

International Hydrological Programme

17th session of the Intergovernmental Council
(Paris, 3 – 7 July 2006)

EXECUTIVE SUMMARY OF THE DRAFT STRATEGIC PLAN FOR THE 7TH PHASE OF IHP (2008-2013)

Item 12 of the provisional agenda

SUMMARY

This document is the Executive Summary of the full Draft Strategic Plan of the Seventh Phase of the International Hydrological Programme (IHP), available as document IHP/IC-XVII/Inf.9. Both documents have been prepared by the Task Force set up to prepare the Plan. Attention is drawn to the proposed addition of a new fifth theme on water education in response to new developments within UNESCO. The Council is invited to review and approve the Draft Strategic Plan. A draft resolution to that effect is included at the end of this document.

Decision required: paragraph 17.

EXECUTIVE SUMMARY

International Hydrological Programme *Phase VII (2008-2013)*

Water Dependencies: Systems under Stress and Societal Responses

Progress and milestones

Background

1. At the 16th session of the IHP Council, the concept for the 7th Phase of IHP (2008-2013) was approved (ref. document IHP/IC-XVI/9 and IHP/IC-XVI/3, para 69-76). This concept had been developed by a Task Force which has been meeting since March 2004 to develop the Draft Strategic Plan for IHP VII for consideration by the Bureau and the Council. The most recent meeting of the Task Force took place in Paris on 6-7 June 2006, following the approval by the Bureau at its meeting held in Delft on 3 to 5 May 2006 (ref. document IHP/Bur-XXXIX/3, para 22-25). In accordance with the relevant recommendations of the Bureau, the Task Force was assisted by several invited experts at its last meeting in order to complement geographical and policy representation.

2. The present document is the executive summary of the full Draft Strategic Plan provided in document IHP/IC-XVII/9, which also outlines the steps to be taken until final approval of the Plan by the 34th session of the General Conference. The Draft Strategic Plan incorporates the recommendations of the Bureau as well as the very valuable contributions made by IHP National Committees and other partners. The Council is asked to review and to approve the Draft presented in the above mentioned document. A draft resolution to that effect is included at the end of this executive summary.

3. The Task Force wishes to record its appreciation for the invaluable support that the IHP Secretariat has provided to its work.

Milestones

4. The essential concept and structure for IHP Phase VII, IHP-VII in short, and its cross cutting themes such as FRIEND, HELP, PCCP, ISARM and others, were set out in the Fourth Report of the Task Force (April, 2006). Prior to the 39th session of the Bureau, the Secretariat worked on collating comments by the IHP National Committees, and other partners. These comments, contributions and observations provide an essential and independent cross check of the scope of the proposed Plan for IHP-VII. During the June 2006 meeting the Task Force, has concentrated on the needed refinements, fine tuning and peer reviews of the Draft Plan for IHP-VII.

Baseline needs of the IHP

5. It is now widely accepted that water in its many manifestations is of principal concern to most sections of the economy of all countries and fundamental to global sustainability, thanks in a large part to the three decades of IHP's scientific leadership. In developing the initial Concept into the Draft Plan for Phase VII, a primary concern of the Task Force has been to ensure the policy relevance of the International Hydrological Programme and through it, of the research conducted at the national, regional and global levels. The lessons learnt from such actions as FRIEND, HELP and others have been incorporated.

6. Another important concern has been to ensure that education, training and capacity-building retain strong emphasis throughout all the themes. Until the meeting of the Task Force in

early June 2006, it was felt that this could be accomplished without devoting a specific theme to that subject as had been done in Phase VI. However, new developments within UNESCO caused the Task Force to revise its thinking, in line with a recommendation from the Bureau. Further to decisions of the Executive Board (166 EX/Decision 3.6.1 and 174 EX/Decision 48), it is likely that a UNESCO-wide strategy and programme for water education at all levels will be developed and included in the Programme and Budget for 2008-2009. This programme is likely to be one of the Thematic Programmes currently under internal discussion within the Draft UNESCO Implementation Plan for the UN Decade on Education for Sustainable Development. Document IHP/IC-XVI/12 provides further information in this regard. In this document the Council is asked to comment on the recommendation from the Bureau that a working group of experts be set up to advise and guide UNESCO's work in this context, particularly in view of the fact that the Science Sector of UNESCO, and hence the IHP, would be expected to play a leadership role. Taking into account this situation, the Task Force proposes that:

- a. A new theme be added to the plan for IHP VII (Theme 5), provisionally entitled "Water Education for Sustainable Development"
- b. The working group likely to be set up on water education (ref. Document IHP/IC-XVI/12) be charged, *inter alia*, with developing the focal areas of Theme 5 in light of the broader efforts within UNESCO as a whole for water education.
- c. The Bureau be authorized by the Council to approve the more developed iteration of Theme 5 by the working group and the Task Force.
- d. The UNESCO-IHE Institute for Water Education play a key role in the formulation and implementation of Theme 5.

7. The Task Force also noted that, upon recommendation by the Bureau, it is proposed that in the Draft Programme and Budget for 2008-2009, there be a Joint Main Line of Action on water education, to be implemented jointly by the Science Sector, the Education Sector, and the UNESCO Institute for Water Education (ref. document IHP/IC-XVII/10).

8. The integration of the UNESCO-IHE Institute of Water Education into UNESCO in 2003 has substantially reinforced UNESCO's efforts in freshwater and in contributing to the attainment of the MDGs. It has been emphasized on numerous occasions, particularly within the Bureau and the Council, that the expertise and resources available within UNESCO-IHE can and should be tapped to the fullest by the IHP, and that collaboration be established wherever possible. It is thus understood that, in the implementation of the Strategic Plan for IHP VII, UNESCO-IHE will be a key partner.

9. It is expected that by 2008, UNESCO's work in water sciences will require increased coordination and cooperation with actions of other UN agencies, organizations and programmes. The involvement of other parts of the UN system in Phase VII will be enhanced by the presence within UNESCO of the secretariat for the UN World Water Assessment Programme (WWAP). Since 2000, 24 agencies of the UN system have been cooperating WWAP. UNESCO leads this programme, and has contributed in a major way to the preparation of the first and second *World Water Development Reports* (published in 2003 and 2006, respectively).

Setting the targets of IHP-VII for the coming decade

10. The crafting of the scope of the Phase VII is based upon the premise that in the hydrological cycle water acts as the essential bloodstream for all terrestrial and coastal ecosystems, be they global or local. Water is also fundamental for society's needs, as recognised in many global declarations, such as the UN MDG's, 2nd WWDR and the UN Water for Life Decade. The IHP from its earliest inception in the mid 1970's has striven to support the better understanding and to harness in a sustainable manner the benefits of this essential natural resource. This is captured in the overarching themes of IHP- IV, through to IHP-VI, each reflecting the improved understanding of the hydrological science vis a vis the needs of society and of the natural environments. Up to Phase V the emphasis of IHP was on linking hydrology, initially to

“sustainable development” as such, and later to the “vulnerable environment”. By Phase VI, the emphasis turned to complex water interactions in the context of “systems at risk and social changes”.

11. This evolution paved the way for anticipating the demands that would be made on IHP-VII from 2008 to 2013, a period which also coincides with the International Decade on Water for Life, and at its culmination should contribute to the achievements of the MDG's. By basing the prognosis on the observation that there are few discontinuities in nature, rather an evolution of changes, the Phase VII can be expected to build on the continuity of the previous IHP phases, yet respond to new dynamics. Two principal thoughts relate to these forthcoming changes: firstly the actual nature of the changes in the coming decades, and secondly the unprecedented rate of the change. The nature of the changes being experienced are diverse but there is one commonality: changes occur in every continent, in response to the pace of national and international relations in a globalised world. In the current geopolitical socio-economic arena, each social or economic interaction involving international relations results in multiple related interactions, many of them comprising local changes expressed through modified land use, demand on natural resources, energy needs, and so forth. Thus there is an exponential increase in these types of changes at the global and local scales. The science of hydrology, expressed through the IHP, must therefore be capable of giving scale related, timely and appropriate policy relevant advice while dynamically developing tools and methodologies that will meet these regularly changing challenges. Some of the relevant IHP processes that were started in Phase VI will need to be reinforced and strengthened as they will continue to be relevant throughout IHP-VII, such as FRIEND, HELP, PCCP, and others.

