



## **International Hydrological Programme**

18<sup>th</sup> session of the IHP Intergovernmental Council  
(Paris, 9 – 14 June 2008)

### **IMPLEMENTATION OF IHP-VII : FOCUS FOR 2008-2009**

Item 11 of the provisional agenda

#### **SUMMARY**

This document includes an outline of the proposed Implementation Plan for the IHP-VII for 2008-2009. It gives an overview of the inputs and indications of interest related to the themes and focal areas received from the IHP National Committees and other partners.

The Council may wish to comment on the proposed activities and provide recommendations to foster their implementation and facilitate the participation of the IHP National Committees.

## INTRODUCTION

1. This document contains the outline of the Implementation workplan for the Strategic Plan for the Phase VII of the IHP with a focus for 2008-2009. The Strategic Plan was endorsed, in principle, by the 17<sup>th</sup> session of the of the IHP Intergovernmental Council. The Council authorized the Bureau of the IHP to consolidate the draft with the comments made in the course of the Council debate and with the later consultations with Member States, and to commence the implementation arrangements for the period 2008–2013 with a focus on the 2008-2009 biennium.
2. The 40<sup>th</sup> session of the IHP Bureau (June 2007) approved the Strategic Plan and requested the Secretariat to circulate the endorsed Strategic Plan to the members of the IHP Council to receive an out-of-session approval by 1<sup>st</sup> September 2007. The Strategic Plan was thus approved by the majority of the Members of the IHP Council (IHP/Bur-XL/11).
3. The Bureau at its 41<sup>st</sup> session took note that (IHP/BUR-XL1/16) the Secretariat prepared a standard proforma table that was circulated (letter SC/HYD/456 of 12 December) to the IHP National Committees for their contribution.
4. Contributions from Member States were requested with an ultimate deadline of 15 May 2008. In light of the above, and taking into account the contributions up to that date as well as developments within UNESCO, the Secretariat has prepared the Implementation Plan for 2008-2009 as set out in the following sections.
5. The information provided in this document is complemented by those included in several other Council documents; *inter alia*, IHP/IC-XVIII.Inf.2 (Report of the Secretariat on the 34<sup>th</sup> session of the General Conference), IHP/IC-XVIII.Inf.8 (Implementation of the strategy of category 1 and 2 water-related institutes and centres), IHP/IC-XVIII/Inf.10 (IHP-related extrabudgetary activities), and IHP/IC-XVIII.Inf.15 (IHP's involvement in the 5<sup>th</sup> World Water Forum).

## PREPARATION OF THE IMPLEMENTATION PLAN

6. The regular budget allocated for the execution of the 2008-2009 biennium of the IHP-VII Phase was approved at the 34<sup>th</sup> session of the General Conference ( October 2007). Following the General Conference decision (Major Programme II – Natural Sciences 34 C/5), the programme is structured under Main Lines of Action, Actions and Activities. The IHP-VII represents the freshwater component of the Main Line of Action 1: *Fostering policies, technical capacity-building, research, networking, education and international cooperation in the fields of water, ecological and earth sciences for enhancing societal responses*; and of the Main Line of Action 3: *Promoting science, knowledge and education for disaster preparedness and mitigation, and enhancing national and regional coping capacities, including through support for the development of risk reduction networks and monitoring and assessment measures, such as tsunami early warning systems*. The Actions and Activities of the UNESCO Workplan for 2008-2009 correspond to the IHP-VII Themes and Focal Areas (Annex I).
7. Given the constraints imposed on the number of activities to be adopted in the workplan, and the need to phase out the start of some IHP-VII activities, the IHP-VII workplan for 2008-2009 was consolidated into 16 activities plus one devoted to the institutional activities, such as the IHP Council (Activity 125) (Annex I) patterned after the 22 Focal Areas that are considered in the IHP-VII Strategic Plan (Annex II). These include ongoing activities, such as the cross-cutting projects and international initiatives (HELP, FRIEND, ISI, PCCP, ISARM, WHYMAP, and JIHP). Each activity normally represents one

IHP-VII Focal Area (FA), with exceptions such as the case of FA 3.1 and 3.2 which have been merged into one activity and of FA 5.1, 5.2 and 5.3 which have also been merged into one activity. Three Focal Areas, FA 2.3 "Governance strategies that enhance affordability and assure financing", FA 3.3 "Risk-based environmental management and accounting" and FA 4.4 "Achieving sustainable rural water management" have not yet been included in the workplans for 2008-2009 as it was judged more appropriate to start their implementation in 2010-2011.

8. Proposals, priorities and offers of contribution for the 2008-2009 programme were received from some of the IHP National Committees and these are listed in the Annexes (Annexes III, IV, V and VI). Nevertheless the formulation of the IHP-VII Implementation Plan for 2008-2013 allows flexibility such as the possibility to include new partners, introduce new elements in the activities, address newly selected situations and emerging issues, and to take into account the evolving water sector framework. The IHP National Committees can then provide more detailed indications and proposals, establish focal points for the themes and the focal areas and provide indications for experts that could provide guidance at the technical level if they wish to take the responsibility for the execution of activities related to the themes and focal areas. They can at any moment inform the Secretariat in which activities they wish to participate and when they are ready to offer to take a lead position or to coordinate the activity and the methodology to implement the activities.

9. UNESCO water-related chairs and category 1 and 2 institutes and centres were involved in the IHP-VII preparation and will take part in the execution of the Implementation Plan (IHP/Bur-XLI/12).

10. In order to secure adequate finance to the IHP VII activities in particular in developing countries consideration should be given to leverage support from cooperating agencies and other intergovernmental entities. For example it would be beneficial to strengthen the partnership established with the Global Environment Facility (GEF) that could provide real benefits to the Member States in activities aligned with IHP-VII. GEF, one of the most relevant multilateral donors in the field of global environmental gains, has been an important partner for IHP since 2003.

## **MONITORING, TRACKING AND INFORMATION MANAGEMENT TOOL**

11. The IHP-VII strategic plan is reflected in the workplan for 2008-2009 following UNESCO's norms. The house-wide management software SISTER will be used to monitor the implementation of the programme, define results and outcomes. This programme is accessible to the Member State Delegations. The Secretariat will redesign the IHP web portal and its layout. This is expected to reflect more clearly the themes, focal areas, and activities of the IHP-VII. The Secretariat will also prepare a simple tool that will complement the web based presentation of the achievements and products of IHP-VII as a complement to the SISTER system and to provide initial means for information processing.

## ANNEX I

### UNESCO- 34 C/5

**Division of Water Sciences (HYD) Actions and Activities for Workplan 2008-2009  
Based on the Core Programme Themes of the Seventh Phase of the IHP (2008-2013):  
WATER DEPENDENCIES: SYSTEMS UNDER STRESS AND SOCIETAL RESPONSES**

#### MLA1 – Freshwater Component

#### **ACTION 11: ADAPTING TO THE IMPACTS OF GLOBAL CHANGES ON RIVER BASINS AND AQUIFER SYSTEMS**

**Activity 111** - Global changes and feedback mechanisms of hydrological processes in stressed systems

**Activity 112** - Climate change impacts on the hydrological cycle, and consequent impact on water resources

**Activity 113** - Managing groundwater systems' response to global changes

**Activity 114** - Global change and climate variability in arid and semi-arid regions

#### **ACTION 12: STRENGTHENING WATER GOVERNANCE FOR SUSTAINABILITY**

**Activity 121** - Cultural, societal and scientific responses to the crises in water governance

**Activity 122** - Capacity development for improved governance; enhanced legislation for wise stewardship of water resources

**Activity 123** - Managing water as a shared responsibility across geographical and social boundaries

**Activity 124** - Addressing the water energy nexus in basin-wide water resources

**Activity 125** - Institutional Capacity Building and Interagency and Partnership Cooperation

#### **ACTION 13: ECOHYDROLOGY FOR ECOSYSTEM SUSTAINABILITY**

**Activity 31-32** - Promoting ecohydrology as a transdisciplinary approach for the sustainable management of water resources

