

United Nations Educational, Scientific & Cultural Organisation

**Major objective is the achievement of
the Millenium Development Goals**

Particularly (in our case) Goal 7:

ENSURE ENVIRONMENTAL SUSTAINABILITY

Target 7.C:

**Halve, by 2015, the proportion of the population
without sustainable access to safe drinking water and basic sanitation**

UNESCO-IHE
Institute for Water Education



**Postgraduate Education, Training and Research
in Water, Environment and Infrastructure.**

Based in Delft, the Netherlands

The Need

- A recent report on a global water sector capacity needs concludes that, if the MDGs are to be met in Africa by the target date of 2015 the number of water professionals needs to be increased by 300 % (WWAP3, 2009)
- WHO statistics have revealed that if the current tendencies continue, Sub-Saharan Africa will not reach the sanitation related MDG before 2082
- A World Bank task force on capacity development in Africa concluded that there is:
 - a failure to systematically include capacity building in country-led development strategies,
 - too much focus on one-off training programs,
 - too little focus on South-South learning and partnerships(Nelson and Tejaszi, 2009)

UNESCO Category 1 Institutes & Centres

- Institutionally part of UNESCO
- Governed by UNESCO's rules and regulations
- 11 worldwide, but only 2 science institutes
- Created by a decision of UNESCO's General Conference following a review by the Executive Board
- Headed by a UNESCO staff member, who is answerable to the Director-General
- All UNESCO institutes and centres but one (IHE) receive funding from UNESCO's regular budget
- Functional autonomy is a key structural and operational requirement
- They act under the authority of the Director-General and their programme activities are an integral part of UNESCO's programme

UNESCO Category 1 Institutes

- **Directors of UNESCO institutes shall be placed under the direct authority of the relevant Sector ADG**
- **Overseen by a Governing Board**
 - IHE's Board has 13 members
 - Appointed by the Director-General for a renewable term of office of four years
 - 6 elected by the Intergovernmental Council of the IHP
 - 7 designated by the D-G
 - 2 from agencies, institutions and the private sector
 - 1 from professional international associations in the water sector
 - 1 representing the IHE alumni associations worldwide
 - 3 designated upon recommendation by the Government of the Netherlands.

Mission

The **mission** of the Institute is to contribute to the **research, education and training of water professionals**

to **build the capacity** of sector organisations, knowledge centres and other institutions active in the fields of water, the environment and infrastructure **in developing countries and countries in transition.**



History of UNESCO-IHE:

1957 Birth IHE established as an International Education Institute



1991 Transformation IHE Delft becomes an independent Foundation

2003 Operational UNESCO-IHE Institute for Water Education becomes operational

Staff and Outputs



150 Staff
75 Academic
75 Support

300 Guest
Faculty



4 Water and Environment MSc Programmes (Delft-based):

- 200 MSc participants
- 100 PhD fellows
- 200 Short Course Participants



From about 80 countries

126 Publications (average per year) 112 Projects (mostly capacity building)

- + 200 Postgrad Degree**
- + 300 Short Course**



Participants at Partner Institutions worldwide

International Masters Programmes



Masters Degree Programmes

Specialisations

Environmental Science

Environmental Science & Technology
Environmental Planning & Management
Limnology & Wetland Ecosystems

