



WMO



IGAD



EU

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

**IMPLEMENTATION AGREEMENT OF IGAD-HYCOS PROJECT  
IN  
THE REPUBLIC OF SUDAN**

**July 2014**



**AGREEMENT ON THE IMPLEMENTATION OF THE IGAD-HYCOS PROJECT  
IN  
THE REPUBLIC OF SUDAN**

**BETWEEN:**

The World Meteorological Organisation (WMO), with its address as follows: Case Postale 2300-CH-1211, Geneva, 2- Switzerland, represented by its Secretary General, and hereafter referred to as WMO on the one hand,

**AND**

The Ministry of Water Resources and Electricity (MWRE) of the Republic of Sudan, with its address as follows: P.O.Box 878 Khartoum, Sudan represented by the Honorable Minister, Ministry of Water Resources and Electricity (MWRE), on the other hand;

And all these hereafter collectively referred to as Parties

**PREAMBLE:**

**KNOWING** that, the availability of fresh water is the key to sustainable development and an essential element in health, food production and poverty reduction. As every aspect of development is closely linked to the proper utilization of water, this in turn exerts enormous influence on national economies in the IGAD region and contributes to poverty reduction and sustainable development through the achievement of specific MDGs and WSSD targets on water and sanitation.

**REALIZING** that due to shrinking budgets, concrete improvements in hydrological information management systems and strengthening of the capacity of hydrological services have been neglected. This has prevented provision of adequate baseline data and information services for sustainable water resources management. In order to assess the level of water availability, adequate hydrological, hydro-meteorological and other related data is needed on the amount of water available in the IGAD region.

**NOTICING** that within the IGAD region, most of the National Hydrological Services (NHS) are lacking sufficient technical and institutional capacity to collect timely and accurate hydrological information to enable efficient and economic management of their national water resources.

**CONSIDERING** that the IGAD-HYCOS project is designed to promote sustainable and integrated water resources development and management in the IGAD region through enhancement of regional cooperation and collaboration in the collection, analysis, dissemination and exchange of hydrological and hydro-meteorological data and information for water resources assessment, monitoring and management. For this purpose the project aims at

providing an adequate infrastructure for hydrological observation and adequate regional cooperation in information exchange within the IGAD countries.

**APPRECIATING** the efforts of Inter-governmental Authority for Development (IGAD) and financial support from the European Union (EU) to assist IGAD countries in addressing the water issues and improve performance of the National Hydrological Service in their countries.

**RECOGNIZING** WMO expertise in the field of Hydrology and Water Resources and its support to National Meteorological and Hydrological Services (NMHSs) to carryout their mandate in implementing their national socio-economic development plans.

**APPRECIATING** WMO's initiative for observing the Global Hydrological Cycle through the development of the World Hydrological Cycle Observing System (WHYCOS) which is a WMO programme allowing participating countries to have access to WMO Global Telecommunication System (GTS) with a free data transmission through WMO Meteosat satellite

**CONSIDERING** the Financing Agreement between the European Commission (EC) and the Intergovernmental Authority for Development No. RSO/FED/2009/021-334 signed on 28 March 2010 (for implementing the Inland Water Resources Management Programme in the IGAD countries) and the European Union Contribution agreement with WMO No. FED/2012/296-154 signed on 30 July 2012 (for implementing IGAD-HYCOS).

**RECOGNIZING** the achievements and outcome of the IGAD-HYCOS Preparatory Phase which ended in June 2012 and the start of the Implementation Phase in August 2012 with the task to establish an IGAD Regional Water Information System to be operational by March 2015 in order to strengthen regional cooperation.

**CONSIDERING** the activities related to the implementation of the IGAD-HYCOS project in the Republic of Sudan which is the object of this agreement are to be organized and executed by the National Hydrological Service in close collaboration and cooperation with the Project Management Unit (PMU) in Nairobi established by WMO through the available financial support from the European Union (EU) contribution.

**CONSIDERING** that each participating country in the IGAD-HYCOS project has agreed to collaborate and cooperate with all partners involved in the project to ensure successful implementation of the project and to achieve its objectives.