**Activity 133** - Groundwater dependent ecosystems identification, inventory and assessment

#### **ACTION 14: WATER AND LIFE SUPPORT SYSTEMS**

**Activity 141** - Protecting water quality for sustainable livelihoods and poverty alleviation

**Activity 142** - Augmenting scarce water resources especially in SIDS

**Activity 143** - Achieving sustainable urban water management

#### **ACTION 15: WATER EDUCATION FOR SUSTAINABLE DEVELOPMENT**

**Activity 151 – 152-153** - Water education for sustainable development

**Activity 154** - Water education for communities, stakeholders and mass-media professionals

#### MLA3 – Freshwater Component

#### **ACTION 11: HYDRO-HAZARDS, HYDROLOGICAL EXTREMES AND WATER-RELATED DISASTERS**

**Activity 111** - Hydro-hazards, hydrological extremes and water-related disasters

**IHP VII PROJECTS AND INITIATIVES WITHIN THE UNESCO WORKPLAN (34 C/5)  
2008-2009 WORKPLAN ACTIVITIES**

**MLA 1:**

**ACTION 11: ADAPTING TO THE IMPACTS OF GLOBAL CHANGES  
ON RIVER BASINS AND AQUIFER SYSTEMS**

Activity 111 - (including **ISI**)

Activity 112 - (including **HELP, FRIEND**)

Activity 114 - (including **WHYMAP, JIIHP**)

Activity 115 - (including **GWADI**)

**ACTION 12: STRENGTHENING WATER GOVERNANCE FOR  
SUSTAINABILITY**

Activity 123 (including **PCCP, ISARM**)

**ACTION 14: WATER AND LIFE SUPPORT SYSTEMS**

Activity 143 (including **UWM**)

## ANNEX II

### Overview of the Core Programme Themes of the Seventh Phase of the IHP (2008-2013)

#### **WATER DEPENDENCIES: SYSTEMS UNDER STRESS AND SOCIETAL RESPONSES**

##### **Theme 1: ADAPTING TO THE IMPACTS OF GLOBAL CHANGES ON RIVER BASINS AND AQUIFER SYSTEMS**

Focal area 1.1: Global changes and feedback mechanisms of hydrological processes in stressed systems

Focal area 1.2: Climate change impacts on the hydrological cycle and consequent impact on water resources

Focal area 1.3: Hydro-hazards, hydrological extremes and water-related disasters

Focal area 1.4: Managing groundwater systems' response to global changes

Focal area 1.5: Global change and climate variability in arid and semi-arid regions

##### **Theme 2: STRENGTHENING WATER GOVERNANCE FOR SUSTAINABILITY**

Focal area 2.1: Cultural, societal and scientific responses to the crises in water governance

Focal area 2.2: Capacity development for improved governance; enhanced legislation for wise stewardship of water resources

Focal area 2.3: Governance strategies that enhance affordability and assure financing

Focal area 2.4: Managing water as a shared responsibility across geographical and social boundaries

Focal area 2.5: Addressing the water-energy nexus in basin-wide water resources

##### **Theme 3: ECOHYDROLOGY FOR SUSTAINABILITY**

Focal area 3.1: Ecological measures to protect and remediate catchments process

Focal area 3.2: Improving ecosystem quality and services by combining structural solutions with ecological biotechnologies

Focal area 3.3: Risk-based environmental management and accounting

Focal area 3.4: Groundwater-dependent ecosystems identification, inventory and assessment

##### **Theme 4: WATER AND LIFE SUPPORT SYSTEMS**

Focal area 4.1: Protecting water quality for sustainable livelihoods and poverty alleviation

Focal area 4.2: Augmenting scarce water resources especially in SIDS

Focal area 4.3: Achieving sustainable urban water management

Focal area 4.4: Achieving sustainable rural water management

##### **Theme 5: WATER EDUCATION FOR SUSTAINABLE DEVELOPMENT**

Focal area 5.1: Tertiary water education and professional development

Focal area 5.2: Vocational education and training of water technicians

Focal area 5.3: Water education in schools

Focal area 5.4: Water education for communities, stakeholders and mass-media professionals

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#### **Cross-cutting programmes: HELP, FRIEND**

**Associated programmes:** International Flood Initiative (IFI) - International Sediment Initiative (ISI) - From Potential Conflict to Cooperation Potential (PCCP) - Joint International Isotope Hydrology Programme (JIHP) - Internationally Shared Aquifer Resources Management (ISARM) - Global Network on Water and Development Information in Arid Lands (G-WADI) - Urban Water Management Programme (UWMP) - World Hydrogeological Map (WHYMAP)-  
**Education, Training and Capacity Building** across all the themes

ANNEX III

**IHP National Committees Inputs and indications of interest related to Themes and Focal Areas**

<b>IHP-VII Themes and Focal areas</b>	Inputs and indications of interest related to Themes and Focal Areas, received from the IHP National Committees as a result of the consultations that have been undertaken in: February and June 2004, April 2005, April 2006, July 2006, September 2006 and 2007
<b>Theme 1: ADAPTING TO THE IMPACTS OF GLOBAL CHANGES ON RIVER BASINS AND AQUIFER SYSTEMS</b>	
Focal area 1.1	<p>Argentina, Australia, Bulgaria, Iceland, Germany, Finland and other Nordic countries:</p> <ul style="list-style-type: none"> <li>- Cooperation is envisaged to further the necessary and fundamental research for adapting to global changes impacts on the Arctic Hydrological Cycle. Develop activities in the framework of the Arctic-Hydra programme within the framework of the International Polar Year 2007-2008 (IPY). On the basis of this programme cooperation on this field of research will be continued under the IHP-VII period.</li> </ul> <p>Iceland:</p> <ul style="list-style-type: none"> <li>- Evaluation of the impacts of global changes on coastal zones, small islands, present permafrost zones and glaciated areas, and mega-cities.</li> <li>- Evaluation of possible influences of global change on their temporal and regional occurrences and magnitude include e.g. changes in the position and movement of major weather systems as well as changes in snow melt.</li> </ul> <p>Canada and Nordic Countries, Chile, Colombia, Costa Rica, Eastern Africa sub-region, Egypt, Finland, Hungary, Iceland, Germany, Finland, Sweden, Iceland, Ireland , Italy, Japan, Kuwait, Kyrgyz Republic, Madagascar, Nepal, Norway, Pakistan, Peru, Spain, Sudan.</p>
Focal area 1.2	Eastern Africa sub-region, Australia, Bulgaria, Congo, El Salvador, Finland, Germany, Iceland, Ireland and a group of Nordic countries, Jordan, Namibia, Russia, Saudi Arabia, Spain, Sudan, Thailand.
Focal area 1.3	Egypt, India, Ireland, Italy, Japan, Malaysia, Namibia, Nigeria, Norway, Peru, Spain, Sudan.
Focal area 1.4	Australia, Canada, Egypt, Haiti, Hungary, Japan, Jordan, Kyrgyz Republic, Kuwait, Mauritius, Mexico, Norway, Romania, Saudi Arabia, Tunisia .
Focal area 1.5	Egypt , India, Italy, Israel, Jordan, Namibia, Pakistan, Spain.
<b>Theme 2: STRENGTHENING WATER GOVERNANCE FOR SUSTAINABILITY</b>	
Focal area 2.1	Australia, Bulgaria, Dominican Republic, Eastern Africa sub-region, Hungary, Mauritius, Peru, Saudi Arabia, Spain.
Focal area 2.2	Brazil, Bulgaria, El Salvador, Egypt, Haiti, Kuwait, Ireland, Romania, Slovenia, Spain, Thailand, Tunisia.
Focal area 2.3	Australia, Chile, Finland, Eastern Africa sub-region, Haiti, Italy, Jordan, Kuwait, Kyrgyz Republic, Madagascar, Malaysia.
Focal area 2.4	Australia, Eastern Africa sub-region, Egypt, El Salvador, Finland, Hungary, Iran, Kyrgyz Republic, Latin American Countries (ISARM of the Americas), Lesotho, Malaysia, Mexico, Nigeria, Romania , Russia, Tunisia.