Water Quality Management

Water Management

Water Resources Management

Water Services Management

Municipal Water & Infrastructure

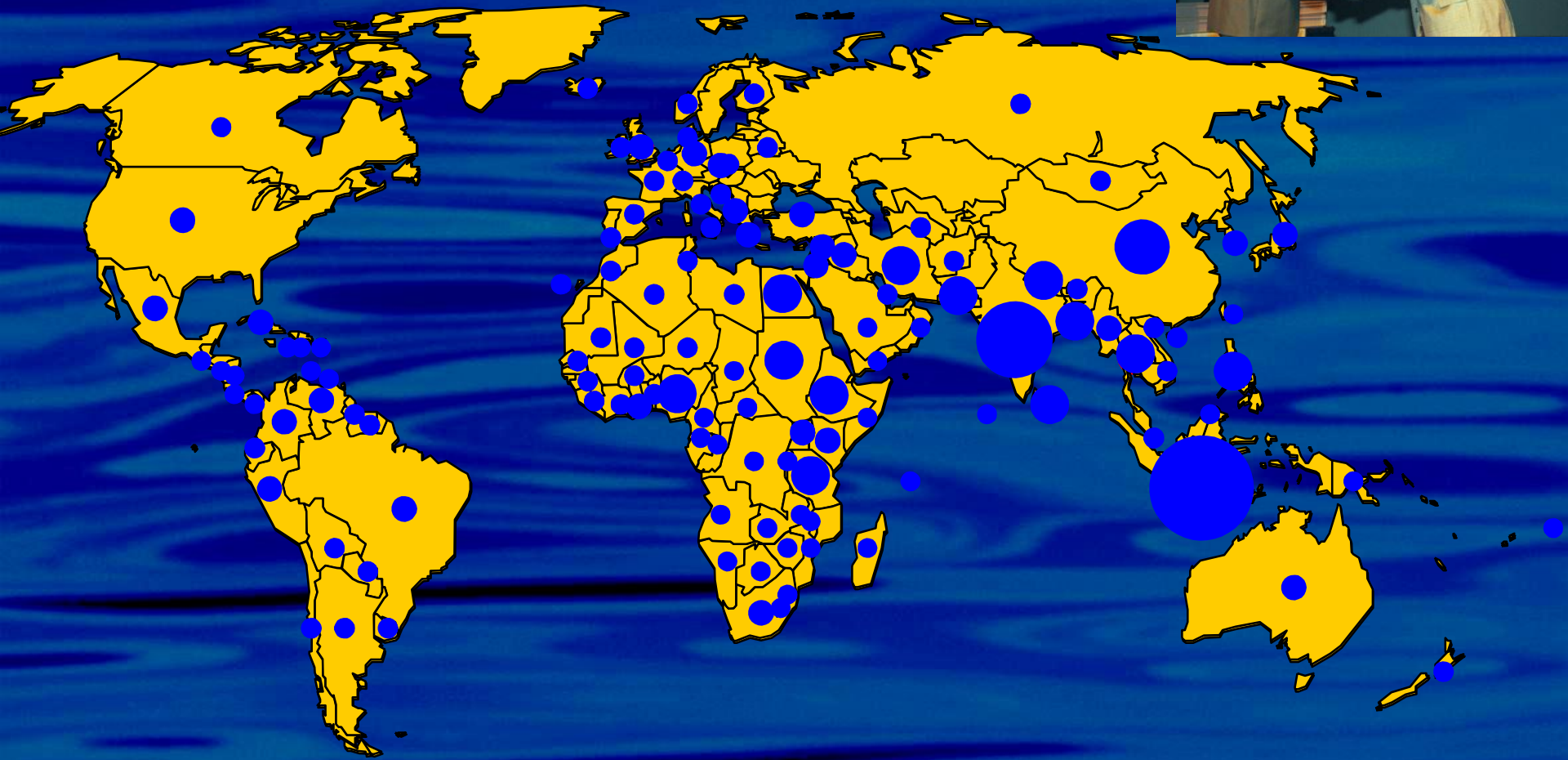
Water Supply & Engineering
Sanitary Engineering
Integrated Urban Engineering

Water Science & Engineering

Surface Water Hydrology
Groundwater Hydrology
Hydraulic Engineering & River Basin Development
Coastal Engineering & Port Development
Land & Water Development
Hydroinformatics

Connecting the Community of 14,000 Alumni

UNESCO-IHE Alumni Community



0 - 50

51-150

151-300

301-500

501-850

851-1200

ECOLIVE Project, Nyando Wetlands, Kenya, 2010 - 2014



Julius Kipkemboi - PhD 2007 UNESCO-IHE
Lecturer, Egerton University

Margaret Abira - PhD 2008 UNESCO-IHE
Director, WRMA, LV Basin South

Prof J B Okeyo - Director VIRED, Kisumu
UNESCO-IHE Partner

Prof Fred Zaal - University of Amsterdam
UNESCO-IHE Partner

4 x Current Kenyan PhD students UNESCO-IHE

4 x Staff members, UNESCO-IHE



On 30 June 2010, the Nicaraguan National Congress appointed Louis Angel Montenegro as First Water Minister of Nicaragua.

