evaluation of applications

Applications will be assessed against the required education, relevant experience, regional and thematic knowledge, analytical and writing ability, stakeholder-coordination skills, availability for the full assignment period and value for money. Shortlisted candidates may be required to participate in an interview.