



WMO



IGAD



EC

Intergovernmental Authority on Development (IGAD) – Hydrological Cycle  
Observing System (HYCOS) Project – IGAD-HYCOS

## **DEVELOPING TRAINING PROGRAMME FOR CAPACITY DEVELOPMENT IGAD-HYCOS**

### **TERMS OF REFERENCE**

#### **1. Background**

The IGAD-HYCOS project, promoted by IGAD, is one component of the Inland Water Resources Management Programme (INWRMP). The project is aimed at establishing a “*Regional water management information systems and strengthened observation networks*” within the broader framework of the Inland Water Resources Management Programme (INWRMP).

The IGAD-HYCOS project will be implemented as a two Phase project entitled “Implementation of the IGAD HYCOS”. The implementation period for Phase I (preparatory phase) of the project is twelve months and it commenced in June 2011.

The preparatory phase of the “Implementation of IGAD-HYCOS” will focus on revision of the project document and preparatory activities for the implementation phase (Phase II). It will involve extensive country consultations with all relevant stakeholders. The revision of the document is necessary because the existing project document was compiled in 2003 (with preliminary budget estimates) keeping in view the then state of hydrological networks in the Region. As per the original proposal only, Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda – Members of IGAD - were included as the participating countries in the project. Now, at the request of East Africa Community (EAC) and considering the new political changes in the Region, the scope of the project has been extended to cover additional countries including Burundi, Rwanda and South Sudan. The revised draft project document will be aligned with the new on the ground realities to ensure successful implementation of the project.

Presently, within the IGAD region, most of the National Hydrological Services (NHS) don't have sufficient technical and institutional capacity to collect, analysis, and store and disseminate timely and accurate hydrological information to enable the efficient and economic management of their national water resources.

Staff from the NHS participating in the project needs to be trained in various topics including the basics of telemetry technology, installation, operation and maintenance of the telemetry equipment, database management and Web systems and preparation and development of hydrological products from the IGAD-HYCOS. This support to the NHS will strengthen their capacity to better fulfil their responsibilities. Moreover, training sessions on the issue of marketing and public relations needs to be considered.

The IGAD-HYCOS project, therefore, is designed to strengthen national and regional Capacity Development programmes for sustainable and integrated water resources development and management in the IGAD region. For that purpose the project aims at developing a training programme to be conducted during the implementation of the IGAD-HYCOS - tailored to respond to country needs in both basic hydrology (e.g. stream gauging) and specific skills required for project implementation (e.g. maintenance of automatic equipment).

## **2. Purpose**

To support the reinforcement of national and regional capabilities in specific technical fields to the project and therefore to contribute to ensuring the long term sustainability of the project results, specific training events would be organized, addressed to the staff of the participating NHSs. The primary objective of the Capacity Development Programme for IGAD-HYCOS is to prepare well trained staff on specific topics to contribute to the project sustainability.

In this instance, a primary focus will be on a comprehensive short course for training of trainers and training sessions in the countries. The IGAD-HYCOS will need to continuously up-date the training programme according to countries need, sustain and maintain the level of trainers, in order to motivate the staff to fully and actively participate in the implementation of national and regional water resources development and management sustainable plans.

The services of a qualified and highly competent consultant will be required to assist the Project Manager to develop an effective and useful long-term training needs of NHSs in the Region and draw a programme of training to be conducted during the implementation of the IGAD-HYCOS - tailored to respond to country needs in both basic hydrology (e.g. stream gauging) and specific skills required for project implementation (e.g. maintenance of automatic equipment).

The Consultant will carry out country consultations to assess the training needs of the NHSs and collect necessary information related to capacity development required for review and update of the IGAD-HYCOS document. Revised project document will be prepared by the PM based on these inputs from the consultant.

The purpose of these Terms of Reference is to guide the Consultant in the process of developing the training programme for the IGAD Region, and any special topics that merit consideration for inclusion in the training programme. This will be carried out in consultation with the Member States guided by the following principles:

- Experience in implementation of other HYCOS training programmes will be considered
- Make use of the existing facilities (training institutes, Universities etc) available within the region and bring outside expertise where necessary.
- Emphasis would be on training of trainers.
- Bring closer collaboration between the NHSs and the Universities or other technical or research institutions.

The Training programme under the IGAD-HYCOS project will include but not be limited to the basics of telemetry technology, installation, operation and maintenance of the telemetry

equipment, database and Web systems and preparation and development of hydrological products from the IGAD-HYCOS.