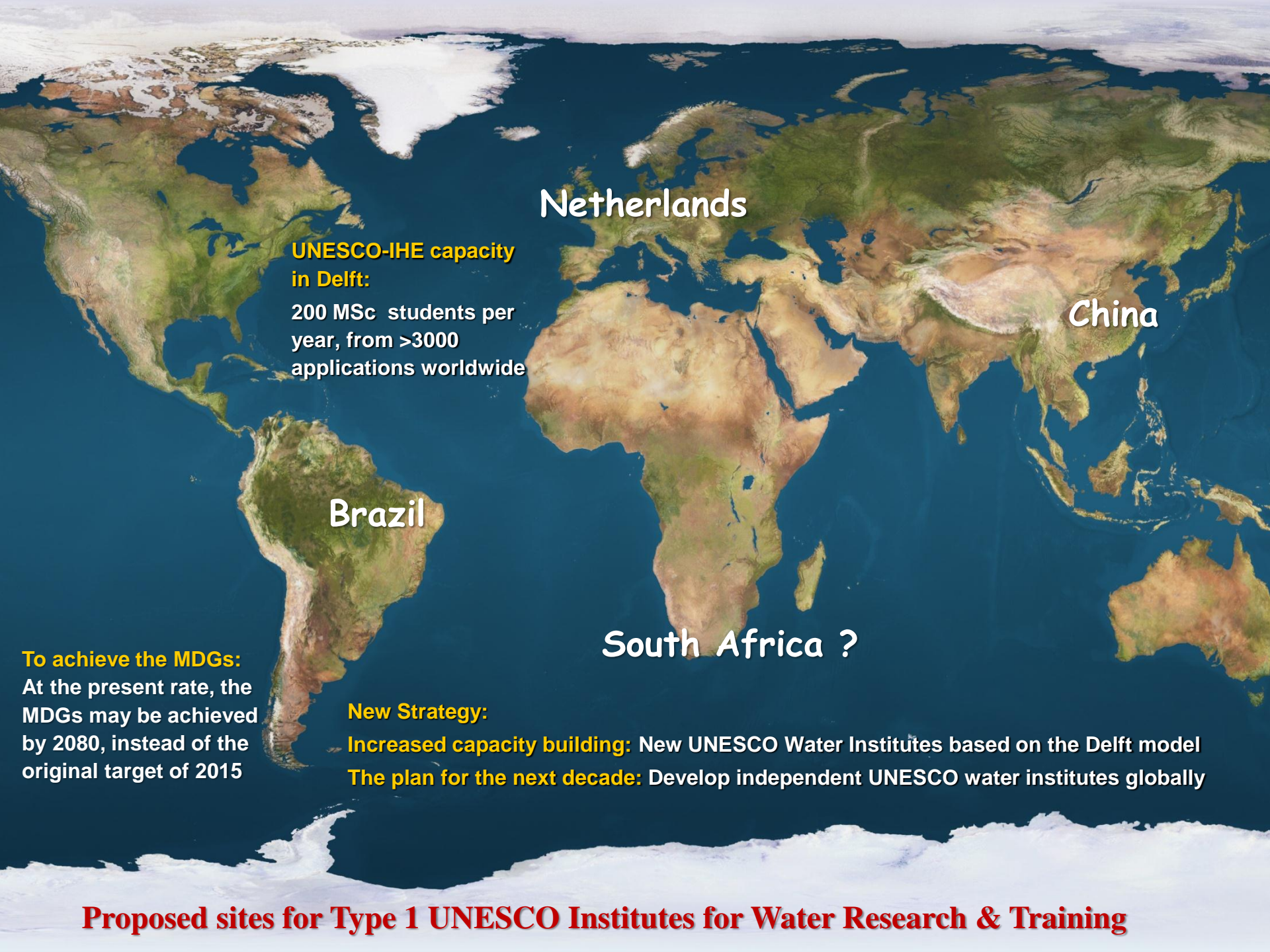
UNESCO-IHE Alumnus becomes Water Minister of Nicaragua

Mr Louis Montenegro



Mr Montenegro obtained his MSc degree in Water Management from UNESCO-IHE in 2010.

