



TERMS OF REFERENCE

Development of a Youth Digital Collaboration, Knowledge Sharing, and Climate Engagement Platform

Issuing Office	IGAD Climate Prediction and Applications Centre (ICPAC)
Location	ICPAC office, Nairobi, Kenya
Assignment Type	INDIVIDUAL CONSULTANCY
Contract Duration	6 months
Closing Date	13 July 2026 (End of Day) EAT
Reporting To	Youth Engagement Work Package Lead

1. Background and Context

The IGAD Climate Prediction and Applications Centre (ICPAC) is a World Meteorological Organization (WMO) Regional Climate Centre serving 11 countries in the Greater Horn of Africa. ICPAC provides climate services, early warning information, and capacity building support to strengthen climate resilience across the region. Through its initiatives, ICPAC plays a crucial role in helping communities adapt to the impacts of climate change, ensuring that vulnerable populations have access to the necessary tools and knowledge to mitigate risks associated with extreme weather events. This commitment not only enhances food security but also promotes sustainable development throughout the Greater Horn of Africa.

Youth constitute a significant proportion of the population in the Greater Horn of Africa and are among the groups most affected by climate change. At the same time, they are increasingly recognized as critical agents of change whose active engagement is essential for achieving meaningful climate action at national, regional, and international levels. Their innovative ideas, digital connectivity, and energy can strengthen community resilience, drive sustainable practices, and contribute to addressing the challenges posed by climate change.

To harness this potential, there is a need to create inclusive and accessible spaces that enable youth to connect, collaborate, learn, and amplify their voices. In alignment with its mandate to foster climate services and knowledge to enhance climate resilience and a sustainable future in the Greater Horn of Africa, ICPAC seeks to develop a dedicated digital platform to:

- Facilitate structured communication and networking among youth across the region
- Enable exchange of valuable climate-related resources, knowledge, and tools
- Create peer-learning opportunities between youth and experts
- Consolidate youth voices into a coherent force capable of influencing climate policy
- Coordinate collective action by youth across the region
- Empower youth to actively engage decision makers and shape climate policies at national, regional, and international levels

The platform is expected to leverage modern digital technologies, including interactive web mapping, climate information dissemination tools, and collaborative knowledge-sharing functionalities to enhance youth participation in climate resilience initiatives.

2. Objective of the Assignment

The primary objective of this consultancy is to design, develop, test, and deploy a fully functional, secure, and accessible Youth Digital Collaboration and Resource-Sharing Platform integrated. The platform shall serve as a dynamic hub enabling youth in the Greater Horn of Africa and beyond to access climate information, collaborate on regional initiatives, share digital resources, visualize climate-related information, and strengthen participation in climate resilience and adaptation initiatives.

3. Scope of Work

Discovery and Requirements Gathering

- Review existing ICPAC website architecture, branding guidelines, and technical stack.
- Develop a mockup of the youth corner.

Platform Design

- Develop UI/UX wireframes and interactive prototypes aligned with ICPAC branding.
- Design a responsive, mobile-first interface accessible on low-bandwidth connections.
- Present design concepts for ICPAC review (project lead and developers' team) and incorporate feedback.

Platform Development Core Features

The developer shall build and integrate the following core modules:

a) User Registration & Profiles

- Secure registration and authentication (email, OAuth via Google/LinkedIn)
- Youth profile pages with bio, country, skills, and interests
- Role-based access control (youth member, moderator, ICPAC admin)

b) Communication & Networking

- Discussion forums organized by topic (climate science, advocacy, policy, livelihoods)
- Direct messaging between registered users
- Multi-language support (e.g. English, French, Arabic, Somali, Swahili, etc.)

