Vlaams Unesco “Wetenschappen” trustfonds

Flandres UNESCO Science Trust fund
Fund in trust to support UNESCO activities in the Science sector

Rudy Herman
Flanders Authority
Economy, Science and Innovation Administration

VPWvO World Water Day 2013 event, Brussels, March 22
MISSION: "to contribute to peace and security by promoting collaboration among nations through education, science and culture in order to further universal respect for justice, for the rule of law and for the human rights and fundamental freedoms which are affirmed for the peoples of the world, without distinction of race, sex, language or religion, by the Charter of the United Nations"
Established in 1999 - 5 yr agreement - Third phase 2009-2013

Main Guiding Policy lines:

⇒ Sustainable capacity building;
⇒ Contribute to the development of a sustainable policy taking into account the local socio-economic and political context;
⇒ Supporting and strengthening knowledge transfer;
⇒ Cooperation as partners in addressing, defining and solving the problems;
⇒ Persistence of the effort;
⇒ Guarantee sufficient equipment, inclusive training to safeguard operation;
⇒ Encourage networking.
Bi-annual UNESCO programme (C5)

UNESCO Project proposals within IOC, MAB en IHP action lines

“Call for interest” to Flanders Universities and Research Institutes

Science Trust Funds Steering Committee Selection of the proposals
Approval Government of Flanders
Science Trust funds → Proposal funds

Actualisation of the Work Plans
Science Trust Funds Steering Committee

Implementation = UNESCO
in close collaboration with all partners

Annual report UNESCO → Flanders
UNESCO’S Intergovernmental Scientific Cooperative Programme in Hydrology and Water Resources

The International Hydrological Programme (IHP) is the only Intergovernmental programme of the UN system devoted to water research, water resources management, and education and capacity building. The programme, tailored to Member States’s needs, is implemented in six-year phases—allowing it to adapt to a rapidly changing world.
Transition of IHP’s phases: *continuity with change*

**1990-1995 IHP IV**
Hydrology and Water Resources Sustainable Development
in a *Changing Environment*

**1996-2001 IHP-V**
Hydrology and Water Resources Development
in a *Vulnerable Environment*

**2002-2007 IHP-VI**
Water Interactions:
*Systems at Risk and Social Challenges*

**2008-2013 IHP-VII**
Water Dependencies:
*Systems under Stress and Societal Responses*
Water at UNESCO: "The three plus one pillars"

• **International Hydrological Programme- IHP**
  IHP Secretariat : Paris+ Field Offices + Regional settings
  National Committees in member states- 161


• **Network of 26+ (more in the pipeline) IHP Water Centers**

• **UNESCO-IHE Institute for Water Education:**
  postgraduate education for water professionals
  (Delft, The Netherlands)
Strengthening global water initiatives to sustain world water governance

By: Varady, Robert G., Katherine Meehan, John Rodda, Matthew Iles-Shih, and Emily McGovern (2008)

UNESCO’s water family operates as a global network

The IHP oval is in bold for readability only, since it overlaps with so many other initiatives. The acronyms identify various global water initiatives, and their placement is a schematic attempt to situate them according to their primary institutional aims.
GWADI-GeoServer

http://hydis.eng.uci.edu/gwadi/

Drought Management  Flood Forecasting  Water Resources
International Drought Initiative (IDI)

Objective

- Provide experimental, near-real-time (2-3 days behind real time and depending on availability of needed data from NASA, NOAA and other providers) drought monitoring products based on large-scale hydrological model output
- Develop a large scale hydrologic model using the Variable Infiltration Capacity (VIC) land surface model approach
- Provide near-real-time fields of soil moisture and other hydrologic variables across the African domain
- Make available the products, via a drought monitoring webpage

African Drought Monitor
Terrestrial water cycle (evaporation, runoff, soil moisture, snow) simulated using the VIC land surface model, forced by observed and RS precipitation and temperature.
IHP VIII (2014-2021)

“Water Security: Responses to Local, Regional, and Global Challenges”

Water-related Disasters and Hydrological Change

Groundwater in a Changing Environment

Addressing Water Scarcity and Quality

Water and Human Settlements of the Future

Ecohydrology Engineering Harmony for a Sustainable World

Water Education, Key for Water Security

Water Security: Responses to Local, Regional, and Global Challenges
1. Risk Management as adaptation to global changes
2. Understanding coupled human and natural processes
3. Benefiting from global and local Earth observation systems
4. Addressing uncertainty and improving communication
5. Enhancing sustainable groundwater resources management

Water-related Disasters and Hydrological Change

Water security: Responses to local, regional, and global challenges

Addressing Water Scarcity and Quality

1. Game changing approaches and technologies
2. System wide changes for integrated management approaches
3. Institution and leadership for beneficiation and integration
4. Opportunities in emerging cities in developing countries
5. Integrated development in rural human settlement