He said: "Certainly it is UNESCO-IHE that gave me the technical background to assume my new duties as Water Minister of my country. It was an honour to have studied at UNESCO-IHE."



Netherlands

**UNESCO-IHE capacity
in Delft:**

200 MSc students per
year, from >3000
applications worldwide

China

Brazil

South Africa ?

To achieve the MDGs:

At the present rate, the
MDGs may be achieved
by 2080, instead of the
original target of 2015

New Strategy:

Increased capacity building: New UNESCO Water Institutes based on the Delft model

The plan for the next decade: Develop independent UNESCO water institutes globally

Proposed sites for Type 1 UNESCO Institutes for Water Research & Training

Progress and plans

**At the November meeting of the UNESCO general Conference,
A resolution was passed calling for the development of more Category 1
Water Institutes worldwide:**

Proposed timeline:

- **March 2012:** IHE prepare a draft agreement on how the Category 1 institutes will be setup
- **April/May 2012:** Present the above agreement to the permanent delegation at UNESCO
- **September 2012:** Table the agreement to UNESCO executive Board. Call for proposals.
- **February 2013:** Deadline for proposals from member governments
- **May 2013:** Feasibility studies carried out by UNESCO, and the outcome discussed with IHE's GB.
- **September 2013:** GB submits its recommendations to the UNESCO Exec board
- **Oct/Nov 2013:** Approval sent to the general conference of UNESCO.

Objectives of the Eastern Cape Water Group:

- **Commitment of the South African government, other African countries, relevant institutions, universities in South Africa and the rest of Africa, and NGOs**
- **Establish a representative national committee to spearhead the pursuit of the Institute for Water Education and Research**
- **Develop a full-scale proposal by the beginning of 2013**
- **Obtain the necessary resources to set up the Institute**
- **Develop the Eastern Cape Water Group partnership**
- **Build cooperation with relevant institutions in South Africa and the rest of Africa**
- **Establish pilot initiatives that can demonstrate the potential and advantages of the proposed Institute.**

