G-77/INFO-12

MINISTERIAL FORUM ON WATER
Muscat, Sultanate of Oman
23-25 February 2009

SAMPLE OF UNESCO'S INTERNATIONAL HYDROLOGICAL PROGRAMME (IHP) AND OF THE PROGRESS OF THE UNESCO-INSTITUTE FOR WATER EDUCATION (IHE) AIMED AT COOPERATION BETWEEN DEVELOPING COUNTRIES IN THE FIELD OF WATER WITHIN THE PURVIEW OF THE UNITED NATIONS

(Background document prepared by the secretariat of UNESCO)

OFFICE OF THE CHAIRMAN OF THE GROUP OF 77
NEW YORK

Annex-1 Sample UNESCO activities aimed at cooperation between developing countries in the field of water within the purview of the United Nations

Name of the project/programme	Internationally Shared Aquifer Resources Management - SADC
Brief description of the activity (short paragraph)	Within the ISARM SADC framework, a pilot project was decided to be initiated at the Auob Transboundary Aquifer (TBA) in the south east Kalahari/Karoo basin. The project's first phase focuses on a hydrogeological study of the TBA based on previous work. Critical review of existing work done to date with purpose of delineating the extent of the TBA is taking place so that the countries reach a consensus on the spatial distribution of the system. The final product of the project is the development of tools for the joined management of the TBA by the Member States that share it.
Countries involved	Botswana, Namibia and South Africa
Contact information of project leader or website of project (please include your name, title, location and email address)	Mr. Ernesto Fernandez – Polcuch, Science Programme Officer, UNESCO Windhoek Cluster Office; e.fernandez-polcuch@unesco.org Mr. Alexandros Makarigakis, Science Programme Officer, UNESCO Addis Cluster Office; a.makarigakis@unesco.org

Cooperation between developing countries in the field of water within the purview of the United Nations- Arab Region

Name of the project/programme	Climate Change Risk Management in Egypt/ Spanish MDG Achievements Funds
Brief description of the activity (short paragraph)	Within the framework / Spanish MDG Achievements Funds of UNDP, UNESCO Cairo Office was a member of the UN country team who developed this joint project document. The project was approved for three years with 4 Million US$ budget. Cairo Office was leading on the water component with an operational budget of about half a million US$. The project started in late October 2008. The main objectives of the project are: ▪ Establish and train a core group of specialist from Ministry of Water Resources and Irrigation (MWRI) and its relevant research institutes to use the models in assessing climate change impacts, mitigation and adaptation on water resources of Egypt; ▪ Organize awareness workshops on climate change impacts and adaptation measures on the water sector; and ▪ Enhance the water policy of Egypt by considering the climate change in their IWRM plans. The main tasks of the project are: ▪ Development of a Regional Circulation Model (RCM) for the River Nile in full coordination with the National Office of the Nile Basin Initiative (NBI). ▪ Implementation of IWRM pilot projects using the generated scenarios from the RCM. Climate resilient Integrated Water Resources Management (IWRM) Plans on the local level, based on the climate scenarios generated by the RCM will be implemented.
Countries involved	Egypt
Contact information of project leader or website of project (please include your name, title, location and email address)	**Dr. Radwan Al-Weshah** **Regional Advisor for Water Sciences in Arab States & FRIEND/Nile Project Director** **UNESCO Cairo Regional Office** **8 Abdel Rahman Fahmy Street, Garden City, Cairo 11541, EGYPT** **Tel: 202-27945599 / 27943036** **Fax: 202- 27945296, Mobile: 20-10-1777800** **E-mail: R.Weshah@unesco.org** **Private E-mail: Weshah11@yahoo.com**

Cooperation between developing countries in the field of water within the purview of the United Nations- Arab Region-2