Focal area 2.5	Italy, Nepal.
<b>Theme 3: ECOHYDROLOGY FOR SUSTAINABILITY</b>	
Focal area 3.1	Australia, Bulgaria, Canada, Chile, Eastern Africa sub-region, Japan, Jordan, Malaysia, México, Kuwait, Thailand.
Focal area 3.2	Australia, Eastern Africa sub-region , Korea, Lesotho.
Focal area 3.3	Australia, Jordan, Ireland, Malaysia, Norway.
Focal area 3.4	Australia, El Salvador, Italy, Saudi Arabia.
<b>Theme 4: WATER AND LIFE SUPPORT SYSTEMS</b>	
Focal area 4.1	Australia, Canada, Chile, El Salvador, Eastern Africa sub-region, Haiti, Jordan, Kyrgyz Republic, Mauritius, México, Moldova, Pakistan, Peru, Thailand.
Focal area 4.2	Australia, El Salvador, Egypt, Haiti, India, Jordan, Korea, Kuwait, Malaysia, Pakistan, Saudi Arabia, Spain, Sudan, Tunisia.
Focal area 4.3	Australia, Eastern Africa sub-region, Japan, Malaysia, Saudi Arabia.
Focal area 4.4	El Salvador.
<b>Theme 5: WATER EDUCATION FOR SUSTAINABLE DEVELOPMENT</b>	
	Australia, Bolivia, Chile, Dominican republic, Eastern Africa sub-region, Egypt, Finland, Germany, Haiti, Hungary, Italy, Japan, Jordan, Kuwait, Kyrgyz Republic, Madagascar, Malaysia, Mauritius, Mexico, Namibia, Nigeria, Norway, Romania, Saudi Arabia, Sudan.

ANNEX IV

**NB:** Every effort has been taken to compile this Annex with respect to the contributions received from the respective countries and IHP National Committees.

**Theme 1: ADAPTING TO THE IMPACTS OF GLOBAL CHANGES ON RIVER BASINS AND AQUIFER SYSTEMS**

- Focal area 1.1 - Global changes and feedback mechanisms in hydrological processes in stressed systems
- Focal area 1.2 - Climate change impacts on the hydrological cycle and consequent impact on water resources
- Focal Area 1.3 - Hydro-hazards, hydrological extremes and water-related disasters
- Focal area 1.4 - Managing groundwater systems' response to global changes
- Focal Area 1.5 - Global change and climate variability in arid and semi-arid regions

Focal Area 1.1	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Headquarters</b>	<ul style="list-style-type: none"> <li>-Workshop on Global Change impacts on water resources held</li> <li>-Background paper prepared on Global Change impacts on water resources</li> <li>-Key research questions related to global change impacts on water resources identified</li> <li>-ISI case studies from 5 river basin finalized</li> <li>-2- ISI workshop held</li> <li>-Background paper on Global change impacts on sedimentation and erosion processes prepared and key research questions identified</li> <li>-State of the Art in Sediment Research published</li> <li>-Cooperation is envisaged to further the necessary and fundamental research for adapting to global changes impacts on the Arctic Hydrological Cycle. Develop activities in the framework of the Arctic-Hydra programme within the framework of the International Polar Year 2007-2008 (IPY). On the basis of this program cooperation on this field of research will be continued under the IHP-VII period.</li> </ul>	<ul style="list-style-type: none"> <li>-ISI case studies from 5 river basin published as IHP technical document</li> <li>-ISI event during IAHS assembly in Hyderabad organized</li> <li>-Workshop held on Global Change impacts in Water Resources</li> <li>-One technical document published on Global Change impacts on water resources</li> <li>-ISI data base system organized and strengthened</li> </ul>	China, Congo, Ghana, Egypt, Iceland, Germany, Rep of Korea (MLTM/KWRA), Egypt, Finland and other Nordic countries, Jordan, The Netherlands, Russian Federation, Slovakia, Japan, Norway
<b>Montevideo Field Office</b>	<ul style="list-style-type: none"> <li>Assessing the effect of global changes on hydrological systems: <i>Consolidation of a regional network of experts and participating institutions.</i></li> <li>-Further development of the ISI-LAC database</li> <li>-Meeting of the Working Group on Snow and Ice (August, 26-30, Manizales, Colombia)</li> <li>-VIII National Meeting on Engineering of Sediments (November 2-8; Campo Grande, Brasil)</li> <li>-Conference on Global Change and Water Resources (September 8-10; Montevideo, Uruguay).</li> </ul>	<ul style="list-style-type: none"> <li>Assessing the effect of global changes on hydrological systems:</li> <li>-Establish information and knowledge sharing mechanism(s).</li> <li>-Make available publications</li> <li>- Hydrological Regionalization Workshop</li> </ul>	Brazil, Uruguay, Colombia, and IHP national committees of the region

Focal Area 1.1	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Cairo Field Office</b>	Support to the organization of the 11th FRIEND/NILE Steering Committee Meetings and activities.  Flash Flood Hazard Assessment Studies in the Arab region.	Support to the organization of the 12th FRIEND/NILE Steering Committee Meetings and activities.  Flash Flood Hazard Assessment Studies in the Arab region.	Nile Basin Initiative, Other ongoing initiatives and projects such as Nile Basin Capacity Building Network for River Engineering (NBCBN-RE) and Nile Basin Programme (NBP) National IHP Committees in the Arab And countries, UNESCO Water Center and Chairs ALECSO, ISESCO, ACSAD, and UNEP.
<b>UNESCO New Delhi Field Office</b>	International conference on Arsenic in Kathmandu, Nepal	Training of water professionals for low flow measurements in Bhutan	IHP National Committee; Bhutan, Nepal Activities in the Indian Sub-Continent
<b>UNESCO Beijing Field Office</b>	Research Project on Erosion and sediment control in China  ISI steering Committee meeting  ISI information portal for data sharing	Research Project on Erosion and sediment control ISI international training workshop  Maintenance of information portal	East Asian Cluster

Focal Area 1.2	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Headquarters</b>	-IFI Conference, 6-8 May 2008, Toronto, Canada. -Danube Floods Conf. -TDH Editing IFI publication. -Hydro Predict 2008 Czech Republic 15-18 Sept 2008. -TDH Publication of Bratislava Workshop: Climate Change/Hydrological Extremes at different scales. University of Vienna. -Inception Workshop Global Change, Paris. -IHP Germany + GLOWA -HELP-SILA Wetlands Workshop, Annecy, France. 31Jan-2Feb 2008 -Contribution to WWAP. -HELP Regional Coordinators Meeting, Paris, 7+8 May 08. -HELP EcoHydrology Meeting, Lodz, Poland 19-21 May 2008	Capri Conference IAHS German IHP  I-Charm Flood Forecasting system.  IAHS India  Flood Mapping German IHP  Symposium on Water Flood and the Modern Methods of fighting against it. Georgian NATCOM	China (Establish a collaborative research centre), Egypt, Finland (3rd international Conference on climate and water by Finnish environment institute and Helsinki University of technology), Ghana, Rep. of Korea, Jordan, The Netherlands, Russian Federation, Slovakia The Netherlands, Wageningen University (NE-FRIEND), Japan, Norway

	<ul style="list-style-type: none"> <li>-FRIEND FIGCC Meeting Adelaide, 19 April 2008</li> <li>-WWDR-3 Conclusion meeting 21-25 April 2008.</li> <li>-NE-FRIEND Database Group Meeting, 28-30 May 2008, Koblenz, Germany. Support to participants from Slovak Rep; UK; Czech Rep + Luxembourg</li> <li>-12th ERB-FRIEND Conference Poland, 18-20 Sept 08</li> <li>-Training of Cuban staff to manage database and to build links between FRIEND AMHY and FRIEND AOC data bases</li> </ul>		
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Focal Area 1.2	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Cairo Field Office</b>	Climate Change Impact on Water Resources in the Arab Region Studies	Climate Change Impact on Water Resources in the Arab Region workshop	
<b>UNESCO New Delhi Field Office</b>	Conference on Coastal Groundwater Management in South India	<ul style="list-style-type: none"> <li>-Water Resource Mapping of Maldives</li> <li>-Publication of the second edition of the Sri Lanka Water Development Report.</li> </ul>	Activities with IHP National Committees in the Indian Sub-Continent
<b>UNESCO Beijing Field Office</b>	Research Project on Climate Change Impact on Water Resources in Yellow River Basin, China	Research Project on Climate Change Impact on Water Resources in Yellow River Basin, China	East Asian Cluster
<b>UNESCO Jakarta Field Office</b>	Implementation of crosscutting activities (FRIEND and HELP) in the Asia Pacific Region: 1. AP-FRIEND: <ul style="list-style-type: none"> <li>- Organize regional workshop to report on progress of the APFRIEND Phase 2, implement a plan of activities for design flood determination across the region, and share the use of different methods and/or guidelines (design rainfall and design runoff).</li> <li>- Publish AP-FRIEND Phase 2 Report</li> </ul> 2. HELP: <ul style="list-style-type: none"> <li>- Incorporate new catchments in Asia and Pacific to the HELP network</li> </ul>	Implementation of crosscutting activities (FRIEND and HELP) in the Asia Pacific Region: 1. AP-FRIEND: <ul style="list-style-type: none"> <li>- Compile Asia Water Archive through Humid Tropics Centre website</li> </ul> 2. HELP: <ul style="list-style-type: none"> <li>- Identify different stakeholders to be involved in the HELP network</li> </ul>	See Annex 3. Southeast Asian & Pacific (SEAP) Country Priorities of IHP VII
<b>UNESCO Accra Field Office</b>	<ul style="list-style-type: none"> <li>-Evidence of hydrological changes in the cluster countries to be documented and published with a national workshop (Ghana, Benin)</li> <li>-Support to the preparation of the West African</li> </ul>	Evidence of hydrological changes in the cluster countries to be documented and published with a national workshop (Togo, Cote d'Ivoire)	Activities in the Accra cluster countries