**THE PARTIES AGREE AS FOLLOWS:**

## **CHAPTER 1: OBJECTIVE OF THE AGREEMENT**

### **Article 1: Contractual Documents**

1.1 The following are to be considered as important Documents and form an integral part of this Agreement:

- a) IGAD-HYCOS Project in the Republic of Sudan (annex 1);
- b) The Financing Agreement between EC and IGAD (annex 2);
- c) The Contribution Agreement between EU and WMO (annex 3);
- d) List of Steering Committee members and National Focal Points (annex 4).

### **Article 2: Objective of the Agreement**

2.1 The present Agreement defines the commitment of WMO and the Ministry of Water Resources and Electricity (MWRE) of the Republic of Sudan with respect to the technical and



financial support and modalities for the implementation of IGAD-HYCOS project in the Republic of Sudan.

### **Article 3: Obligations of the Parties**

3.1 For the execution of the present Agreement, the obligations of each party are defined as follows:

#### **3-1: Obligations of the World Meteorological Organization (WMO)**

3.1.1 The WMO is the Project Implementing Agency (PIA). In this regard, WMO is responsible for supporting the implementation of the project in the Republic of Sudan. It will support the Project National Implementing Agency (PNIA) in the implementation of the project activities in the Republic of Sudan, as per the revised project document.

3.1.2 The WMO established the Project Management Unit (PMU) charged with the technical development and support to the countries. In this regard, the WMO commits itself to:

- a) From the project funds from the EU, provide financial and material inputs to facilitate the implementation of the project activities in the Republic of Sudan throughout the duration of the project. The financial provisions, equipment and instruments to be provided are as stipulated in Annex I
- b) Liaising with the UNDP offices to ensure smooth processing of documents related to the project by government officials, such as administrative approvals and arrangements for the importation of equipment including customs clearance.
- c) Facilitating the delivery of materials and equipment to the National Hydrological Service including one vehicle necessary for the project execution in the Republic of Sudan.
- d) Providing any necessary technical assistance through deployment of qualified experts. Preference will be given to experts from the region or from outside the region when specific expertise is not available in the region.
- e) Facilitating and supporting collaboration and coordination between the Project Regional Center/Project Management Unit and the National Implementing Agency to ensure successful implementation of the project in the country.
- f) Provide the necessary assistance to strengthen cooperation and coordination between the National Meteorological Service and the National Hydrological Service to promote collaboration for the smooth implementation of the Project.
- g) Consider IGAD-HYCOS as a component within WMO's initiative for observing the Global Hydrological Cycle through the development of the World Hydrological Cycle Observing System (WHYCOS) which is a WMO programme allowing participating countries to have access to WMO Global Telecommunication System (GTS) with a free data transmission through WMO Meteosat satellite
- h) Undertaking supervision and audit missions for the evaluation of project execution. The frequency and dates of missions will be determined in consultation with the parties.

#### **3-2: Obligations of the Ministry of Water Resources and Electricity (MWRE) of Republic of Sudan**

3.2.1 The National Implementing Agency for the IGAD-HYCOS Project in the Republic of



Sudan is the Hydrology Department of Ministry of Water Resources and Electricity.

3.2.2 In this regard, the Ministry commits itself to:

a) Confirming the nomination of **Eng. Musa Omer Abu El Gasim** (Under-Secretary Ministry of Water Resources and Electricity) and **Eng. Hassab elnabi Musa Mohamed** (Director-General for Nile Water Affairs and Dams, Ministry of Water Resources and Electricity) as the Steering Committee member and the National Focal Point respectively. Their full coordinates are included in annex 4 to this agreement.

b) Respecting EU and WMO's financial rules and regulations and any directives related to the project implementation as presented in the project documents; it will act in close cooperation and consultation with WMO in matters related to the implementation of the project.

c) Confirming that the following bank account will be dedicated only to receive and use funds related to project activities:

Name of account holder: -----**Roserse Dam Lower Gates Rehabilitation Project**-----  
Bank account number: -----**6918-2019-23**-----  
Name of bank: -----**Central Bank of Sudan**-----  
Address of bank: -----**Khartoum/Sudan**-----  
-----  
-----  
Bank (Swift) code: -----**BSDNSDKH**-----

d) Using the funds provided by WMO under this Agreement and received in the above account will be used by the National Implementing Agency exclusively in support of the IGAD – HYCOS activities as defined in a letter of agreement for each case.

e) Coordinating and facilitating activities related to the project among various national agencies and end-users involved in the implementation of the project within the defined scope of the project and as modified from time to time by the Steering Committee;

f) Providing the necessary financial resources as determined by Sudan for complementing the financial contribution received from the EU through WMO for implementing project activities in the country. These finances will be allocated to support expenditures that are not covered by the present Agreement or compliment services and construction activities in relation to the implementation of the field activities of the project;

g) Developing synergies between IGAD-HYCOS and the various programs and current projects in the country related to water and climate issues. Ensure that the country will provide all relevant information for setting up the regional database including the web-site; and carry out the civil works for the installation of the equipment and the rehabilitation and installation of the selected hydrological stations in the project;

h) Recognizing the importance of WMO's Resolution 25 (Cg-XIII) on free and unrestricted exchange of hydrological data and products, the Ministry agrees to share all the required hydrological and related data with the participating countries and the Regional Centre to enable formulation of regional hydrological products from the Regional Database. Accordingly, the Ministry and the Regional data Centre will ensure together that data related to the IGAD sub-region in general and the project in particular is properly archived on the Regional and National Databases through the agreed project procedures.



- i) Reporting to the PMU every three months on the technical and financial aspects of the project execution and in accord with the terms of the signed Letters of Agreement. Communicating to the PMU a final report of work achieved on the project within one month after the end of the project.
- j) Executing all technical activities as described in the benefits and responsibilities file (Annex 1) which is an integral part of the present Agreement.

## **CHAPTER II: MODALITIES FOR RECEIVING AND USE OF FUNDS**

### **Article 4: Request for Funds**

4.1 The Ministry of Water Resources and Electricity (MWRE) of Republic of Sudan / the Steering Committee Member should identify the activities which require financial support and the amount of funding needed to implement such activities.

4.2 Based on the above identified required funds, a request for funds should be submitted by the Ministry of Water Resources and Electricity (MWRE) of Republic of Sudan / the Steering Committee Member to the WMO Director, Climate and Water, Geneva, Switzerland, with a copy to IGAD-HYCOS Project Manager.

### **Article 5: Modalities for Release and use of funds**

5.1 Upon receipt of the request for funds and according to WMO's Financial Rules and Regulations, the Ministry of Water Resources and Electricity represented by the Steering Committee member and WMO represented by the Director of Climate and Water will sign a Letter of Agreement indicating the amount to be transferred and the specific activities to be undertaken with these funds.

5.2 The fund shall be transferred into the dedicated bank account for the IGAD-HYCOS project in the country as indicated above in paragraph 3.2.2 Funds provided by WMO under the Letter of Agreement are to be used by the Ministry of Water Resources and Electricity exclusively in support of the IGAD – HYCOS activities as indicated in the Letter of Agreement.

5.3 The Ministry of Water Resources and Electricity shall submit to WMO a detailed statement of expenditure incurred in undertaking the activities and it will be certified by the Head of Financial Services of the Ministry of Water Resources and Electricity, with originals or validated copies of supporting documents, within two weeks of the conclusion of the task for which the support is given.

5.4 Should the actual expenditure incurred be less than the amount provided by WMO, the Ministry of Water Resources and Electricity shall reimburse the unspent funds to WMO by transfer to WMO's account, within one month of finishing the activities.

5.5 The successive transfers shall only be carried out after settling the account of the previous request and receipt of justifications in original documents (invoices, receipt from suppliers, state of payment of per diem or night allowances by the beneficiaries etc).

### **Article 6: Adjournment or Rejection of Request for release of Funds**

6.1 The WMO reserves the right to postpone or reject any requests for funds, which do not conform to the Agreement on financing the beneficiary or if they do not respect all of the contractual obligations.