Name of the project/programme	The FRIEND/Nile Project
Brief description of the activity (short paragraph)	The FRIEND/Nile Project is a UNESCO-Flanders Science Fund In Trust Project funded by the Government of Flanders and aims at enhancing the capacity building and networking for Nile countries. The project is executed by UNESCO Cairo Office and implemented by several key water institutions in the Nile countries. UNESCO was able to secure funding from the Flemish government for the project of an amount of US$ 929,700 for the first phase of the project (513RAB2042) covering the period 2001-2006 and US$ 950,000 for the second phase of the project (513RAB2003) covering the period 2006-2010. The Water Resources Research Institute - Ministry of Water Resources and Irrigation of Egypt is the overall coordinator of the project in addition to the coordination center of the Integrated Water Resources Management (IWRM) component. The FRIEND/Nile activities themes are: · Hydrologic Modeling; · Erosion and Sediment Transport Modeling; · Stochastic Modeling; · Ecohydrology; and · Integrated Water resources Management. Training needs were identified by the research teams in all participating countries. Hands-on training and intensive working group sessions were undertaken using the real data under the supervision of the resource persons. The “Training of Trainers” modality was adopted based on the needs of the research themes of the project. Researchers were trained on the application of different models/software, GIS and new modelling methodologies as an effective approach for enhancing the institutional and human resources capacity building in the Nile Basin water resource management. Mutual trust, confidence and understandings have been developed among the research teams of the project. Finally, it can be pointed out that the FRIEND/Nile project is an excellent model for exchange experience and hydrological knowledge between researchers and

	scientists in the Nile countries. This is a good model for South-North and South-South cooperation.
Countries involved	Nile Basin Countries: Egypt, Sudan, Kenya, Ethiopia, Tanzania, Uganda, and Eretria
Contact information of project leader or website of project (please include your name, title, location and email address)	**Dr. Radwan Al-Weshah** **Regional Advisor for Water Sciences in Arab States & FRIEND/Nile Project Director** **UNESCO Cairo Regional Office** **8 Abdel Rahman Fahmy Street, Garden City, Cairo 11541, EGYPT** **Tel: 202-27945599 / 27943036** **Fax: 202- 27945296, Mobile: 20-10-1777800** **E-mail: R.Weshah@unesco.org** **Private E-mail: Weshah11@yahoo.com**

Name of the project/programme	Preparation of Index for Water Resource Development and preparation of India Water Development Report
Brief description of the activity (short paragraph)	Interagency action under UNDAF India is trying to develop a single index for water resource development and use the groundwork to prepare an India Water Development Report. UNESCO, UNICEF and FAO have been mandated to prepare the report. Output is expected to be published in 2011.
Countries involved	India
Contact information of project leader or website of project (please include your name, title, location and email address)	Mr Bhanu Neupane, Regional Programme Specialist, UNESCO, New Delhi office; b.neupane@unesco.org

Name of the project/programme	Estimation of green-gas house gas emission due to groundwater exploitation in the Central Ganga Plain
Brief description of the activity (short paragraph)	This action under UNDAF India will quantity the total green house gas contribution in the atmosphere due to groundwater exploitation in the Central Ganga Plain by assessing the current and simulating future probable trend of groundwater exploitation.
Countries involved	India
Contact information of project leader or website of project (please include your name, title, location and email address)	Mr Bhanu Neupane, Regional Programme Specialist, UNESCO, New Delhi office; b.neupane@unesco.org

Name of the project/programme	Development of Basin-wide rain-water harvesting strategy for the Chitaugarh Basin, Rajanthan
Brief description of the activity (short paragraph)	This action under UNDAF India is developing geomorphology based rainwater harvesting strategy for entire basin. The activity contributing to the climate-change adaptation initiative aims at developing an expert system that will suggest the best rainwater harvesting structure for a given geohydrologic and geomorphologic condition.
Countries involved	India

Contact information of project leader or website of project (please include your name, title, location and email address)	Mr Bhanu Neupane, Regional Programme Specialist, UNESCO, New Delhi office; b.neupane@unesco.org