c) Resource Library

- Searchable repository for reports, toolkits, policy briefs, climate datasets, and multimedia
- Tagging, categorization, and advanced filtering
- Upload/download functionality with version management
- Creative Commons licensing indicators per resource

d) Peer Learning & Capacity Building

- Mentorship matching tool connecting youth with experts and mentors
- Collaborative project spaces (shared workspaces/boards)
- Badges and certificates for completed learning activities

e) Youth Voice & Advocacy

- Petition / open-letter creation and signature collection tools
- Blog/op-ed publishing space for youth contributors
- Policy tracker linking to national and regional climate commitments (NDCs, NAPs)

f) Administration & Moderation

- Admin dashboard for content moderation, user management, and analytics
- Reporting/flagging mechanism for inappropriate content
- Automated email notifications and newsletter functionality

g) Climate Information & Visualization Tools

- Interactive dashboards for climate-related indicators and youth engagement metrics
- Integration of geospatial and map-based visualization tools
- Display of regional climate initiatives, projects, and activities through interactive maps
- Visualization of climate data, early warning products, and knowledge resources
- Spatial tagging of projects and activities where applicable

Integration with ICPAC Website

- Seamless integration with existing ICPAC website (CMS if applicable)
- Consistent branding, navigation, and design language
- Design and implementation of RESTful APIs for any required data exchange with other ICPAC systems
- Integration with external climate and geospatial data services where applicable

Testing, Security & Performance

- Conduct unit, integration, and user acceptance testing (UAT)
- Implement OWASP Top 10 security measures; data encryption in transit and at rest
- GDPR-compliant data management and privacy policy
- Performance optimization for low-bandwidth environments
- Cross-browser and cross-device compatibility testing

Deployment and Handover

- All development shall follow Git-based version control workflows using ICPAC GitHub repositories, including documentation of commits, pull requests, and deployment processes.
- Deploy platform to ICPAC's hosting environment - Containerized deployment using Docker or equivalent
- Performance optimization and monitoring
- Conduct training sessions for ICPAC administrators and moderators
- Develop comprehensive technical documentation and user manuals
- Provide a 30-day post-launch support and bug-fix period.

4. Required Qualifications and Experience

- Bachelor's degree or higher in Computer Science, Software Engineering, Information Technology, or a related field
- Minimum 1 year of professional experience in full-stack web development
- Experience with geospatial web technologies and interactive mapping frameworks (e.g., Leaflet, OpenLayers, MapLibre, PostGIS) is an added advantage.
- Proficiency in modern web frameworks (e.g., React, Next.js, FastAPI, Django, Node.js, or equivalent modern web frameworks.)
- Strong experience with relational and/or non-relational databases (PostgreSQL, MySQL, etc)
- Experience with API development and third-party integrations
- Knowledge of cloud hosting environments (AWS, Azure, GCP, or equivalent)
- Understanding of web security best practices and data privacy regulations
- Proven ability to deliver responsive, accessible, mobile-first web applications
- Experience with Linux server administration, Docker-based deployments, cloud hosting, and Git-based collaborative development workflows.
- Experience working on climate, environmental, geospatial, or early warning systems will be an added advantage.
- Preferred technologies include React/Next.js frontend frameworks, FastAPI/Django backend frameworks, PostgreSQL/PostGIS databases, and cloud-native deployment environments.

5. Management and Reporting Arrangements

The consultant will report directly to the Youth Engagement Work Package Lead. Progress meetings shall be held fortnightly (or as agreed). ICPAC will designate a Technical Focal Point to facilitate access to existing systems, coordinate stakeholder consultations, and review deliverables.

ICPAC will provide:

- Access to the existing ICPAC website infrastructure, GitHub repo, and branding assets
- Facilitation of stakeholder consultations and youth representative engagement
- Timely review and feedback on all submitted deliverables

- Any relevant existing documentation, reports, and strategy papers

6. Application Requirements

Interested individuals should submit the following documents:

- Cover letter (maximum 2 pages)
- CV with Sample work or links to live platforms previously developed

Expression of interest must be sent to the email address below by **13 July 2026 (End of Day) EAT**. Send by email to: Procurement@icpac.net. No other submission method is allowed. Quote the Assignment title and Contract No. in the subject row.

Address:

IGAD Climate Prediction and Applications Centre

Attn: Procurement Unit

IGAD Climate Prediction and Applications Centre- **ICPAC**

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