## CHAPTER III: FINAL DISPOSITION

### Article 7: COMMENCEMENT AND TERMINATION

7.1 The present Agreement shall take effect on the date when the last of the two parties signs and shall remain in force until completion of the project.

7.2 This agreement and the Annex 1 may be modified through amendments duly signed and dated by both parties.

7.3 The WMO reserves the right to cancel the present Agreement in all cases where the Ministry of Water Resources and Electricity of Republic of Sudan does not respect its obligations. In such a case, the non-justified expenditure related funds shall be refunded to the WMO.

### Article 8: Dispute settlement Procedure

8.1 All disputes relating to the interpretation or implementation of the present Agreement shall be settled amicably. If no solution is found, it will be referred to the Council of Ministers of the IGAD.

### Article 9: Stamp Duty and Registration

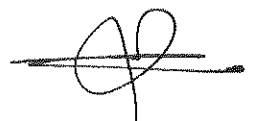
9.1 The stamp duty and right of registration of the present Agreement should be done by the Ministry of Water Resources and Electricity (MWRE) of Republic of Sudan whenever this formality is required.

### Article 10 – Legal Status of WMO

10.1 Nothing contained in this Agreement shall be deemed a waiver of any of the privileges or immunities enjoyed by WMO or IGAD.

### Article 11: Residence Election

11.1 All notifications relating to the execution of this Agreement between the WMO and the Ministry of Water Resources and Electricity (MWRE) of Republic of Sudan will be deemed to have been validly made if delivered at the residence place of one or the other party. The following are the addresses of the parties:



**For the World Meteorological Organization:**

Mr. Bruce Stewart  
Director, Climate and Water Department  
World Meteorological Organization  
7 bis, Avenue de la Paix  
Case postale No: 2300-CH-1211  
GENEVE 2-SWITZERLAND.  
Tel : 4122-730 83 55  
Fax : 4122-730 80 43;

**For the Ministry of Water Resources and Electricity (MWRE) of Republic of Sudan**

Name: ----- **Eng. Musa Omer Abu El Gasim** -----  
**Under-Secretary - Ministry of Water Resources and Electricity (MWRE) of Republic of Sudan**  
**Steering Committee member (IGAD-HYCOS project)**  
Designation: Minister (recommended) or Senior Government Official,  
Ministry of Water Resources and Electricity (MWRE)  
PO BOX ----**878**-----  
Khartoum, Republic of Sudan  
Telephone: **+249 83 775776** -----  
Fax: **+249 83 777151** -----

**Article 12: Language**

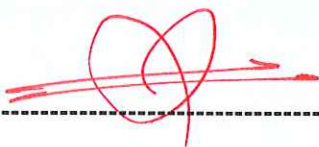
The present Agreement is made in two originals in English language.

Done at -----**Khartoum**-----

Done at -----

For the Ministry of Water Resources  
and Electricity (MWRE)

For the World Meteorological  
Organization (WMO)



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Date: ----**17 September, 2014**-----

Date: -----



## IGAD-HYCOS PROJECT IN THE REPUBLIC OF SUDAN

### 1. PROJECT BRIEF

About 60% of the IGAD region is arid or semi-arid and the availability of water resources is uneven and irregular both in space and time. In order to assess the level of water availability, adequate hydrological, hydro-meteorological and other related data is needed on the amount of water available in the countries. Sustainability of water resources infrastructure depends largely on adequate and accurate basic information related to the state of water resources. Due to lack of adequate hydrological information, many water resources development schemes cannot be designed optimally.

Presently, within the IGAD-HYCOS participating countries, most of the National Hydrological Services (NHS) are lacking technical and institutional capacity to collect, store and disseminate timely and accurate hydrological information to enable the efficient and economic management of their national water resources. It is necessary to support the NHSs to strengthen their capacity to better fulfill their responsibilities, by improving the availability, accuracy, and dissemination of water resources data and information.

The IGAD-HYCOS project, therefore, is designed to promote sustainable and integrated water resources development and management in the participating countries through enhancement of regional cooperation and collaboration in the collection, analysis, dissemination and exchange of hydrological and hydro-meteorological data and information for water resources assessment, monitoring and management.