Integrated Water Resources Management, Transboundary or Shared Waters, Human Dimension, Global Change

1. Enhancing sustainable groundwater resources management
2. Promoting innovative tools for utility of water supplies and controlling pollution
3. Addressing water quality and pollution issues within an IWRM framework – regulation, policy, institutional and human capacity – resolution
4. Promoting tools for stakeholders involvement and awareness, and conflict underseable trends
5. Dealing with present water scarcity and developing foresight to prevent

Water and Human Settlements of the Future

1. Hydrological dimension of a catchment – identification of potential threats and opportunities for sustainable development
2. Ecological catchment structure shaping for ecosystem potential enhancement – biological productivity and biodiversity
3. Ecohydrological system solutions and ecological engineering for the enhancement of water and ecosystem resilience and ecosystem services
4. Urban ecohydrology – stormwater purification and retention in the city
5. Ecohydrology dimension of a catchment – demarcation of potential threats and opportunities

Educating for Transboundary water cooperation

1. Enhancing tertiary education and professional capabilities in the water sector
2. Value education for children and youth
3. Addressing vocational education and training of water technicians
4. Promoting awareness of water issues through informal water education
5. Education for transboundary water cooperation

Ecohydrology, Engineering Harmony for a Sustainable World

Water Education, Key for Water Security

1. Improving governance, planning, management, allocation, and efficient use of water resources
2. Dealing with present water scarcity and developing foresight to prevent undesirable trends
3. Promoting tools for stakeholders involvement and conflict resolution
4. Addressing water quality and pollution issues within an IWRM framework – improving legal, policy, institutional, and human capacity
5. Promoting innovative tools for utility of water supplies and controlling pollution

Groundwater in a Changing Environment

Ecohydrology, Engineering Harmony for a Sustainable World
Thematic priorities

- Improved water governance as a basis to attain integrated water resources management
- Use of modern techniques and methodologies to assess and improve water use efficiency,
- Hydro-climatic risk management including decision making.

Following cross-cutting themes will provide support to these priorities:

- Generating and supplying relevant scientific information to support decision making processes,
- Building technical, academic and professional capacities,
- Enhancing communication and dissemination of experiences, procedures, methods and results associated to the execution of activities.
FRIEND / Nile partners: Egypt, Sudan, Uganda, Ethiopia, Kenya, Tanzania

Training of Trainers
On the job training

Workshops

Joint publications
Flow Regimes from International Experimental and Network Data

IWRM
Capacity building and groundwater resources exploration for emergency response to drought in the Horn of Africa

Major Humanitarian problems: Ethiopia, Kenya, Somalia

Activities conducted:

- Rapid survey of groundwater with WATEX System (remote-sensing technology)
- Processing, modeling, analysis, development of maps and database
- Delivery of Groundwater Exploration Navigation Systems (GENS)
- Training of trainers, water managers and well-drillers on the developed tools
CONTINUATION of IHP VII (2008-2013)  
Systems under Stress and Societal Response

A significant contribution to UNESCO IHP programme designed to address water resources challenges and opportunities of Arid and Semi Arid region.

Centro del Agua des Zonas Aridas in Latin America y Caribe  
(CAZALAC)

Managing Water Resources in Arid and Semi Arid Regions of Latin America and Caribbean”  
(MWAR - LAC)

OBJECTIVE: to contribute to improve the quality of life and alleviate poverty of local communities in arid and semiarid environments in Latin America and the Caribbean, through a reduction of the vulnerability of water resources systems to global changes based on sound scientific knowledge.
UNESCO-Centre for Water management in Arid and Semi Arid zones in LAC

- Research & Common approach + standardization
- Networking

Improving livelihood of local communities!
CAZALAC:

UNESCO-Centre for Water management in Arid and Semi Arid zones in LAC

Dedicated on field training schemes:
- ELAFIS
- COSWAND
- AQUACROP

In cooperation with local communities!
Sustainable Management of Marginal Drylands (SUMAMAD) Project
(joint project of UNESCO, UNU, ICARDA, Flemish Gov’t of Belgium)
→ Will implement five priority themes:
(4) Dryland agriculture
(6) Formulating scenarios for decision-makers
(7) Viable dryland livelihoods, in-come generating activities
(8) Environmental education/knowledge sharing
(9) Restoration/rehabilitation of degraded drylands
OVERALL OBJECTIVES

- Improved and alternative livelihoods of dryland dwellers;
- Reduced vulnerability to land degradation in marginal lands through rehabilitation efforts of degraded lands;
- Improved productivity through identification of wise practices using both traditional knowledge and scientific expertise;
- Sharing of scientific knowledge among partner countries.

