European Union

United Nations Educational, Scientific and Cultural Organization

Intergovernmental Hydrological Programme

NEPAD African Network of Centres of Water Science and Technology

Geographical scope
13 countries in Central-East, West, and Southern Africa

Total project value & timeframe
6 million Euro funded by the EU
2016 - 2020

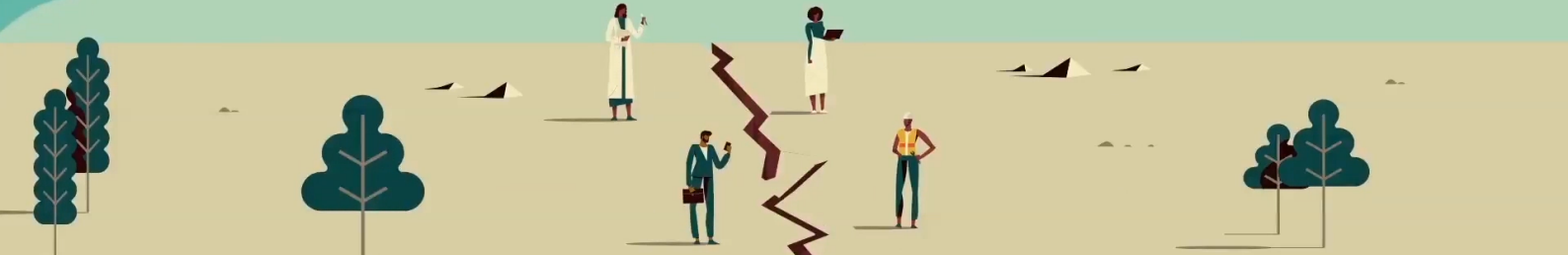
Implementation partners:
UNESCO IHP and the JRC

The **ACEWATER II** project addresses research, data-sharing, technology transfer and human capacity development challenges for junior and senior professionals and technicians in Africa's Water Sector.

Years of work have gone into improving Delivery, acquiring Finance, and Training People in the Water Sector, all of which is necessary to provide sustainable access to Water and Sanitation. The challenges of Delivery and Finance can be more easily addressed but the **most difficult challenge remains: there are not sufficient people** - engineers, technicians, trainers and management - **who have the right skills and capacities** to do their job. This challenge remains because there is no reliable information on what, and how large, these gaps in human capacity actually are. This problem grew to such an extent that in 2013, the African Union and the African Ministers Council for Water announced the need to create a **Human Capacity Development Programme**.

This task was given to the **African Union's NEPAD Water Centres of Excellence**. The Centres of Excellence are Higher Education and Research Institutions that conduct high-end scientific research on water related sectors to support **informed decision-making** and provide policy guidance to governments. The Centres have identified human capacity gaps and priorities in the Water Sector in West, Central-East and Southern Africa through a multistakeholder participative approach, engaging all levels of government, a range of sector actors from technical to managerical levels, and education institutions who are involved in training sector technicians and professionals. These priorities have been addressed with Technical and Higher Education trainings and courses for a minimum of **1,200 students** at Masters and technical levels in **eleven countries**. Staff and student exchanges and mobility between countries for all regions have been promoted to increase access to training and research at a regional level.

Acknowledging that COVID-19 will have a direct impact on the implementation of Human Capacity Development activities, the ACEWATER II project has conducted a Risk analysis to define the extent of the impact. Results of this analysis provide key information to identify, from a sample of African Institutions and Water Sector actors, how project Partners are coping with challenges of the current outbreak and what gaps can be addressed by the Project with alternative modalities such as distance and e-learning, and online webinars for exchanges. This will facilitate the return to effective trainings, skills transfers, and access to services in the face of this and future emergencies, and will also impact the future configuration of the education sector overall.



Regional Comparison of three Top Priorities

Central-East Africa

- Water Supply 23 %
- Management, Admin 23 %
- Water Quality 16 %

West Africa

- Water Supply 26 %
- Water Quality 26 %
- Groundwater 16 %

Southern Africa

- IWRM 26 %
- Water Supply 22 %
- Water Quality 22 %

A total of 78 priorities were identified by the Centres of Excellence in countries in Central-East, West and Southern Africa, which were grouped into seven priority thematic sectors for analysis. The graphic above shows the top three priorities per region and their degree of importance. Some of the priorities identified, such as Water Supply and Water Quality, are common to all regions. Regional trends can be identified: E.g. Water Supply is a higher percentage priority in West Africa and Management & Administration is a main priority only in Central-East Africa.

The priority thematic sectors are:

1. Water Quality
2. IWRM
3. Data & Modeling
4. Sanitation
5. Groundwater
6. Management, Admin
7. Water Supply

Success story: Nigeria

The National Water Resource Institute (NWRI) Centre of Excellence in Kadua identified shortages of skilled human resources and a spectrum of training needs in water resources sub-sectors. Needs were identified at Federal, State and local Government Agency levels in Nigeria. The results of this study contributed to policy interventions; stimulating the National Technical Committee on Water Resources to make mandatory the proposed courses such as the Induction Course for Fresh Engineers employed in the water sector and Career Progression Courses for the water sector personnel. Government agencies were directed to sponsor their staff for further education training at the NWRI.

Implementing Pilot Courses: Case Studies

Case Study: Ethiopia

The Ethiopian Institute for Water Resources at Addis Ababa University developed the following courses from their National HCD Framework:

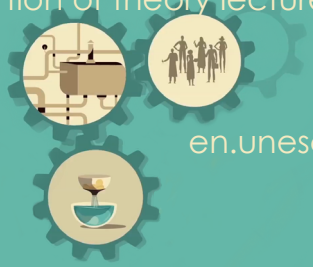
HCD Priority	Training course	Remark
Operation & Maintenance of Water Infrastructure	Irrigation Systems Diagnosis, On-farm water management, Operation & Maintenance	Technical level courses; **25 Students**
Stream Flow & Water Quality Monitoring	Operational Hydrology: Flow & Sediment monitoring in streams	
Irrigation Systems Performance Evaluation & Improvement	Water Productivity & Irrigation Systems Modellig	Professional courses; **50 Students**
Water Resources Assessment	Surface Water Resources Assessment Using Advanced Modelling Techniques	

Case Study: Sudan

The University of Khartoum in Sudan developed the following courses from their National HCD Framework:

HCD Priority	Training course	Remark
Data Acquisition in Surface and Groundwater (Practical Aspects)	Irrigation Systems Diagnosis, On-farm water management, Operation & Maintenance	Technical level courses; **25 Students**
Water Quality Monitoring & Testing	Operational Hydrology: Flow & Sediment monitoring in streams	
Water Sanitation & Hygiene	Water Productivity & Irrigation Systems Modellig	Professional courses; **50 Students**
Data Acquisition in Water Resources Management	Surface Water Resources Assessment Using Advanced Modelling Techniques	

The courses were implemented during the end of 2019 and early 2020 and included a combination of theory lectures, laboratory work and field work.



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