Name of the project/programme	Preparation of Vulnerability index to assess impact of climate change on agriculture and prepare adaptation strategy
Brief description of the activity (short paragraph)	This action under UNDAF India is trying to develop an index of climate change impact on agriculture and develop a suit of adaptation strategies in 4 basins of India.
Countries involved	India
Contact information of project leader or website of project (please include your name, title, location and email address)	Mr Bhanu Neupane, Regional Programme Specialist, UNESCO, New Delhi office; b.neupane@unesco.org

Name of the project/programme	Sri Lanka Water Development Report
Brief description of the activity (short paragraph)	Under its World Water Assessment programme, the second edition of Sri Lanka's National Water Development report will be prepared. Agreement has been reached under UNDAF to continue the assessment with UNDP and UNICEF's financial as well as technical support.
Countries involved	Sri Lanka
Contact information of project leader or website of project (please include your name, title, location and email address)	Mr Bhanu Neupane, Regional Programme Specialist, UNESCO, New Delhi office; b.neupane@unesco.org

Name of the project/programme	Hazard and Risk Assessment of Post Flood-Return of the Koshi river
Brief description of the activity (short paragraph)	The Koshi flood disaster occurred on 18 August 2008 due to the breach of eastern embarkment at Kushaha in Nepal. This project will make a qualitative and quantitative assessment of the immediate vulnerability of the flood affected people and develop a detailed risk management plan including plans of facilitating better coordination between various agencies. It also hopes to arrive at specific recommendations to deal with the possible flood, develop flood vulnerability maps and devise methods for community preparedness as well as prepare a medium term action plan and their implementation plan for long-term security. The planned interventions are being executed by UNESCO through UNDMT in Nepal.
Countries involved	Nepal
Contact information of project leader or website of project (please include your name, title, location and email address)	Mr Bhanu Neupane, Regional Programme Specialist, UNESCO, New Delhi office; b.neupane@unesco.org

Name of the project/programme	Hydrology for Environment, Life and Policy
Brief description of the activity (short paragraph)	The Hydrology for the Environment, Life and Policy (HELP) program aims to bring together scientific research in catchment management with practical application of policy and on-ground management practices. The HELP programme was initiated by the international hydrological research community and adopted by UNESCO and WMO in 1999. HELP is designed to develop scientific research in the application of integrated water resources management (IWRM) through a global network of catchments to improve the links between hydrology and the needs of society. It seeks examples of good solutions-oriented science which can deliver real outcomes and impacts to real people in real catchments to address real problems, locally as well as globally. Currently there are 67 HELP basins across the globe (in Australia, Asia, Africa, North America and Latin America (www.unesco.org/water/ihp/help/) to demonstrate how HELP principles can be put in practice.
Countries involved	50 UN Member states, 600 organisations
Contact information of project leader or website of project (please include your name, title, location and email address)	Mr Shahbaz Khan Chief, Sustainable Water Resources Development and Management Section Division of Water Sciences Natural Sciences Sector UNESCO 1, rue Miollis 75 732 Paris cedex 15, SP France Tel: +33 1 45 68 45 69 Fax: +33 1 45 68 58 11 Email: s.khan@unesco.org