	Climate Change Action Plan		
<b>UNESCO Nairobi Field Office</b>	Coordination of FRIEND, HELP Projects and Climate change impacts on water resources in Africa	Coordination of FRIEND, HELP Projects and Climate change impacts on water resources in Africa	

<b>Focal Area 1.3</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<b>UNESCO Headquarters</b>	<p>-GEWES - Establishment of an International WG and Regional Working Groups in cooperation with National Committees, IAH, IAEA and IGRAC 1-Mitigation of extremes and natural hazards impacts on groundwater resources ( Prepare guidelines for assessment of the aquifer systems vulnerability) 2-Set up appropriate groundwater management and protection strategies to mitigate disaster impacts (Identify potential safe groundwater resources which could temporarily replace damaged water supply systems in case of emergency situations). -Organization of a GEWES session at the seminar at the IAH Toyama Conference, Japan, October 2008 -Set up Coordination with IGRAC and WHYMAP and preparation of thematic maps on risks and vulnerability</p>	<p>GEWES -Publish guidelines for the identification, investigation, development and management of strategic groundwater bodies to be used in emergency situations that result from extreme climatic and geological events, -Propose effective methodologies for identifying and establishing an inventory of groundwater bodies less vulnerable to natural and man-made impacts in selected pilot regions and presenting relevant case studies. -Coordination established with GWADI network and GEF -Develop linkages with category 2 centers –IGRAC- ICHARM. University of Tsukuba -IGRAC web site and data base available - With Russia develop case studies-2. Studying mechanisms and distribution of hazardous hydrological processes in the territory of Russia.</p>	<p>Czech Republic, China, Congo, Egypt, Japan, Ghana, Center, IGRAC Center, UNESCO Chair in Geohydrology, The Netherlands, ICHARM IAH, BGR, IGRAC, USGS, Canada, Russia, Norway</p>
<b>UNESCO Headquarters</b>	<p>Experimental drought monitor developed on Africa tested and validated by African users as capacity building for better preparedness</p> <ul style="list-style-type: none"> <li>Review and coordination meeting of organizations working on remote-sensing based drought monitoring</li> <li>Results of the TIGER projects published in IHP's Technical Documents in Hydrology series</li> </ul> <p>Concept and plan for the 2<sup>nd</sup> phase of TIGER adopted</p>	<ul style="list-style-type: none"> <li>TIGER call for projects issued and projects selected to be supported in the framework</li> <li>A review publication on drought/hydrological extremes, with focus on hydrological modeling and remote sensing -based methods, jointly with GEWEX</li> <li>ESA, NASA</li> </ul>	

<b>UNESCO New Delhi Field Office</b>	-International conference on Groundwater Dynamics and Global Change in Jaipur, Rajasthan -International Symposium on Water harvesting in Coimbatore, India	Research studies on the impact of recharge structures on the local hydrology in parts of Rajasthan and Gujarat	IHP National Committee, India; University of Rajasthan, India, Tamil Nadu Agricultural University, India, NM Sadguru Foundation Gujarat
<b>UNESCO Jakarta Field Office</b>	-Assess accuracy and reliability of present flood forecasting and warning systems and suggest improvement of the system by developing case studies for the assessment of flood events,  -flood forecasting and warning systems with particular focus on high risk catchments and their implications and impacts on social and economic assets	-Provide capacity building for professional and technicians in the region/participating countries and promoting scientific collaboration and knowledge exchange -organization of workshop and training courses - Improve data collection and analysis for flood management	Government institutions and research centres, UNESCO Category II Water centres, IHP National Committees
<b>UNESCO Accra Field Office</b>	Support for floods mapping in Ghana and Togo and for the dissemination of the sub-region seasonal forecasts in the two countries for floods prevention	Support for floods mapping in Ghana and Togo and for the dissemination of the sub-region seasonal forecasts in the two countries for floods prevention	IHP National Committees in the selected countries, NADMO in Ghana, AGRHYMET regional centre, ACMAD regional centre

<b>Focal Area 1.4</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<b>UNESCO Headquarters</b>	-GRAPHIC (human and climate change impacts on groundwater resources) project: - International Conference on <i>Groundwater and Climate change impacts in Africa</i> , 24-28 June 2008, Kampala, Uganda. Regional networks established with particular focus on Africa - Support to the establishment of groundwater information system at the global scale, and set up data base contained geo-referenced data and produce several thematic groundwater maps through the WHYMAP project and the IGRAC -Establishment of regional and sub-regional groups of experts dealing with groundwater and global changes in particular climate change and climate variability. Particular focus on arid zones and Sub-Sahara African countries.- Coordination amongst category 2 centers with particular focus on exchanges between Latin America and SADC regions and policy advice to establish interregional research systems provided -Global Changes mitigation measures: the contribution of Groundwater resources, Organization of a Conference in Irvine December, 2008 in cooperation with US National Committee-ISARM-Guidelines	- GRAPHIC Development of case studies, mitigation measures and indicators. IGRAC Center, <i>GRAPHIC WEB SITE</i> established-Strengthening the existing cooperation with International and Regional partners including amongst others, UNECE, OAS, WMO, UNU, UNDP, UNEP, GEF, SADC, OSS, BMZ, SIWI, BRGM, USGS, BGS, CSIRO, IGME, World Bank, IAH and IAHS AMCOW, SADC, IHE, GWADI, HELP, FRIEND, WWAP, - Organization of 4 regional meetings and publication of related recommendations in coordination with UNESCO offices in the regions. China- Prepare a country report with a case study to WWDR 3 under climate change issues focusing groundwater system response - ISARM-Managing Transboundary Aquifer systems responses to global changes. Compile case studies and develop indicators. Set up data bases facility. IGRAC-WHYMAP	Algeria, China, IHP-Sub-Saharan African, Ghana, Italy, Rep of Korea, , Russian Federation ,The Netherlands, Tunisia, Uganda, BGR, Germany, Japan and The Netherlands, Coordination established with : IGRAC, WHYMAP, BRGM University London ,IAH, IAHS, GEF, UNDP, FAO, UNECE, INWEB, UNEP, SIWI, AMCOW, SADC - IAEA in the framework of the UNESCO-IAEA Joint International Isotopes in Hydrology Project (JIHP) in order to foster the valuable application of isotope techniques for groundwater resources assessment and management. - UNU (launching of a Joint UNESCO-UNU Groundwater Quo-Vadis Aquifer project) to develop a joint programme on groundwater resources and human security.