Network of existing projects: exchange of best practices + Common training

Participative approach with local population & technical depts,
INCOME GENERATING ACTIVITIES IDENTIFIED:
• High value crop production
• Post-harvest technologies
• Fruit drying
• Chicken raising
• Fish farming
• Dairy and goat sector
• Milk tofu production
• Milk-based cosmetics
• Olive oil soap production
• Wool products
• Handicrafts
• Ecotourism

DESSERTLAND conference Gent, 17-18 June 2013 + 19 June = SUMAMAD
Framework for ‘Empowerment and Training’ in the field of Water

=> Networking in Southern Africa:

DPSIR
Ecosystem approach
FETWATER was developed with the aims of rising and transferring knowledge so that a critical mass of water practitioners is created and/or reinforced to facilitate the process of the implementation of the Water Act.

FET-Water build trust amongst the water actors and established seven networks:

- Resource Directed Measures (RDM);
- Groundwater Resource Directed Measures (GRDM);
- Beneficial Use of Water (BUW);
- Wetlands and Rivers (W & R);
- Catchment Management Agencies (CMA) Expertise Development;
- Catchment Management Strategy (CMS) Development;
- Water-Related Disaster Management (WRDM).
NETWORKING as CB tool is about pooling expertise and resources and building trust between partners.
When focus is on training of trainers ➔ cost effectiveness is even higher.
Co-ordinator: important role in welding motivated people toward common perspectives and goals.
• Fosters cooperation, building respect, openness and empathy ➔ creating mutual trust between partners;
• Stimulate knowledge transfer (mix of bottom-up & top down), often including local knowledge;
• Stimulate experts to share data, information, ideas and work jointly in the development of/broadening insights
• Networks embraces young people in a stimulating environment and let them participate in the cooperative spirit contributing to the long-term vision perspectives and vision.
• Foster cross-sector cooperation stimulating multi-/inter-disciplinarity in complementary manner ➔ 1+1+1+1+1= >>>5
Visibility & return:
• Enlarge your view, area & fields of operation
• Enlarge the exchange of experience
• Larger forum for exchange of ideas ➔ enhances creativity
• Broadens the stakeholder involvement (research community, authorities, agencies & NGO’s, private sectors, larger public).
Remote Sensing technology in support to Integrated (ground) Water Resource Management and integrated Coastal area Management

http://www.apex-esa.org/
HR4DEV
Human Rights for Development (HR4DEV)
An international training programme on Rights-Based Approaches to Human Rights and Children’s Rights

HR4DEV has 2 modules
• Module 1: mapping the potential and limits of HR rights-based approaches to development and development cooperation
• Module 2: idem, with a specific focus on children’s rights

The main themes included a contextualisation of human rights in the development debate, paradigms of rights-based approaches to development (HRBA), mainstreaming HRBA into policy-making, critical approaches to children’s rights in theory and practice, and global challenges to children’s rights.

Additionally the course materials will be the basis of a Manual’
Both modules discussed the recurrent themes:

1. universality of human rights

2. structural inequality (a.o. on development (cooperation) paradigms, on the right to development (including global poverty, gender, cultural diversity, migration and armed conflict);

3. the practical operationalization and added value of human rights principles of respect of inherent human dignity, non-discrimination, equality, justice, participation

4. the nature and the strategic added value of children’s rights (in the themes on critical approaches, poverty, environmental challenges, migration and armed conflict).
The HR4DEV Executive Committee:

Prof. Dr. Wouter Vandenhole, UNICEF Chair in Children's Rights, University of Antwerp
Prof. Dr. Stephan Parmentier, KU Leuven
Dr. Ellen Desmet, Children’s Rights Knowledge Centre
Dr. Didier Reynaert, UGent,
Ms. Giselle Corradi, UGent
Ms. Kathy Vlieghe, Children’s Rights Knowledge Centre
Ms. Terry Amssoms, University of Antwerp

See also: http://www.keki.be/?m=47#Video.
Towards a Southeast Pacific Coastal Atlas and information system to support coastal management plans and policies

Aims to establish a coastal management indicator framework in each country of the Southeast Pacific region (Chile, Colombia, Ecuador, Panama and Peru), focused on environmental and socio-economic conditions within the context of sustainable development and integrated coastal area management.
Four specific objectives:

Strengthen the framework of national and regional ICAM indicators to assist in decision making through partnerships and collaborations among institutions.

- Coordinate and integrate further coastal and marine data and information systems at national level through the IODE National Oceanographic Data Centers.
- Design and implement a strategy for dissemination and awareness of the ICAM indicator framework among local and regional stakeholders.
- Promote continuous training and formation to strengthen the institutional capacities.
Flanders UNESCO Science Trust fund

- Visibility
- Scale: local → multilateral
- Persistence: ‘Dialogue’ & ‘Partnerships’
- Optimal use of the budget
- Valorisation
- Integration Experts & Expertise