Name of the project/programme	Ecohydrology for Sustainable Water Resources Management
Brief description of the activity (short paragraph)	Establishment of the demonstration sites has been underlined by the ecohydrological research conducted by the leading institutions all over the world and its continuous advancements. They refer to the variety of the water-related and social issues addressed by the particular projects and the respective solutions to tackle them developed in the scope of the UNESCO-IHP Ecohydrology programme. It finally recently gives also the perspectives for the future research towards the recommendations of the member countries to be developed within the UNESCO IHP-VII (2008-2013). The major activities in the demonstration projects are designed to take place around the following issues: • science advancement – comparative analysis across gradients for development of ecohydrological research on ecohydrology and defining social drivers for ecohydrological processes; • knowledge transfer - sharing knowledge and scientific basis for identifying and implementation of ecohydrological solutions in integrated watershed management around the world; • calibration of methods - qualitative and quantitative validation of the effectiveness of the ecohydrological approach around the world; • education and capacity building – for ensuring the implementation progress and sustainability by social acceptance and involvement.
Countries involved	• Pilica River, Poland: Application of ecohydrology and phytotechnology for water resources management and sustainable development • Mara River & Serengeti Plain, Kenya & Tanzania: Water deficit and inter-basin transfer of water resources for large mammals migrating to Serengeti (UNESCO World Heritage Site and MAB Biosphere Reserve) • Danube River, Lobau floodplain, Austria: Hydrological regime optimization to maintain biodiversity in the Lobau Biosphere Reserve and flood protection for Vienna • Lake Naivasha, Kenya: Re-creation of artificial Cyperus papyrus wetlands surrounding the lake and at inflowing river deltas using phytotechnological methods for restoration. • Guadiana Estuary, Portugal: Sustainable estuarine zone management for control of

	eutrophication, toxic blooms, invasive species and conservation of biodiversity • Lacar Lake, Huahum River Basin, Patagonia, Argentina: • Amazon River Floodplain, Brazil • Paraná Floodplain, Brazil
Contact information of project leader or website of project (please include your name, title, location and email address)	Mr Shahbaz Khan Chief, Sustainable Water Resources Development and Management Section Division of Water Sciences Natural Sciences Sector UNESCO 1, rue Miollis 75 732 Paris cedex 15, SP France Tel: +33 1 45 68 45 69 Fax: +33 1 45 68 58 11 Email: s.khan@unesco.org

Cooperation between developing countries in the field of water within the purview of the United Nations by UNESCO IHE

Principal Contact:
Erwin Ploeger
UNESCO-IHE Institute for Water Education
Head of the Office of the Director
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fax: +31 - (0)15 - 21 22 921
e-mail: e.ploeger@unesco-ihe.org
Internet: www.unesco-ihe.org

<table>
<tr><td colspan="2">Assignment Name:
WaterNet (phase I and II)</td><td>Country:
Southern and Eastern Africa</td></tr>
<tr><td colspan="2">Location within Country:
Several locations / countries in Southern Africa</td><td>Professional Staff Provided by Your Firm/Entity(profiles):</td></tr>
<tr><td colspan="2">Name of Client:
Government of the Netherlands and Government of Sweden</td><td>N^o of Staff:
8</td></tr>
<tr><td colspan="2">Address:
The Hague, The Netherlands
Stockholm, Sweden</td><td>N^o of Staff-Months; Duration of Assignment:
150 months; 60 months</td></tr>
<tr><td>Start Date (Month/Year):
September 1999</td><td>Completion Date (Month/Year):
December 2008</td><td>Approx. Value of Services (in Current US Dollar)
9,000,000</td></tr>
<tr><td colspan="2">Name of Associated Consultants, If Any:
52 partners in Southern Africa e.g. University of Zimbabwe (lead), University of Dar es Salaam,</td><td>N^o of Months of Professional Staff Provided by Associated Consultants:
90</td></tr>
<tr><td colspan="3">Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Prof. Dr. Ir. H.H.G. Savenije, Project Director
Prof. P. van der Zaag, Team Leader
Ir. J.C. Heun, Institutional Capacity Building
Dr. J. Rockström, Water Resources Management Advisor
Drs. F.G.W. Jaspers, Institutional and Legal Advisor
Dr. K.H. Schwartz, Water Services Management and Governance Expert</td></tr>
<tr><td colspan="3">Narrative Description of Project:
In phase I (1999-2004) WaterNet was established and have become a strong regional collaborative network which aims to strengthen the educational, training and research capacities of universities and professional organisations in Southern Africa. The objectives of phase II (2005-2008) are:
• To forge a strong, demand driven and sustainable network of universities and research</td></tr>
</table>