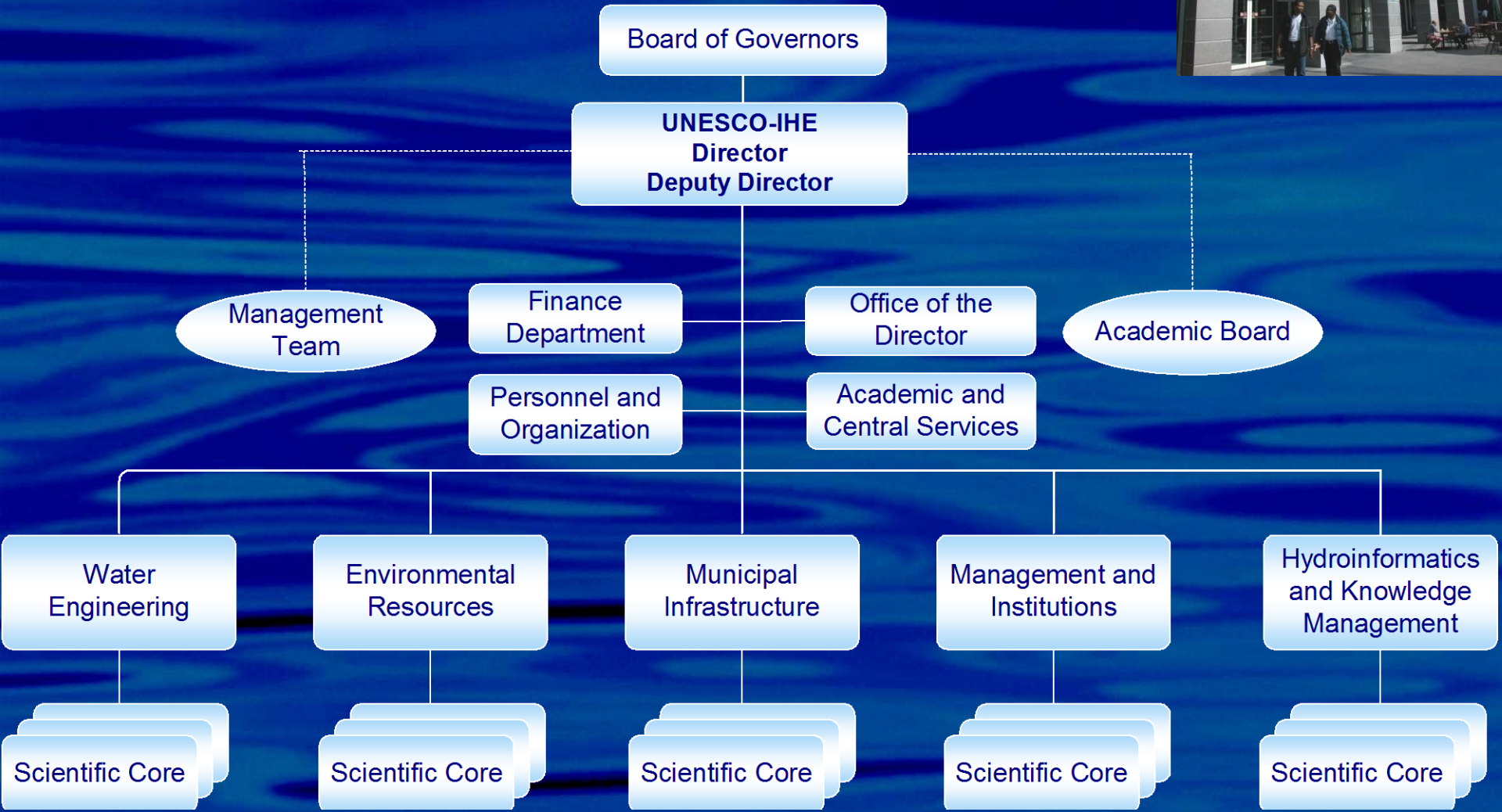
5 Year Plan:

- **Year 1:**
Proposal; Needs analysis; Funding & support; Pilot Projects
- **Year 2:**
First Masters course; Appoint staff; Additional course design
- **Year 3:**
Second Masters course; PhD programme; Planning of infrastructure
- **Year 4:**
Third Masters course; Building infrastructure
- **Year 5:**
**Target 60 Masters students & 10 PhD students;
Complete infrastructure**

5 Year Budget: R122,000,000

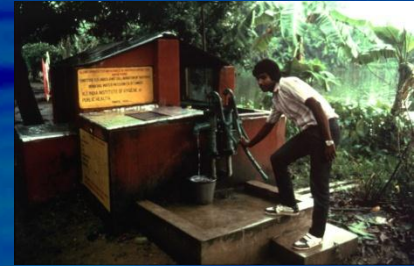
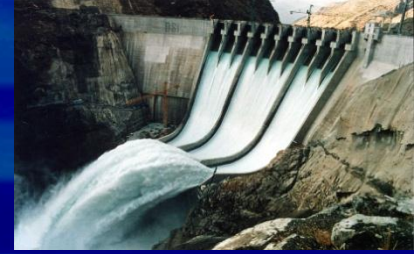