	preparation on Managing Transboundary Aquifer systems responses to Global Changes. -Coordination with the UNECE and EU groundwater working groups- Conference in cooperation with EU and BRGM November 2008-cooperation with EU-ISONITRATE project		
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<b>Focal Area 1.4</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<b>UNESCO Montevideo Field Office</b>	<i>Managing aquifer systems under global change:</i> -Workshop ISARM Americas VI (December 1-4; Santo Domingo, Dominican Republic) -Make available web-based water information exchange tools (web page, publications, others), in collaboration with IGRAC. -ISARM Americas Working Group Meeting(October 16-17; Fort Lauderdale, USA) -Congress ALHSUD (TAS Session) (July 8-12; Quito, Ecuador) -Meeting Artibonito and Masacre (August; Santo Domingo, Dominican Republic)	Managing aquifer systems under global change: -Development of a proposal for a strategy on managing LAC aquifer systems under global change. -VII ISARM Americas Workshop. -Publication "Diagnostics of the socio-economic, environmental and competitive use of transboundary aquifers systems in the Americas."	IHP National Committees of South and Central America, OAS, GEF, IAH
<b>UNESCO Cairo Field Office</b>	Support to Groundwater Management Training Workshops / Conference in the Arab region  Support to Groundwater Protection Network Studies and Publications	<i>Support to Groundwater Management Training Workshops / Conference in the Arab region</i>  <i>Support to Groundwater Protection Network Studies and Publications</i>	IHP National Committees in the Arab countries, UNESCO Water Centers and Chairs, ALECSO, ISESCO, Arab Network on Groundwater Protection.
<b>UNESCO Windhoek Field Office</b>	Following up to the ISARM SADC meetings, the UNESCO Chair in Geo-hydrology will be contracted to conduct a desk top study at the Stampriet TBA (Botswana, Namibia, RSA)		UNESCO Chair on Geo-hydrology (South Africa), Botswana, Namibia, RSA
<b>UNESCO Nairobi Field Office</b>	Managing Groundwater resources in Africa: capacity building towards sustainable management, utilization and protection	Managing Groundwater resources in Africa: capacity building towards sustainable management, utilization and protection	AMCOW
<b>UNESCO Jakarta Field Office</b>	Development of regional case studies, advanced research in groundwater resources assessment (WHYMAP – GRAPHIC), and pilot projects on aquifer recharge (MAR)	Consolidate a regional network of institutions through workshop within the ASPAC region Publish a comprehensive report on the study cases within the ASPAC region	Government institutions, Academies of Science, research centres, UNESCO Category II Water centres, IHP National Committees

<b>UNESCO Beijing Field Office</b>	<p>Research Project on Climate Change Impact on groundwater resources, China (UNICEF is the lead Agency in this project under the coordination of UNESCO)</p> <p>-Impact of Humanity and Climate Change on Groundwater Resources of North China plain</p> <p>-Pilot research on Transboundary Aquifers of China</p> <p>- Groundwater monitoring network research under UNESCO Chair</p>	<p>Research Project on Climate Change Impact on groundwater resources, China (UNICEF is the lead Agency in this project under the coordination of UNESCO)</p> <p>-Impact of Humanity and Climate Change on Groundwater Resources of North China plain</p> <p>-Pilot research on Transboundary Aquifers of China</p> <p>-Groundwater monitoring network research under UNESCO Chair</p>	East Asian Cluster
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<b>Focal Area 1.5</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<b>UNESCO Headquarters</b>	<p>-Global dissemination of information on water issues in arid and semi-arid areas through SAHRA's Global Water News Watch service</p> <p>-Enhancement of G-WADI web-based information resources and data. Specifically, make available high-resolution (4km) precipitation product on Google Earth and carry out a targeted campaign to promote the use of the data product and collect feedback; add materials on water harvesting, including regional reports and case studies</p>	<p>-G-WADI session at the GEWEX conference in Melbourne</p> <p>-CUP book on groundwater modeling in arid and semi-arid areas published</p> <p>-Science&amp; policy G-WADI workshop on water resources and climate variability in West Africa</p> <p>-Launch a pilot scheme of using a set of G-WADI sites/basins as test-beds for evaluation of data products and a vehicle for training</p>	Ghana, The Netherlands, IGRAC, IAH, Japan
<b>UNESCO Cairo Field Office</b>	<p>Support to Wadi Hydrology Network Studies / Publications / Activities</p> <p>Support to Wadi Hydrology Training Workshops</p>	Support to Wadi Hydrology Training/ Workshops/ Conference in the Arab region	National IHP Committees in the Arab countries, UNESCO Water Centers and Chairs ALECSO, ISESCO, ACSAD, Arab Network on Wadi Hydrology, and UNEP
<b>UNESCO New Delhi Field Office</b>	Support to G-Wadi	Support G-Wadi activities in the region.	IHP National Committee, India
<b>UNESCO Beijing Field Office</b>	<p>Asian G-WADI Activities</p> <ul style="list-style-type: none"> <li>• Network meeting</li> <li>• Publication of success stories of pilot basins</li> <li>• Capacity building workshop</li> <li>• Data sharing and exchange of experience</li> </ul>	<p>Asian G-WADI Activities</p> <ul style="list-style-type: none"> <li>• Network meeting</li> <li>• Publication of success stories of pilot basins</li> <li>• Capacity building workshop</li> <li>• Data sharing and exchange of experience</li> </ul>	Norway

**Theme 2: STRENGTHENING WATER GOVERNANCE FOR SUSTAINABILITY**

Focal area 2.1 - Cultural, societal and scientific responses to the crises in water governance

Focal area 2.2 - Capacity development for improved governance; enhanced legislation for wise stewardship of water resources

Focal Area 2.3 – Governance strategies that enhance affordability and assure financing

Focal area 2.4 - Managing water as a shared responsibility across geographical & social boundaries

Focal area 2.5 - Addressing the water-energy nexus in basin-wide water resources

Focal Area 2.1	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Headquarters</b>	<ul style="list-style-type: none"> <li>-Holding of meetings of expert advisory group (January and July), in order to provide direction and to develop policy recommendations and to lead the “water and culture” topic for the World Water Forum.</li> <li>-Publication of brochure on the topic (April).</li> <li>-Launch of database on water and cultural diversity (Summer) on UNESCO's Water Portal.</li> </ul>	<ul style="list-style-type: none"> <li>-Contribution to the World Water Forum (March), to the topic 6.5 “Water and Culture”</li> <li>-Launch virtual Community of Practice (CoP) on UNESCO's Water Portal (Spring).</li> <li>-Holding of international symposium on water and cultural diversity (October).</li> <li>-Launch of book on water and cultural diversity (Autumn).</li> <li>China-Organize an international workshop on IRBM and/or IWRM, investigate and summarize public participation</li> </ul>	China, Ghana, Russia, The Netherlands, Jordan, Japan
<b>UNESCO Montevideo Field Office</b>	<p>Water Governance in LAC countries:</p> <ul style="list-style-type: none"> <li>-Workshop on the Water Balance of the La Plata Basin (March, 10 Foz de Iguazu, Brazil)</li> <li>-Graduate Course on PccP (March 18 – June 24, Buenos Aires, Argentina.)</li> <li>-Short course on PccP / UCAB ( July 14-18, Caracas, Venezuela.</li> <li>-Identify ethnic or socio-cultural groups to be studied and referenced.</li> </ul>	<p>Water Governance in LAC countries:</p> <ul style="list-style-type: none"> <li>-Increase information exchange.</li> <li>-Publication supplement to the Water Culture Atlas of the Americas.</li> </ul>	
<b>UNESCO Cairo Field Office</b>	<p>Support to UNDAF Activities in Egypt and Yemen</p> <ul style="list-style-type: none"> <li>-Institutional Capacity Building and Interagency and Partnership Cooperation</li> </ul>	<p>Support to UNDAF Activities in Egypt and Yemen</p> <p>The 13th Regional Meeting of the IHP Committees in Year 2009 and side activities</p>	National IHP Committees, UNESCO Water Centers and UN RC Office.

<b>Focal Area 2.2</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<b>UNESCO Headquarters</b>	<ul style="list-style-type: none"> <li>- Publication of State-of-the-art in IRBM</li> <li>- Joint project with Japanese partners on guidelines for IRBM</li> <li>-Design of short course on IWRM</li> </ul>	<ul style="list-style-type: none"> <li>- Case studies of best practices in IWRM prepared</li> <li>- Joint session in 5th World Water Forum on IRBM</li> </ul>	Congo, Ghana, The Netherlands, Korea, Japan
<b>UNESCO Windhoek Field Office</b>	The UNESCO Chair in Geo-hydrology will be contracted to develop Guidelines for community water supply and sanitation provision in Africa that will be presented during the World Water Week		

<b>Focal Area 2.3</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<i>Focal Area not active during the biennium 2008 - 2009</i>			