institutions in southern Africa in the field of IWRM. • To deliver and strengthen the jointly owned regional Master degree programme in IWRM. • To develop and deliver demand-driven training and education for practising water sector professionals in Southern Africa. • To stimulate, regionalise and strengthen the research in the field of IWRM in Southern Africa. • To raise awareness and understanding of IWRM and its implementation at local, national and transboundary scale
Description of Actual Services Provided by Your Staff: • Initiation and facilitation of the establishment of the Network • Curriculum development, development of lecture materials, training of trainers, didactical support • Short-courses, facilitation of workshops and dialogues, organisation of symposia • Joint research on IWRM

Cooperation between developing countries in the field of water within the purview of the United Nations by UNESCO IHE

Project Name: In Search of Sustainable Catchments and Basin-wide Solidarities; Transboundary Water Management of the Blue Nile River Basin	Country: Ethiopia, Sudan, Egypt
Project Location within Country: Nile basin	Professional Staff Provided by your Company: No. of Staff: 2
Name of Client: Netherlands Organisation for Scientific Research (NWO)	No. of Person-Months: approximately 50
Start Date (Month /Year): summer 2008	Total Project Cost (in US$ Equivalent) : 786,000
Completion Date: (Month/Year) 2012	Approx. Value of Services (in US$ equivalent): 300,000
Name of Associated Firm(s), if any:	No. of Person-Months of Professional Staff Provided by Associated Firm(s): 50
Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed: Prof. P. van der Zaag, PhD, MSc – overall management and scientific coordination of the project and promoter of 3 PhD studies within this project Prof. S. Uhlenbrook, PhD, MSc - promoter of 2 PhD studies within this project	
Detailed Narrative Description of Project: The overall scientific objective of this research project is to quantify the positive and negative environmental as well as socio-economic impacts of improved land management practices, assess to what extent positive externalities between up-and downstream areas exist and whether these can increase the willingness to invest in sustainable practices and catchment-wide solidarities, and thus form the basis for sustainable integrated river basin management. The development objective of the research is to contribute to achieving food security and poverty eradication of local communities with positive impacts for downstream users and for the environment. The collaborative objective is to enhance collaboration between Dutch, Ethiopian and Sudanese knowledge institutes concerning hydrology and river basin management, as well as to strengthen the mutual understanding and solidarity between the countries riparian to the Blue Nile basin. Four research projects will be conducted: Project 1 evaluates soil and water conservation technologies within the Choke Mountain range and will identify - in a participatory approach – improved farming options. Project 2 focuses on the up scaling of the hydrological impacts identified in Project 1 to the Blue Nile river basin. A distributed daily model will be developed that can predict the water and sediment fluxes. Project 3 applies different valuation methodologies in order to quantify the direct and indirect upstream and downstream costs and benefits of current and improved land use practices, using outcomes from Projects 1 and 2. Project 4 analyses the institutional arrangements in the Blue Nile within Ethiopia as well as between Ethiopia, Sudan and Egypt. Current perceptions of upstream-downstream interdependencies and hydro-solidarity will be chronicled. Outcomes of the quantifications achieved in the first three projects will inform alternative designs	

for institutionalizing compensation flows, which could form the foundation for improved river basin management. Design options will be evaluated with stakeholder groups at various spatial scales. Furthermore, several PhD research projects will be carried out.
Detailed Description of Actual Services Provided by your Company: UNESCO-IHE is responsible for the overall management and scientific coordination of the project and will chair the Project Management Team. UNESCO-IHE will take final administrative and financial responsibility towards the client.
Relevance of the projects to MRC activities: This project has relevance to MRC activities in terms of optimizing water management at sub-basin scale on the basis of sound technical knowledge while preventing regional tensions due to trans-boundary water issues.