Transition of Phase VI to Phase VII

12. Given this background, IHP- VII is being crafted to make a seamless transition from Phase VI's ‘water interactions’ to ‘water dependencies’. Research results of the previous decades of scientific hydrology suggest that interactions in practically all terrestrial ecosystems are water dependent; further, that within natural, as well as the built systems, there are inter-dependencies connected by water. The Phase VI's ‘systems at risk and social changes’ has identified and characterised the types and scope of risks, and the consequent stresses being experienced, as exemplified in the Millennium Assessment, and the challenges faced by stakeholders for whom water acts as a life support system. Phase VII would thus focuss on the systems under stress and the societal responses to these stresses, not least through adaptation measures to the most serious impact of global changes, including that of climate. Some globally relevant societal responses to which IHP has already made a substantial start in Phase VI are the shared water resources and related conflict resolution initiatives, which would continue and be made more relevant in IHP-VII. In addition the UN system-wide triannual WWDR, coordinated by UNESCO, provides a global measure of the state of the resource and would also form an important IHP-VII activity.

13. IHP's Phase VII is entitled: “Water Dependencies: Systems Under Stress and Societal Responses”. The Task Force's Fifth Report has re-visited this overarching title, the four original themes and their focal areas, as well as the supporting analyses. The key points tested were: what has been missed and what is redundant? This ‘gap and superfluities’ assessment is a recognised approach in strategy evaluation, and applying this, the previous Draft Plan for IHP-VII has been refined and an additional theme added, as explained above. It is proposed that, with the involvement of the Bureau, the Phase VII Plan continue to be fine-tuned after the 17th session of the Intergovernmental Council and until it is submitted for approval to the 34th session of the General Conference of UNESCO. The current updated definition of the Themes and the Focal Areas are shown in Table 1.

Making Phase VII action oriented and policy relevant

14. The Fifth Report of the Task Force has elaborated the theme titles, and the focal areas for each to make them more *action orientated* in due consideration of the different audiences of the IHP-VII Plan. This process has required a significant amount of subjectivity because what counts as 'action' to one audience may not necessarily be an action to another. Broadly speaking, IHP's audiences can be grouped into four categories: governments, the scientific community, international agencies and the committed stakeholders, such as NGO's. While the first and second category would seek policy orientated research actions in the IHP-VII Plan, the third category would seek actions that provided complementarity between their Programmes and those of IHP. The fourth category would seek actions that produce some tangible benefits at the local level.

Themes and Focal areas of the IHP Phase VII

15. The themes of Phase VII are designed to address hydrological issues affecting global as well as processes. The following paragraphs give descriptions of the now five themes, constituting the Core Programme for IHP-VII and summarise the approaches and the focal areas adopted for each theme. The inter-relationship among the Themes is shown in Figure 1.

- ***Theme 1: Adapting to the impacts of global changes on river basins and aquifer systems***

Pressures of a global character increasingly require adaptation to changing water availability and increasing water demand. The activities developed under this theme will help Member States advance their understanding of global change phenomena and to develop adaptation and mitigation strategies that respond to the new pressures on water resource management. Particular attention will be given to the most stressed and vulnerable environments, such as arid and semi-arid regions, mega-cities, and internationally shared basins and aquifer systems. Lessons learned from international projects like HELP and FRIEND will also be compiled and disseminated for application. This Theme is subdivided into 5 focal areas:

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***

The international community has recognized after two major world water fora that the water crises is largely a crises of good governance. One diagnosis of this malaise is that, freshwater resource management in many parts of the world is still characterized by piecemeal and sectoral approaches rather than by integrated approaches. To be effective, integrated water resource management (IWRM) should take into consideration cultural, ethical and socio-economic elements. Strengthened water governance would provide the platform, the institutional framework, the authority and the legislative body for sound IWRM. Work under this theme will contribute to developing better understanding, better tools and practices, as well as policies and legislation appropriate for integrated water resources management. It will also help to develop methods for studying the way particular populations and different consumer groups relate to water: better understanding of their values and motivations can lead to more effective governance. Finally, public information materials should foster greater participation by stakeholders in water issues. This theme is sub divided into 5 focal areas:

- 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 - Water as a shared responsibility: managing water across geographical and social boundaries
- Focal area 2.5 - Resolving the water and energy nexus