<b>Focal Area 2.4</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<b>UNESCO Headquarters</b>	<ul style="list-style-type: none"> <li>-ISARM-Preparation of Transboundary Aquifer systems inventories and management guidelines</li> <li>- Preparation of a Training course</li> <li>-Support to regional and sub-regional meetings workshops and training courses</li> <li>- Improve regional coordination for the management of transboundary aquifer systems and contribution to UN MDGs for water supply and sanitation and the UN Decade of Water for Life</li> <li>- Organization with UNECE of the UNWATER Seminar at the Stockholm Water Week August 2008</li> <li>-Organization of the third Conference on African Transboundary aquifers in Tripoli 25-27 May 2008,</li> </ul>	<ul style="list-style-type: none"> <li>-Organization with UNECE of the Water Day in March 2009</li> <li>-Co-organize with INBO and PCCP the programme of the Transboundary Water session at the 5<sup>th</sup> World Water Forum</li> <li>-Transboundary Aquifer Systems ISARM data base established at the Category 2 center IGRAC and thematic maps prepared and published</li> <li>- International Conference organized at UNESCO HQ</li> <li>- Publication of Training course</li> <li>- Improved understanding of scientific, socio-economic, legal, institutional and environmental issues related to the management of transboundary</li> </ul>	Congo, Egypt, Libya, Algeria, Tunisia, Italy, Ghana, Russia, Slovakia, The Netherlands, Norway IAH, BGR, IGRAC, Centers and Chairs, on groundwater, UNEP, UNDP, GEF, IAHS, Regional Networks, the Sahara and Sahel Observatory (OSS), ESA

	<p>Libya - Coordination established with the UNILC, contribute to the finalization of draft articles of the Law of Transboundary Aquifers in August 2008. -Cooperation with IAH, FAO, UNECE, UNESCWA, Organization of American States (OAS), UNESCO Chair INWEB</p>	<p>aquifers -Cooperation with the UNILC, the International Association of Hydrogeologists (IAH), FAO, UNECE, UNESCWA, Organization of American States (OAS), International Network of Water-Environment Centres for the Balkans (INWEB), the Sahara and Sahel Observatory (OSS), GEF -Contribute to the implementation programmes of the Category 2 Center RCSARM in Tripoli, Libya -Develop Transboundary aquifer assessment in cooperation with UNEP-GEF-WWAP</p>	
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Focal Area 2.4	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Headquarters</b>	<p>Preparation of the first comprehensive knowledge base of 263 transboundary water basins</p> <ul style="list-style-type: none"> <li>• Design of the structure needed for the knowledge base</li> <li>• First call for contribution to the knowledge base</li> </ul> <p>Preparation of the contribution to the political process of the 5th World Water Forum</p> <ul style="list-style-type: none"> <li>• Design of topic 3.1. of the World Water Forum Programme.</li> <li>• Call for participation of various actors and stakeholders</li> <li>• Collection of contributions from various meetings</li> </ul> <p>Contribution to WWDR 3</p> <ul style="list-style-type: none"> <li>• Collection of contributions on water conflict and cooperation from various professional organizations and individuals</li> </ul> <p>Design of side publications of related topics to support WWDR3</p>	<p>First comprehensive knowledge base of 263 transboundary water basins created</p> <ul style="list-style-type: none"> <li>• Integration of first input</li> <li>• Launch of the knowledge base and open call for contributions online</li> </ul> <p>Contribution to the political process of the 5th World Water Forum</p> <ul style="list-style-type: none"> <li>• Integration of contributions into the political process</li> <li>• Holding of topic 3.1. sessions</li> </ul> <p>Contribution to WWDR 3</p> <ul style="list-style-type: none"> <li>• Finalization and publication of the contributions</li> <li>• Finalization and publication of the side publications</li> <li>• Development of “Typology of urban water conflicts” by Tampere University of technology, Finland</li> <li>• Congo- Set up national legislation for the sustainable management of transboundary and national waters</li> </ul>	Congo, Ghana, Egypt, Finland, Slovakia, Russia, The Netherlands
<b>UNESCO Venice Field Office</b>	<p>Enhancing capacities in the governance of shared river basins and aquifer systems in South Eastern Europe:</p> <ul style="list-style-type: none"> <li>-Support to a series of training workshops in cooperation with GWP-Med / MIO-ECSDE Secretariat;</li> <li>-Support to the second General Assembly of the RISKBASE project: GA2 of the EU project</li> </ul>	<p>Enhancing capacities in the governance of shared river basins and aquifer systems in South Eastern Europe:</p> <ul style="list-style-type: none"> <li>Following up with a series of training workshops in cooperation with GWP-Med / MIO-ECSDE Secretariat, focused on shared water systems in SEE such as Drava-Mura and Sava corridors or Ohrid-Prespa or Skadar Lakes.</li> </ul>	

	RISKBASE will be focused especially on the regional scope of e.g. the Danube river basin in Eastern and Southeastern Europe; -Support to start up phase of the proposed GEF funded project on the management of Dinaric Karst Transboundary Aquifer Systems in SEE (DiKTAS).		
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<b>Focal Area 2.4</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<b>UNESCO Cairo Field Office</b>	-Support to Arab Network on Water use Ethics Activities -Support to numbers of NGOs working in Water Issues in the Arab region	Support to Arab Network on Water use Ethics Activities  Support to numbers of NGOs working in Water Issues in the Arab region	National IHP Committees in the Arab countries, UNESCO Water Centers and Chairs ALECSO, ISESCO, Arab Network on Water Use Ethics
<b>UNESCO Beijing Field Office</b>	Support to Ministry of Water Resources of China in developing a pilot case study and capacity building on water sharing between providences – conflict prevention	Support to Ministry of Water Resources of China in developing a pilot case study and capacity building on water sharing between providences – conflict prevention	
<b>UNESCO Montevideo Field Office</b>	Cooperation in transboundary water system: -ISARM:Publication “Institutional and Legal Framework of the Management of Transboundary Aquifers Systems in the Americas.” -Initiate and complete Ostua-Metapan aquifer case study. -Carry out capacity building activity on Water Cooperation and Conflict Resolution (Guatemala, August) - I Coordination Meeting Ostua-Metapan (February 25-26, San Salvador, El Salvador) -Stakeholders Consultation for the Ostua-Metapan (August 27-28; Esquipulas, Guatemala)	- Cooperation in transboundary water system: -Establish a mechanism for information exchange among PccP case studies in LAC. -Publication of the Ostua- Metapan case study and presentation at World Water Forum in Turkey.	Regional IHP National Committees and OAS focal points
<b>UNESCO Accra Field Office</b>	-Data and information collection and analysis for the mapping of transboundary coastal aquifers (Tano and Keta hydrogeological system) -Promotion of IWRM through the coordination SIST IWRM network -Support of the Ghana Water Resources Commission for the implementation IWRM in Ankobra basin -PCCP Case study on the Mono river shared by Togo and Benin	Data and information collection and analysis for the mapping of transboundary coastal aquifers (Tano and Keta hydrogeological system)	National IHP Committees in the cluster countries, ISARM west Africa experts Water research Institute of Ghana and other IHP committees of countries concerned by SIST project Ghana Water Resources Commission AMCOW

<b>UNESCO Nairobi Field Office</b>	Managing water as a shared responsibility across geographical and social boundaries	Managing water as a shared responsibility across geographical and social boundaries	
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<b>Focal Area 2.5</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<b>UNESCO Headquarters</b>	- International Symposium on Resolving the Water-Energy Nexus (26-28 November 2008 at UNESCO HQ) ( collaboration with MEEDDAT, IHA, Red-Ethique, and others)	- Multi-stakeholder forum on GHG emissions of freshwater reservoirs organized. - Input to 5th World Water Forum	
<b>UNESCO Montevideo Field Office</b>	- Water, Energy and Sustainable Development: -V Workshop on Reservoirs of The La Plata Basin (March 11-14, Foz de Iguazu, Brazil) - Establishment of Working Group of Scientists on Water and Energy. Strengthening institutional capacity, regional cooperation and partnerships: -Identify experts and participating institutions in this process. -Coordination Meeting with UNESCO Centres in Southamerica (ICH-CAZALAC) (February 11-13; Montevideo, Uruguay) -Towards the WWF5: Subregional Consultation-South America (September 11-12; Montevideo, Uruguay) -Forum of the Americas (November 24-26; Foz de Iguazu, Brazil)	Water, Energy and Sustainable Development: -Establish a mechanism for information exchange -Present case study at V World Water Forum in Turkey. Strengthening institutional capacity, regional cooperation and partnerships: -Participation and presentation of IHP LAC programs and projects at V WWF in Turkey. -VIII Meeting of IHP National Committees and Focal Points of Latin America and the Caribbean.	
<b>UNESCO Cairo Field Office</b>	Institutional Capacity Building and Interagency and Partnership Cooperation Support to UNDAF Activities in Egypt and Yemen	Support to UNDAF Activities in Egypt and Yemen  The 13th Regional Meeting of the IHP Committees in Year 2009 and side activities	National IHP Committees, UNESCO Water Centers and UN RC Office.