The project is expected to provide participating countries with a hydrological information system that will feed into a regional water information system, and assist participating countries in develop their national capacities for efficient, cost-effective and sustainable water management. To achieve this task a modern strategic and optimum monitoring network for data collection and dissemination will be established. The National Databases will be strengthened and linked to a Regional Database which will also be established. A training programme will be implemented to improve the technical skills of NHSs personnel.

The IGAD-HYCOS will strengthen the technical and institutional capacities of the National Hydrological Services in the region to collect and process hydrological and hydro-meteorological data and meet the needs of end users for information on water issues. It will also promote and facilitate the dissemination and use of water related information using modern information technology.

### 2. STRATEGIC AND OPTIMUM MONITORING HYDROLOGICAL NETWORK IN SUDAN

Within the framework of the IGAD-HYCOS project, 3 hydrological stations were designated for the collection of hydrological and environmental data in the Republic of Sudan. The designation and selection of the stations was based on country consultation and the decision of the IGAD-HYCOS Steering Committee. The selected sites include surface water, water quality and groundwater stations and they are all located in transboundary basins. The list of stations is shown in table 1.

**Table 1: Proposed Hydrological Stations in Sudan**

No	Station Name	Lat	Lon	Purpose	Sensors	Transmission
1	El Jabalain	32.800712780	12.589310210	WRA	WQ, WL and Discharge	Satellite via MeteoSatt
2	El Jeerah	36.466128970	15.268316560	MET	RF,AT and Hum	Satellite via MeteoSatt
3	Eddeim	34.927636111	11.238169444	WRA	WQ, WL and Discharge	Satellite via MeteoSatt

### **2.1 Installation of selected stations under the IGAD-HYCOS Project**

The National Hydrological Services (NHS) under the Ministry of Water Resources and Electricity (MWRE) shall ensure the rehabilitation and installation of the selected stations under the IGAD-HYCOS project in the Republic of Sudan. It will carryout all the preparatory civil work to make the sites suitable for the installation work. Two stations will be installed by the supplying company. The NHS staff will be trained by the supplier on installation, operation and maintenance, during the installation of the two stations. The remaining stations will be installed by the national trained staff with support from the Project Management Unit.

### **2.2 Designation of Gauge Readers**

It is recommended to designate gauge readers in the selected stations in the Republic of Sudan. These gauge readers are to record daily, readings of water levels and any other necessary information. The ministry will take all the necessary steps, in conforming with existing procedures applicable in the country for the recruitment of these gauge readers.

### **2.3 Monitoring of selected hydrometric stations of the project**

The NHS will ensure the collection of hydrological data from all IGAD-HYCOS stations within the country. The procedures for water level monitoring will be specified for each station depending upon the type of equipment installed for data transmission under the project (Meteosat satellite, radio, GSM telephone, field visit by region team).

### **2.4 Monitoring of water quality of surface waters**

The NHS shall ensure the collection of water quality data from selected stations in the project which will be defined in consultation with other stakeholders in the country and the Project Management Unit. The measurements will include but not be limited to temperature, pH, Conductivity, Dissolved Oxygen (DO) and Turbidity.

### **2.5 Sustainability of Observations at the stations**

In the framework of the IGAD-HYCOS project, the monitoring of the 3 hydrometric stations mentioned above as well as the water quality monitoring at these stations shall be carried out by NHS throughout the duration of the project with limited financial support from the project budget. The Ministry of Water Resources and Electricity will be responsible to support and maintain the operation of the network at the end of the EU financial support to ensure continuation of flow of data and project sustainability.

## 2.6 Analysis and Management of the Data at the national level

The NHS will analyze and manage the hydrological data from the selected stations, including historic data and the data to be acquired during the course of the project, using the data base management system to be provided under the project. The collected data will be validated and processed by the NHS and will be transmitted to the Regional Database.

