

## Capacity Building for Acceleration

Bisher Imam and Abdel Aziz Zaki, UNESCO Regional Bureau for Science, Cairo

Arab Regional Preparatory Meeting for the Midterm Comprehensive Review of the Water Action Decade, ESCWA, Beirut, Lebanon 18-19 May 2022



#### UNESCO and the UN SDG6 Global Accelerator Framework



UNESCO's contribution to the Water and Climate Coalition hosted by WMO for SDG6 Implementation

## IHP-IX (2022-2029): Science for a water secure world in a changing environment

Water secure world Resilient societies

Goal 6. Ensure availability and sustainable management of water and sanitation for all Other Water Related SDGs

Integrated water management under conditions of Global Change UNESCO IHP-IX 2022-2029 Science for a Water Secure World in a Changing Environment

Water Governance based on science for mitigation, adaptation and resilience

Sciences: Research and Innovation
Bridging the data and knowledge gaps
Water Education in the fourth industrial
revolution including sustainability

#### **Five priority areas:**

- 1. Scientific research and innovation
- 2. Water Education in the Fourth Industrial Revolution including Sustainability
- 3. Bridging the data-knowledge gap
- 4. Integrated water resources management under conditions of global change
- 5. Water Governance based on science for mitigation, adaptation and resilience

**34** expected outputs

**151** Key activities (draft implementation Plan)

#### **UNESCO WATER FAMILY**

## The UNESCO Water Family:

- IHP, WWAP,
- IHP National Committees in 172 countries,
- 67 water-related UNESCO Chairs,
- 30 water-specialized Centres.

## Additionally:

- IHP Flagships Initiatives,
- partners and networks (e.g., ACSAD/LAS, GWP, IAHS, IHS),
- and... a unique network of 3,000+ water experts.



#### UNESCO WATER FAMILY

#### **Centres**

#### **Arab Region**

- Regional Centre for Training and Water Studies in Arid and Semi-Arid Zones (RCTWS), Egypt;
- Regional Centre on Capacity Development and Research in Water Harvesting (RCWH), Sudan;



#### Some water-related centres to Climate Change and DDR

- Institute for Water Education (IHE-DELFT), Netherlands;
- International Centre for Water Hazard and Risk Management(link is external) (ICHARM), Japan;
- Centre for Water for Sustainable Development and Adaptation to Climate Change (WSDAC), Serbia;
- European Regional Centre for Ecohydrology (ERCE), Poland;
- Asia-Pacific Centre for Ecohydrology (APCE), Indonesia.
- International Centre for Water Resources and Global Change (ICWRGC), Germany.
- International Centre for Water Hazard and Risk Management (ICHARM)
- European Regional Centre for Ecohydrology (ERCE)
- Water Centre for Arid and Semi-Arid Zones of Latin America and the Caribbean (CAZALAC)
- International Groundwater Resources Assessment Centre (IGRAC)
- International Center for Integrated Water Resources Management (ICIWaRM)

#### **UNESCO WATER FAMILY**

#### **Chairs**

- UNESCO Chair in Water Resources, Sudan
- UNESCO Chair on Aflaj, Oman
- UNESCIO Chair on Desalination, Qatar
- UNESCO Chair on Sustainable Water Resources Management, Palestine.

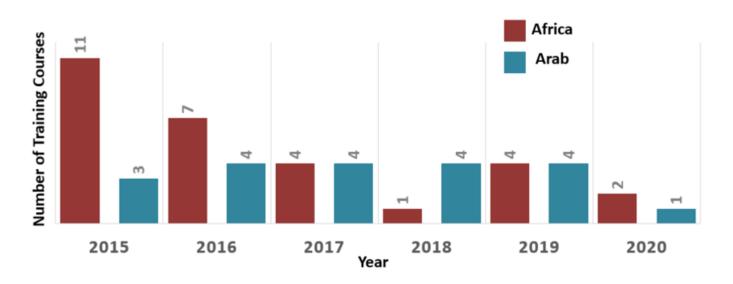
#### **Other Chairs**

- UNESCO Chair on Water, Energy and Disaster Management for Sustainable Development, (WENDI), Japan
- UNESCO Chair on Geoenvironmental Disaster Reduction, Japan.
- UNESCO Chair in Global Environmental Changes, Canada.
- UNESCO Chair in Hydrometeorological Risks, Mexico.
- UNESCO Chair on Sustainable Water research for Climate adaptation in Arid Environment, Namibia.
- UNESCO Chair Sustainable Water Technology and Management, Curação
- UNESCO Chair in Water Management, Central African Republic;
- UNESCO Chair in Water and Education for Sustainable Development, Argentina;
- UNESCO Chair in Hydrological Change and Water Resources Management, Germany.
- UNESCO Chair on the prevention and sustainable management of geo-hydrological hazards, Italy.





## Regional Center for Training and Water Studies (Arab Region, Africa)



	North Africa and Arab Countries <sup>1</sup>	East Africa	Central Africa	Western Africa	Southern Africa	Total
Female	103	52	20	39	9	223
Male	311	89	34	60	20	514
Total	414	141	54	99	29	737
Participation Levels						
Female	24.9%	36.9%	37.0%	39.4%	31.0%	30.3%
Male	75.1%	63.1%	63.0%	60.6%	69.0%	69.7%





- Groundwater and artificial recharge
- Arc GIS & Water CAD
- Leadership and administrative skills
- Efficient water use/on-farm management
- Dam Safety
- Non-conventional water resources
- Modern irrigation Schemes
- Climate Change
- On farm management

## Cairo Office (2019-2021)

Remote Sensing Observation of Precipitation (UCIrvine, AUB)

Water Energy Food Nexus (LAS/ALECSO)

**Groundwater Modeling (ACSAD/LAS)** 

**Artificial Groundwater Recharge (RCTWS)** 

Mathematical Optimization of Water Allocation During Drought for Food Security

**Groundwater Governance** 

More than 350 Water Professionals Trained

#### Climate related UNESCO Water Initiatives



Flow Regimes from
International Experimental and
Network Data



Global Network on Water and Development Information in Arid Lands



Hydrology for the Environment, Life and Policy



World's Large Rivers Initiative



International Sediments Initiative



International Flood Initiative



International Drought Initiative





#### Recommendations

### 1- Need Foresight

Identify national sector skill needs (e.g. SDG6 monitoring) and coordinate with relevant educational/training/vocational institutions to develop critical capacity

- 2- Establish/strengthen Training Units and connect with Academia
- 3- Develop joint/mutual exchange and scholarship programmes (e.g. AGU)

Academic

**Professional** 

- 4- Cooperate, cooperate, and cooperate (Networks, S/S)
- 5-Conisder the establishment of UNESCO Chairs in national universities along national priorities
- 6- Reach out to community
- 7- Promote community of practice/professional organization chapters
- 8- Establish/promote accreditation mechanisms (persona, institutional)

# Thank you

Bisher Imam, Abel Aziz Zaki UNESCO

b.imam@unesco.org; aa.zaki@unesco.org