**Theme 3: ECOHYDROLOGY FOR SUSTAINABILITY**

Focal area 3.1 - Ecological measures to protect and remediate catchments process

Focal area 3.2 - Improving ecosystem quality and services by combining structural solutions with ecological biotechnologies

Focal area 3.3 - Risk-based environmental management and accounting

Focal area 3.4 - Groundwater-dependent ecosystems identification, inventory and assessment

Focal Area 3.1 & 3.2	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Headquarters</b>	<p>-Structural reorganization of global ecohydrology programme and consolidation of future steps, through meetings of the Steering Committee in June and November.</p> <p>-Information-dissemination efforts strengthened through launch of revised website, publication of brochure, and holding of sessions at International Conference on Ecohydrological Processes and Sustainable Floodplain Management.</p>	<p>Launch of various activities, such as:</p> <ul style="list-style-type: none"> <li>- core course on ecohydrology, to be launched at UNESCO-IHE in collaboration with ERCE</li> <li>- publication of scientific synthesis paper World Water Sites, after approval by IHP Bureau at its session in 2009</li> </ul> <p>-Holding of meeting of the Steering Committee (May).</p> <p>-Holding of sessions on ecohydrology at various events, such as the Implementing Environmental Water Allocations (February) World Water Forum (March), Joint IAHS &amp; IAH Convention (September).</p> <p>China- Workshop on transboundary river water ecosystem security (Cooperate with CITWES: Center of International Transboundary Waters and Ecosystem Security)</p>	<p>China, Egypt, Rep.of Korea, Jordan, The Netherlands, Russia, Japan</p>
<b>UNESCO Montevideo Field Office</b>	<p>Ecohydrology for sustainable development:</p> <ul style="list-style-type: none"> <li>-Publication “Strategies for the control of the torrential phenomenae and sustainable management of waters, soils, and forests of mountain basins”</li> <li>- Ecohydrology-IWRM short course (January 28-29; Port-au Prince, Haiti)</li> <li>-Course on Coastal zone Ecohydrology (November 5-7; Santa Marta, Colombia)</li> <li>-Inaugural Seminar of M.Sc. on Ecohydrology (La Plata University, Buenos Aires, Argentina, April 25)</li> <li>-Carry out the workshops on IWRM-ecohydrological approach in Bolivia and Costa Rica.</li> </ul>	<p>Ecohydrology for sustainable development:</p> <ul style="list-style-type: none"> <li>-Participate and present the IHP LAC Ecohydrology Programme at the V WWF Forum.</li> <li>-Publication on advances of Ecohydrology in LAC.</li> </ul>	

<b>Focal Area 3.1 &amp; 3.2</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<b>UNESCO Cairo Field Office</b>	Support to Training and Capacity Building in Ecohydrology for Sustainable Development in the Arab Region	Support to Training and Capacity Building in Ecohydrology for Sustainable Development in the Arab Region	National IHP Committees in the Arab countries, UNESCO Water Centers and Chairs ALECSO, ISESCO, MAB ACSAD, and UNEP.
<b>UNESCO Jakarta Field Office</b>	Support the establishment of Asia Pacific Centre for Ecohydrology (APCE) in Indonesia and related site research projects	Support activities of APCE in promotion of regional activities in ecohydrology: - Dissemination of the ecohydrology approach for integrated water resources management in the Asia Pacific region - Organize training courses - Research projects in order to develop integrated water resources management methods using the ecosystem approach.	Government institutions and research centres, UNESCO Category II Water centres, IHP National Committees
<b>UNESCO New Delhi Field Office</b>	Conference on waste water management in Ujjain, India	Support for Gagans basin, India for achieving the status of demonstration basin under the HELP concept	IHP National Committee, India, Pan Himalayan Grassroots Development Foundation
<b>UNESCO Venice Field Office</b>	Ecohydrology for ecosystem sustainability in river basins and estuaries of South Eastern Europe: <ul style="list-style-type: none"> <li>• Publishing of a Training Manual (Algarve University, Portugal);</li> <li>• 10 young researchers benefiting from Research Grants in European hosting institutions;</li> <li>• One meeting of the Task Force in Greece (September 2008).</li> </ul>	Ecohydrology for ecosystem sustainability in river basins and estuaries of South Eastern Europe: <ul style="list-style-type: none"> <li>• Completion of the Research Grant scheme in Europe;</li> <li>• Development of EH integrated modelling of estuaries/deltas in Europe.</li> </ul>	

<b>Focal Area 3.3</b>	<b>2008</b>	<b>2009</b>	<b>Proposed partners and contributions received from IHP National Committees</b>
<i>Focal Area not active during the biennium 2008 - 2009</i>			

Focal Area 3.4	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Headquarters</b>	-Better policies and guidelines for the protection and management of groundwater dependent ecosystems -Established network of case studies with particular focus on coastal zones in the Mediterranean countries	-Case studies published - Conference and seminars organized with national and regional institutions, and decision makers -Coordination will be set up with the Barcelona convention programmes, GEF/Med Map programme, UNEP and related IHP National Committees. The Spanish Geological Survey (IGME) will contribute with their modeling tools.	Spain, IGME, GEF, UNEP, Tunisia, Congo, Croatia, Italy, Egypt, Ghana, The Netherlands, IGRAC, IAH

**Theme 4: WATER AND LIFE SUPPORT SYSTEMS**

Focal area 4.1 - Protecting water quality for sustainable livelihoods and poverty alleviation

Focal area 4.2 - Augmenting scarce water resources especially in SIDS

Focal area 4.3 - Achieving sustainable urban water management

Focal Area 4.1	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Headquarters</b>	<p>Producing an inception report, containing the general framework and main directions for IHP-VII activities on protecting water for sustainable livelihoods and poverty reduction.</p> <p>Establishing an expert group on water quality.</p> <p>Developing and strengthening collaboration with international organizations, scientific, research and training institutes and IHP National Committees that have expressed interest in this Focal Area (2008-2009)</p>	<p>Improving the knowledge and understanding for protecting water quality through:</p> <ul style="list-style-type: none"> <li>• an expert group meeting;</li> <li>• launching of a case-study on fate, transport and remediation of selected pollutants.</li> </ul> <p>Strengthening the knowledge base and capacity building on protecting water quality through providing support for conferences and training activities:</p> <p>collaboration with the German IHP National Committee for the organization of International Conference on "Water and Health"</p>	<p>Australia, China, Congo, Ghana, Thailand, Pacific Islands, Japan, Jordan, The Netherlands, Korea, Egypt, Slovakia, Norway</p>
<b>UNESCO Montevideo Field Office</b>	<p>Development of guidelines for the application of Management of Aquifer Recharge and other methodologies to meet critical drinking water supply needs to assist communities to adapt to climate change and population growth and substantially contributing to UN MDGs for water supply and sanitation and the UN Decade of Water for Life</p> <p>Cooperation with research institutes that have offered their support and that will contribute with their experience, case studies and data such as the CSIRO institute in Australia</p> <p>Establish coordination with UN agencies, international associations, category 2 UNESCO centers, and other UNESCO programmes such as GRAPHIC, GWADI, HELP and other IHP relevant projects</p>	<p>IGRAC-CSIRO-MAR Web site- Publications-UNESCO/IAH</p> <p>Working group on Small Islands water resources management</p> <p>In cooperation with IAH one convened international meetings to present demonstration projects and evaluate and assess existing applications of MAR methodologies Training material published</p>	<p>CSIRO/Australia, GHANA, Jordan, UNESCO category 2 centers, other UN Agencies and IHP National Committees IAH, IAHS, IAEA, BGS/UK, Pacific Islands, Philippines</p>

Focal Area 4.2	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Headquarters</b>	<p>Development of guidelines for the application of Management of Aquifer Recharge and other methodologies to meet critical drinking water supply needs to assist communities to adapt to climate change and population growth and substantially contributing to UN MDGs for water supply and sanitation and the UN Decade of Water for Life</p> <p>Cooperation with research institutes that have offered their support and that will contribute with their experience, case studies and data such as the CSIRO institute in Australia</p> <p>Establish coordination with UN agencies, international associations, category 2 UNESCO centers, and other UNESCO programmes such as GRAPHIC, GWADI, HELP and other IHP relevant projects</p>	<p>IGRAC-CSIRO-MAR Web site- Publications-UNESCO/IAH</p> <p>Working group on Small Islands water resources management</p> <p>In cooperation with IAH one convened international meetings to present demonstration projects and evaluate and assess existing applications of MAR methodologies Training material published</p>	<p>CSIRO/Australia, Ghana, Jordan, UNESCO category 2 centers, other UN Agencies and IHP National Committees</p> <p>IAH, IAHS, IAEA, BGS/UK, Pacific Islands, Philippines</p>