## 3. HYDROLOGICAL MEASURING EQUIPMENT & DATA COLLECTION PLATFORM

During country consultations, it was noted that most of NHSs in participating countries need to be equipped with modern hydrological measuring equipment to be able to produce accurate and quality data. The NHS in the Republic of Sudan needs substantial assistance and variety of equipment to support their data collection activities. In this regard the NHS in the republic of Sudan through the IGAD-HYCOS project budget will receive a variety of hydrological measuring equipment including Data collection platforms as indicated in table 2 to improve and upgrade their performance.

Table 2: Equipment to be supplied to Sudan

Items	Quantity	Remarks
Complete current meter with accessories	1	
ADCP	2	
Water Quality Portable field kits.	2	
Ordinary rain gauges	12	
Tipping bucket rain gauges	1	
Meteosat DCP	3	Including water level, water quality and rain fall sensors

## 4. TRAINING

Within the framework of IGAD-HYCOS project, Training of Trainers short courses will be organized on regional levels to prepare trainers for conducting similar courses at a national level. One or two participants from the Republic of Sudan will be sponsored to participate in the regional training of trainers. In each participating country, on-job training sessions will be conducted to improve the technical skills of NHS staff and to assist them in operating and maintaining the expected IGAD Water Information System.

The training modules which have been prepared for the Republic of Sudan have considered the demand of hydrological products and water resources development plans in the country. It is designed for different levels of expertise, ranging from technicians who work in the field to professionals and decision making level. The proposed topics and duration of each session are shown in table 1.

**Table 3: Proposed Training areas for Sudan**

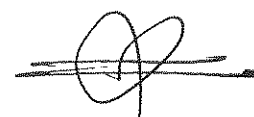
No.	Topics	Duration	Target group
1	Installation, Operation and Maintenance of Hydrological Networks	5 days	Technicians
2	Database and web page Management	4 days	Professionals
3	Water Resources Assessment	3 days	Professionals
4	Discharge Measurement Techniques	4 days	Technicians
5	Water Quality Monitoring and Management	5 days	Technicians & Professionals
6	Integrated Water Resources Planning and Management	2 days	Decision Making
7	Integrated Flood Management	2 days	Decision Making

Five topics will be selected from the above list for organizing five national training sessions in the republic of Sudan. These training modules will be delivered by national trainers who will be trained at the regional session. The national trainers will be supported by national, regional or international institutions to ensure successful delivery of the training. An evaluation report of the training by the participants shall be forwarded to WMO with a copy to the Project Management Unit after the organization of each training module in the country.

## **5. FINANCIAL ARRANGEMENTS**

The Ministry of Water Resources and Electricity in the republic of Sudan will receive financial support to assist the NHS to carryout the field work and to ensure smooth and successful implementation of the project in the country. The financial support will be transferred to NHS for carrying out specific tasks according to modality of using such funds as stated in Chapter II of the above signed agreement.

The allocated financial contribution to the Republic of Sudan is seventy six thousands, one hundred Euros (€ 76,100.00) to be used for specific activities as shown in table 4.



**Table 4: Financial Support to Sudan**

<b>No</b>	<b>ITEMS</b>	<b>FUNDS (€)</b>	<b>REMARKS</b>
1.	Civil Works for hydrological stations	10,500.00	Contribution to the installation of 3 DCP
2.	4X4 vehicles for field works	23,000.00	Purchased local in accordance to WMO rules and regulation for field work
3.	Computers, laptops, printers, photocopier and software	13,600.00	To improve the work environment for professionals
4.	web page development	6,000.00	Develop/enhance NHS web page
5.	National Training and Workshops	11,000.00	To be carried out for specific topics
6.	Database enhancement	12,000.00	Enhance National Database
<b>TOTAL</b>		<b>76,100.00</b>	Will be paid separately for each activity through letter of agreement

## **6. TECHNICAL AND FINANCIAL REPORT ON PROJECT ACTIVITIES**

A quarterly report on the project's progress shall be prepared by the Ministry of Water Resources and Electricity and be submitted to WMO with a copy to the Project Management Unit. The report will present all activities and related expenditures encountered during the reporting period and undertaken by the Ministry.