### **3. Scope of Work**

The consultant, in collaboration and close coordination with the Project Manager and the National Focal Points, shall carry out the following activities:

- a) Consult the necessary relevant IGAD-HYCOS documents, including but not limited to, the old Project document (2003 version), IGAD/EU Financing Agreement, WMO/EU Contribution Agreement, as well as the completed Questionnaires received from the countries;
- b) Establish good working relationships with all IGAD-HYCOS countries;
- c) Visit some IGAD-HYCOS countries to assess and discuss the regional and national needs on training and assess the status of the national and regional training institutes.
- d) Through the discussions with experts in the IGAD-HYCOS countries, identify the priority areas in training for capacity development in the region considering the three categories related to core activities, tools and applications and management Details of the lists are not limited to

#### **A. Core activities**

1. Design and evaluation of hydrological networks
2. Hydrological instruments: maintenance, upkeep and calibration
3. Standard data collection methodologies (including water quality monitoring)
4. Discharge measurement techniques
5. Installation, operation and maintenance of automatic stations
6. Safety measures in hydrometry
7. Data management (processing, storage, retrieval and dissemination)
8. Measurement of physiographic characteristics

#### **B. Tools**

1. Water resources information systems
2. Hydrological modelling
3. Time series analysis
4. Hydrological forecasting systems
5. Flood forecasting techniques
6. Remote sensing

#### **C. Applications and management**

1. Water resources assessment
2. Flood estimation, design and management
3. Integrated water resources management (IWRM)
4. Irrigation and agricultural drainage
5. Environmental issues (impact assessment and ecological flow requirements)
6. Extreme event analysis
7. Management of hydrological services
8. Evaluation of national capabilities
9. Project development and Management
10. Resources mobilization

- e) Collect any relevant information on other existing training programmes in the region.
- f) Prepare a comprehensive draft report and proposal for training programme. The Draft Report should include a list of topics for short courses, proposed syllabus for each course, number of training hours required for each course and the training materials.
- g) Prepare list and their area of experience of potential institutions to be as collaborating technical partners.
- h) Facilitate discussions on the IGAD-HYCOS Training needs and Capacity development at the National Stakeholders workshop.

#### **4. Deliverables and Outputs**

The Consultant shall submit to the Project Management Unit (PMU) three hard and soft copies of the following deliverables:

- Draft detailed Report on National and Regional Capacity Development needs indicating the current status and country needs on training, priority area for training in each country.
- Proposal for National and Regional Programme for Training through Short Courses on various topics.
- Final Report after the draft has been discussed by countries.

#### **5. Qualifications**

To fulfil the requirements of the above scope of work, the Consultant should have the following qualifications:

- a) Extensive experience in developing and preparing Training courses related to Water Resources Management, minimum 10 years
- b) Knowledge of Integrated Water Resources Management, preference will be given to firms and individuals with IGAD Region experience
- c) Knowledge and experience in teaching Hydrology
- d) University degree or equivalent in the relevant field

#### **6. Selection Criteria**

The most suitable applicant will be selected on the basis of an evaluation of the applicants against the following criteria:

- a) Qualifications
- b) Experience in developing training programme on Hydrology
- c) Experience in teaching Water Resources Management
- d) Experience in Capacity Development
- e) Quality of the proposal for work

- f) Knowledge of the IGAD-HYCOS countries and their hydrology
- g) High level communication skills
- h) The cost estimate for doing the job
- i) Availability to commence duties

## **7. Time Frame**

The expected time frame for the Consultant to complete these activities is 3 months.

## **8. Financial Arrangements**

A contract in the form of a Special Service Agreement (SSA) for 30 days work with the WMO will be offered to the consultant to finish the tasks in a three month period. The level of the payment will be based on the qualifications and experience of the successful applicant.

## **9. Procedures for Applying**

Interested experts who have the qualification to do the job are encouraged to submit the following document to the Project Management Unit (PMU):

- a) An up-dated and recent C.V. addressing the selection criteria above
- b) A detailed proposal for the workplan indicating the work to be done for achieving the task, main points to be discussed with the countries and to also be addressed in your report, plan for visiting countries, the structure of your final report.
- c) An estimate of the proposed financial costs for the activities highlighting separately, the consultancy professional fee (Lump sum) and expected cost of at least four missions to visit four countries in the region, each for four days.

The above documentation should be submitted by e-mail to the Project Management Unit (PMU) at [pmunairobi@wmo.int](mailto:pmunairobi@wmo.int) and copied to [mtawfik@wmo.int](mailto:mtawfik@wmo.int)

The closing date for receiving applications is **17 December 2011.**

### **IMPORTANT NOTICE:**

1. ONLY APPLICATIONS RECEIVED BY E-MAIL WILL BE CONSIDERED (HAND DELIVERY OR POST THE APPLICATIONS WILL NOT BE ACCEPTED)
2. APPLICATIONS SENT OR RECEIVED AFTER THE DEADLINE WILL NOT BE CONSIDERED