Cooperation between developing countries in the field of water within the purview of the United Nations by UNESCO IHE

<table>
<tr><td colspan="2">Assignment Name:
Small-holder System Innovations in Integrated Watershed Management</td><td>Country:
South Africa and Tanzania</td></tr>
<tr><td colspan="2">Location within Country:
Thukela River basin, South Africa
Pangani River Basin, Tanzania</td><td>Professional Staff Provided by Your Firm/Entity (profiles):
Senior Experts and PhD students</td></tr>
<tr><td colspan="2">Name of Client:
SIDA, WOTRO, DGIS</td><td>N^o of Staff: 3</td></tr>
<tr><td colspan="2">Address:
-</td><td>N^o of Staff-Months; Duration of Assignment: 22; 60</td></tr>
<tr><td>Start Date (Month/Year):
July 2003</td><td>Completion Date (Month/Year):
June 2008</td><td>Approx. Value of Services (in Current US Dollar): US$ 1,900,000</td></tr>
<tr><td colspan="2">Name of Associated Consultants, If Any:
Stockholm Environment Institute
Sokoine University of Agriculture
Stockholm University
University of KwaZulu-Natal
International Water Management Institute</td><td>N^o of Months of Professional Staff Provided by Associated Consultants:
40</td></tr>
<tr><td colspan="3">Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed:

Prof. Pieter van der Zaag, Team Leader, Integrated Water Resources Management Expert
Prof. Huub Savenije, Integrated Water Resources Management Expert
Prof. Stefan Uhlenbrook, Hydrology Expert</td></tr>
<tr><td colspan="3">Narrative Description of Project:

This research programme has the objective of studying the hydrological, environmental and socio-economic impacts of up-scaling water system innovations in rainfed agriculture at watershed scale. While focus is on smallholder innovations at watershed scale, the programme may use models to integrate findings at the watershed scale with implications at the river basin scale. The programme focuses on Sub-Saharan Africa and is subdivided in 6 projects, each carried-out by PhD and/or Post Doc researchers.</td></tr>
<tr><td colspan="3">Description of Actual Services Provided by Your Staff:

Research in the following fields:
▪ Analysing hydrological, environmental and socio-economic consequences at watershed</td></tr>
</table>

scale of up-scaling water system innovations in smallholder, predominantly rainfed agriculture.

- Developing methodologies and decision support tools for improved rainwater management and equitable sharing of water between upstream and downstream users and uses in nature and society. Analysing current institutions that are responsible for the efficient and equitable sharing of scarce water resources and developing alternative institutional arrangements to enhance the institutional effectiveness.
- Advancing knowledge for improved eco-hydrological landscape management at field, watershed and basin scale with particular focus on systems interactions between water for food requirements in upgraded smallholder rainfed farming systems and water to sustain ecological functions and other societal needs.

Cooperation between developing countries in the field of water within the purview of the United Nations by UNESCO IHE

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<table>
<tr><td colspan="2">Assignment Name:
Nile Basin Capacity Building Network for River Engineering</td><td>Country:
All ten Nile riparian countries</td></tr>
<tr><td colspan="2">Location within Country:
Secretariat based in Egypt and nodes in each country</td><td>Professional Staff Provided by Your Firm/Entity (profiles):
Senior staff</td></tr>
<tr><td colspan="2">Name of Client:
Nile riparian countries, Nile Basin Initiative (World Bank), DGIS</td><td>Nº of Staff: 10</td></tr>
<tr><td colspan="2">Address:</td><td>Nº of Staff-Months; Duration of Assignment: 170-108</td></tr>
<tr><td>Start Date (Month/Year):
June 2000</td><td>Completion Date (Month/Year):
July 2009</td><td>Approx. Value of Services (in Current US Dollar): 4.8 million</td></tr>
<tr><td colspan="2">Name of Associated Consultants, If Any:
ITC, Netherlands,
HRI, Egypt,
Knowledge institutes in all 10 Nile riparian countries</td><td>Nº of Months of Professional Staff Provided by Associated Consultants:
100</td></tr>
<tr><td colspan="3">Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Mr. J. Luijendijk (Project Director)
Dr. P. Boeriu (Team Leader, Scientific Advisor River Structures)
Prof. R. Price (Scientific Advisor, GIS & Modelling)
Prof. B. Petry (Scientific Advisor Hydropower Development)
Mr. J. de Schutter (Scientific Advisor Environmental Aspects)
Mr. J. Klaassen (Scientific Advisor River Morphology)
Mr. K.J. Douben (Scientific Advisor Flood Management)</td></tr>
<tr><td colspan="3">Narrative Description of Project:

The project is a regional programme to strengthen capacity and to build trust between water professionals from the region for a sound development of Water Resources in the Nile River Basin through joint research, education and training. It makes use of existing capacities in the region in the field of River and Hydraulic Engineering and promotes co-</td></tr>
</table>

operation between these water resources institutes.

The main outputs of the project are a further strengthen the water sector, and research institutes in particular, in terms of training, research and network management capacity. The Nile Basin Capacity Building Network for River Engineering (NBCBN-RE) is established with nodes at knowledge institutions in all 10 Nile riparian countries, through which mobility of staff is increased, joint applied research on water resources in the Nile River is executed, and a Knowledge & Information Centre is established to share available knowledge and data in the Basin.

By increasing the interaction between professionals and institutes active in the field of water resources management, the project contributes to the process of confidence building between riparian states and thus facilitates future integration of regional efforts to soundly manage the water resources in the Nile Basin. The project falls under the Nile Basin Initiative and project activities are in line with the priorities listed in the Shared Vision for the Nile Basin.

Description of Actual Services Provided by Your Staff:

Institutional capacity building activities, including:

- Project management;
- Assessment of current situation in water resources management in the region;
- Facilitating the process of prioritization of the future challenges of the basin;
- Knowledge needs assessments in national water sectors;
- Development and implementation diploma and short courses for professionals at different regional institutes;
- Training of trainers;
- Set-up of a framework for collaborative research;
- Establishment of a network secretariat;
- Developing rules and regulations for the management of mobility, education, and research funds;
- Development of innovative communication tools, knowledge maps, and database; and
- Information dissemination.

Cooperation between developing countries in the field of water within the purview of the United Nations by UNESCO IHE

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<table>
<tr><td colspan="2">Assignment Name:
Small Scale Water Treatment Facilities for Domestic Use and Artificial Recharge with Surface Water - Middle East (EXACT)</td><td>Country:
Jordan, Palestine, Israel</td></tr>
<tr><td colspan="2">Location within Country:
Tel Aviv, Nablus, Jericho, Amman</td><td>Professional Staff Provided by Your Firm/Entity (profiles):</td></tr>
<tr><td colspan="2">Name of Client:
Dutch Government (DGIS)</td><td>Nº of Staff: 5</td></tr>
<tr><td colspan="2">Address:
The Hague
The Netherlands</td><td>Nº of Staff-Months, Duration of Assignment: 10/96</td></tr>
<tr><td>Start Date (Month/Year):
April 2002</td><td>Completion Date (Month/Year):
March 2010</td><td>Approx. Value of Services (in Current US Dollar): 2.8 million</td></tr>
<tr><td colspan="2">Name of Associated Consultants, If Any: none
Local consultant firms:
Mekorot and Water Commission in Israel, Palestinian Water Authority in Palestine, Ministry of Water and Irrigation in Jordan</td><td>Nº of Months of Professional Staff Provided by Associated Consultants:
6</td></tr>
<tr><td colspan="3">Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Dr. Pieter de Laat , Project Director
Dr. Branislav Petrusevski, Coordinator water treatment
Dr. Jan Nonner, Coordinator Artificial Recharge</td></tr>
<tr><td colspan="3">Narrative Description of Project:

This project is part of the Middle East Peace Initiative Framework and specifically the Exact programme.
It comprises the implementation of regional research projects in Jordan, Palestine and Israel on Water Treatment and Artificial Recharge. The project includes implementation of five research projects and research supervision and coordination activities.
The three components are:
▪ Small-scale Treatment Facilities for Domestic Use</td></tr>
</table>

- Aims to identify areas and sources of natural or human-induced groundwater contamination, to identify methods and technologies to deal with the contamination, and to verify the application of these methods and techniques. This process would finally lead to an improvement in the quality of local water supplies for domestic uses

- Artificial Recharge with Surface Water
  - Aims to identify areas of groundwater depletion by human or natural causes, to identify methods and technology to artificially recharge the groundwater aquifer, and to verify the application of these methods and techniques. This concept would lead to the restoration and replenishment of aquifers as essential sources for domestic water supply.
- Groundwater Modelling
  - Aims to support the research carried out in the other subprojects (if necessary) and to organise a short training course on groundwater modelling.

Description of Actual Services Provided by Your Staff:

- Project Management
- Research
- Construction of pilot facilities
- Education
- Training

Cooperation between developing countries in the field of water within the purview of the United Nations by UNESCO IHE

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<table>
<tr><td colspan="2">Assignment Name:
Sustainable Urban Water management Improves Tomorrow's Cities' Health (SWITCH)</td><td>Country:
Worldwide (including Brazil, Egypt, China PR, Ghana)</td></tr>
<tr><td colspan="2">Location within Country:
In Brazil: Belo Horizonte</td><td>Professional Staff Provided by Your Firm/Entity (profiles):
Senior staff</td></tr>
<tr><td colspan="2">Name of Client:
European Commission</td><td>Nº of Staff: 2</td></tr>
<tr><td colspan="2">Address:
Brussels, Belgium</td><td>Nº of Staff-Months; Duration of Assignment: 2 months, 5 years</td></tr>
<tr><td>Start Date (Month/Year):
February 2006</td><td>Completion Date (Month/Year):
February 2011</td><td>Approx. Value of Services (in Current US Dollar): $ 22,000,000.-</td></tr>
<tr><td colspan="2">Name of Associated Consultants, If Any:
32 partners involved</td><td>Nº of Months of Professional Staff Provided by Associated Consultants:</td></tr>
<tr><td colspan="3">Name of Senior Staff (Project Director/Coordinator, Team Leader) Involved and Functions Performed:
Carol Howe, BSc (Project Leader)
Zoran Vojinovic, PhD, MSc (Work Package Coordinator)</td></tr>
<tr><td colspan="3">Narrative Description of Project:

The SWITCH Integrated Project aims at the development, application and demonstration of a range of tested scientific, technological and socio-economic solutions and approaches that contribute to the achievement of sustainable and effective urban water management (UWM) schemes in ‘The City of the future’ (projection 30-50 years from now). The approach is develop efficient and interactive urban water systems and services (city level) in the context of the city’s geographical and ecological setting (river basin level), which are robust, flexible and adjustable to a range of global change pressures (global level).
The project is implemented by different combinations of consortium partners, along the lines of seven complementary and interactive themes. The project adopts a multi-level approach by focussing on the different components in the urban water cycle (city-level), in relation to its impacts on, and dependency on, the natural environment in the river basin</td></tr>
</table>

(river basin level), and in relation to Global Change pressures (global level). The innovative Learning Alliances Concept, in which stakeholders are brought together to interact productively and to create win-win solutions along the water chain, ensures the scaling up of the technologies, which will create the Urban Water Paradigm Shift.
Description of Actual Services Provided by Your Staff: ▪ Project management ▪ Research, training and capacity building on: 1. Urban water paradigm shift, 2. Stormwater management, 3. Efficient water supply and water use for all, 4. Water use in sanitation and waste management, 5. Urban water environments and planning, 6. Governance and institutional change. ▪ Development of hydrodynamic models ▪ Analysis of model results and identification of sustainable stormwater measures