Organisational Structure

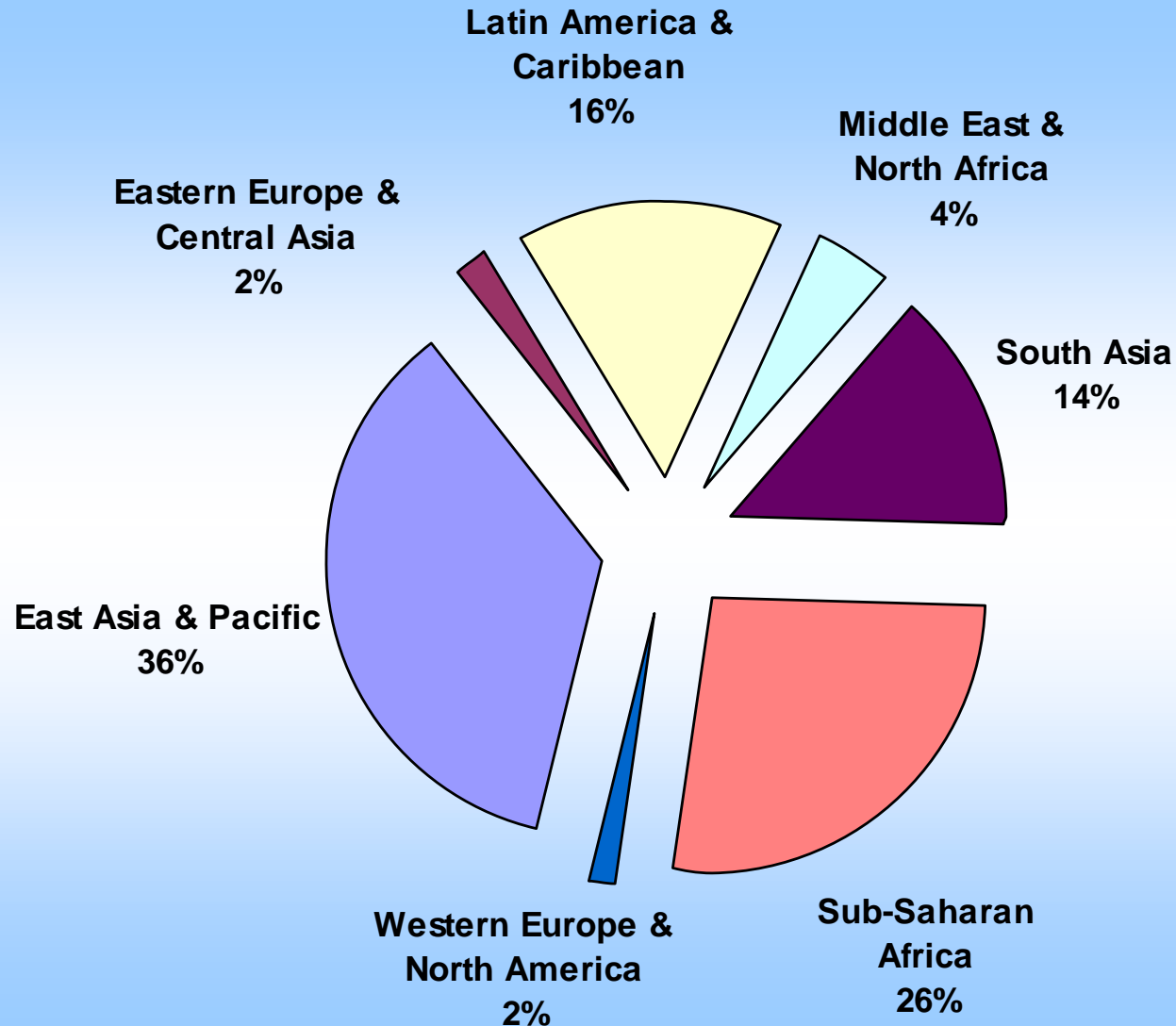


Areas of Competence

- River Engineering and River Basin Development
- Coastal Engineering and Port Development
- Hydrology
- Flood Management and Prevention
- Freshwater Ecology
- Environmental Systems
- Pollution Prevention and Control
- Biotechnology
- Solid Waste Management
- Waste (Water) Treatment
- Urban Infrastructure Management
- Water Resources Management
- Hydroinformatics



Regional Distribution of Participants



The Crisis

- **UNESCO's International Hydrological Programme emphasizes that "Water problems are most acute in Africa, where it is estimated that 300 million people (out of a total population of 700 million) are affected by water shortages"**
- **From 1990 to 2008 provision of safe drinking water expanded in sub-Saharan Africa by 22 per cent, but remains very low, with only 60 per cent of the population served (MDG Report 2010)**
- **For 110 modeled river basins that are predicted to get drier, up to 60% of fish species are likely to face extinction by 2050. (MEA, 2005)**
- **Rivers most at risk are concentrated in poor tropical and sub-tropical countries, where the needs for human adaptation are most likely to exceed governmental and societal capacity to cope (MEA, 2005)**