Focal Area 4.3	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Headquarters</b>	<p>Disseminating expanded knowledge base in sustainable urban water management through:</p> <ul style="list-style-type: none"> <li>• Publication of five new volumes of the UNESCO-IHP Urban Water Series;</li> <li>• Participation in the Fourth World Urban Forum – WUF4 (Nov. 2008) as part of the UNESCO delegation.</li> </ul> <p>Implementing projects dealing with promising directions in urban water management (2008-2009).</p> <p>Strengthening collaboration with innovative initiatives and projects in the field of urban water such as the EU SWITCH project on “urban water management for the cities of tomorrow”.</p>	<p>Enhancing the dissemination of knowledge base through active participation in the Fifth World Water Forum.</p> <p>Strengthening capacity building and educational capabilities in urban water management through collaboration with RCUWM-Tehran, the UNESCO category 2 centre on urban water management, for training activities and implementation of a web-based educational platform.</p> <p>China-Refresher course for UNESCO-IHE alumni on IRBM</p> <p>IHP Nat Com of Russia- develop methods and assessment the ecological status of water systems under stress of large urban cities ( St Petersburg as a case study)</p>	<p>Australia, China, Ghana, Japan, Russia, Jordan, The Netherlands, Korea, Egypt, Norway</p>

**Theme 5: WATER EDUCATION FOR SUSTAINABLE DEVELOPMENT**

Focal area 5.1: Tertiary water education and professional development

Focal area 5.2: Vocational education and training of water technicians

Focal area 5.3: Water education in schools

Focal area 5.4: Water education for communities, stakeholders and mass-media professionals

Focal Area 5.1 – 5.4	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Headquarters</b>	<ul style="list-style-type: none"> <li>- Regional Workshops on Water Education, to collect cases studies on best practices and recommendations for water education</li> <li>- Development of a UNESCO Tertiary Water Education Grants Programme</li> <li>- Improvement of available information on freshwater issues for communities, stakeholders and mass media professionals.</li> </ul>	<ul style="list-style-type: none"> <li>- Development of a Comprehensive Needs Assessment on Water Education</li> <li>- Contribution to the Education, Knowledge and Capacity Building of the 5th World Water Forum</li> </ul>	China, Congo, Ghana, Egypt, Korea, Russia, The Netherlands- IHE, Slovakia, UNESCO-UNEVOC, UNITIWN, ASPNet, CI, UNW-DPC, Japan, Norway
<b>UNESCO Windhoek Field Office</b>	Contacts will be made to identify potential sites and partners	Cooperation with the Department of Water Affairs and the NATCOM will be sought in order to contribute to the formation of Water Basin Committee(s)	
<b>UNESCO Montevideo Field Office</b>	Water and Education for LAC: <ul style="list-style-type: none"> <li>-Carry out workshop on Water and the Media: “Radio Agua” (July 2008; Ciudad del Este, Paraguay)</li> <li>-Publication of the Guide for Teachers of Latin America and the Caribbean.</li> <li>-Capacity-Building course for Teachers (April 7-10; Montevideo, Uruguay)</li> <li>-Regional Conference of Water &amp; Education (October 13-15, Paraguay)</li> <li>-Water &amp; Education Workshop Kingston Jamaica June 30-July 4</li> </ul>	Water and Education for LAC: <ul style="list-style-type: none"> <li>-Participate and present IHP LAC Water and Education and Awareness Programme at V WWF Forum.</li> <li>-Continuation of Water and Education Workshops in LAC.</li> </ul>	
<b>UNESCO Cairo Field Office</b>	Support to Training and Capacity Building of Water Professionals and Technicians Support to Water Education at Schools, Stakeholders, Communities and Raising Public Awareness	Support to Training and Capacity Building of Water Professionals and Technicians Support to Water Education at Schools, Stakeholders, Communities and Raising Public Awareness	National IHP Committees in the Arab countries, UNESCO Water Centers and Chairs
<b>UNESCO New Delhi Field Office</b>	Sponsored research and Focused Studies on the impacts of climate change on water resources, Groundwater	Capacity building of hydrological assistants in Bhutan and Sri Lanka	IHP National Committees India, Bhutan and Sri Lanka

Focal Area 5.1 – 5.4	2008	2009	Proposed partners and contributions received from IHP National Committees
<b>UNESCO Beijing Field Office</b>	Support to Training and Capacity Building of Water Professionals and Technicians  Training/workshop activities under UNESCO Chair on Sustainable Water Management Support to Water Education at Schools for Sustainable Water Integrated Management	Support to Training and Capacity Building of Water Professionals and Technicians  Training activities under UNESCO Chair on Sustainable Water Management Support to Water Education at Schools for Sustainable Water Integrated Management	
<b>UNESCO Jakarta Field Office</b>	Support the implementation on regional bestpractices in freshwater Disseminate the information on bespractices in freshwater through workshop and training courses.	Implementation of fellowship programme by giving at least one fellowship to a scientist within the ASPAC region	Government institutions and research centres, UNESCO Category II Water centres, IHP National Committees
<b>UNESCO Accra Field Office</b>	Support through the IWRM SIST network for the harmonization and creation of IWRM training course (curricula) adapted for West Africa sub-region	Universities and training centers	Accra cluster countries

ANNEX V

**Southeast Asian & Pacific (SEAP) Country Priorities of IHP VII**

No.	Country	Theme 1					Theme 2					Theme 3				Theme 4				Theme 5				Crosscutting		Associate Prog.				
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	1	2	3	4	1	2	3	4	HELP	FRIEND					
1	Australia	x	x	x	x		x	x	x	x		x	x	x	x	x	x	x	X											
2	Cambodia	General																		General					x					
3	China																													
4	Indonesia	General					x					General													x	IFI				
5	Japan	x		x	x							x						x		General					x	x	IFI			
6	Korea Rep. of																			General				x	x					
7	Laos			x			General																							
8	Malaysia											General								General										
9	Myanmar																													
10	Mongolia	General																		General										
11	New Zealand	General																		General										
12	Pacific Island	x	x	x	x											General								x						
13	Philippines	General					General					x				General				General					x					
14	PNG	General																		General				x						
15	Thailand	General					General									x								x	x					
16	Vietnam	General																												

Revisions:

1. Philippines – on 19/03/08

## ANNEX VI

### **List of IHP National Committees that have participated individually or by group to the preparation of the IHPVII Plan**

Argentina, Azerbaijan, Australia, Belgium, Benin, Bolivia, Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Colombia, Congo, Costa Rica, Croatia, Dominican Republic, Ecuador, Egypt, El Salvador, Finland, Gambia, Ghana, Germany, Haiti, Hungary, Iceland, India, Indonesia, Iran, Ireland, Israel, Italy, Ivory cost, Japan, Jordan, Kazakhstan, Kenya, Kirghizstan, Korea (The Republic of), Kuwait, Latvia, Lebanon, Lesotho, Madagascar, Malaysia, Mali, Mauritius, Mexico, Moldova, Namibia, Nepal, Netherlands, Nigeria, Netherlands, Niger, Nigeria, Norway, Pakistan, Palestine, Peru, Romania, Russian Federation, Saudi Arabia, Senegal, Slovakia, Slovenia, South Africa, Spain, Sudan, Syria, Sweden, Switzerland, Thailand, Togo, Tunisia, Turkey, United Kingdom, United States, Uzbekistan, Venezuela, Yemen.

Consultations with the IHP National Committees have been undertaken in:

February and June 2004, April 2005, April 2006, July 2006, September 2007, May 2008

83 IHP National Committees have sent contributions during this period. They also had the opportunity to comment during of the regional meetings coordinated by the IHP regional hydrologists. The IHP National Committees of the Sub-Saharan African countries had the opportunity to discuss and provide comments during the meeting organized by the IHP National Committee of Nigeria in Abuja in March 2006 and in Cape Town in March 2008.