- **Theme 3: Ecohydrology for Sustainability**

Human activities have become the major drivers of change in the Earth's biosphere. The resulting deterioration of water quality, overexploitation of freshwater resources, adverse effects of hydrological hazards and landscape degradation, as well as sectoral management solutions, pose a risk to human health and development. The same activities also affect the functioning of ecosystems and their ability to provide goods and services, on which human well-being depends. This Theme will contribute to a better understanding of water as both an abiotic resource and as a service delivered by ecosystems. The outcome of the theme will identify, quantify and improve the critical interrelationships between water and biota. This is necessary for sustainability, particularly in the critical ecosystems (arid- and semiarid zones, coastal areas and estuaries, and urbanised areas). The theme aims to exemplify transdisciplinary, cost-effective solutions to water-related issues in variety of ecosystems and climatic zones. It will also improve knowledge of groundwater-dependent ecosystems. This Theme is subdivided into 4 focal areas:

- 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**

Life support systems depend directly and indirectly on water. Improved management and protection of water for productive purposes is essential. The theme focuses, amongst others on all aspects of anthropogenic sources of contamination, water augmentation methods applicable in the most water-stressed areas, and on the particular issues and complexities of achieving sustainable water use in urban and rural areas and for food production. This theme aims to contribute to the achievement of the UN MDGs concerning provision of access to safe water and sanitation, particularly in water stressed areas, in urban centres and on especially on Small Islands Developing States (SIDS). A sound understanding of the need to protect river basin and aquifer water quality by regulators, planners, local government, water utilities, industry, and even whole communities, is central to achieving these goals. Increased awareness of the importance of managing human, agricultural and industrial wastes is one starting point. The quality of rural water supply can also be through assured sustainable land management. The results of this theme's work will be summarized in guidelines, based on the best practices for increasing the efficiency of water use. This Theme is subdivided into 4 focal areas:

- 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**

As explained above, the focal areas in this additional theme are yet to be fully defined. The Task Force has proposed that the working group of experts expected to advise on water education within the UN Decade on Education for Sustainable Development will be requested to define the

substance of this theme, as input to the Task Force. This input would ensure that the focal areas of Theme 5 are in line with UNESCO-wide work in this field.

The next steps

16. The Fifth Report of the Task Force has also considered the next steps towards the finalisation of the Phase VII Implementation Plan. The next steps are three-fold: firstly for the Task Force to continue the fine tuning of the activities and priorities, secondly for the Task Force with the Secretariat to identify partners that will participate in the Phase VII on the basis of agency complementarity and comparative advantages, and thirdly for the Secretariat, working with the Task Force, to prepare an implementation plan including the monitoring and evaluation of the IHP VII. Concurrently with these three activities, the Secretariat will continue the preparation of a short user-friendly document describing IHP-VII for larger audiences using media experts. The user-friendly version will be released as soon as the 34th session of the General Conference adopts the IHP-VII Plan.

17. The Council may wish to consider the draft resolution contained in the Annex.

Annex

**Draft resolution concerning the Draft Strategic Plan
for the 7th Phase of IHP (2008-2013)**

The Intergovernmental Council of the International Hydrological Programme of UNESCO:

- Cognizant** of the lead role IHP has played over three decades in the development of hydrology as a science,
- Emphasizing** that IHP should continue to exert such leadership in the future, and in particular in the 7th phase of the programme (2008-2013),
- Acknowledging** that the decision by Member States to make water and associated ecosystems a principal priority of UNESCO has enabled the IHP to flourish substantially, and to benefit from other UNESCO initiatives in freshwater, including the integration into UNESCO of the UNESCO-IHE Institute of Water Education, the establishment of numerous new water centers operating under the auspices of UNESCO, and the lead role of UNESCO in the UN World Water Assessment Programme,
- Endorses** the planned transition between Phase VI and Phase VII of the IHP from focusing on water interactions to water dependencies,
- Agrees** to add a fifth theme on water education, to reflect and be in harmony with UNESCO-wide efforts in this field during the 2008-2013 period,
- Approves** the Draft Strategic Plan for Phase VII of the IHP, entitled “Water Dependencies: Systems under Stress and Societal Responses” presented by the Task Force created to develop this Plan,
- Instructs** the Bureau to review and approve on behalf of the Council fine tuning of the Draft Plan approved by its 17th session, as well as the focal points for the theme devoted to water education still to be developed,
- Recommends** that the General Conference of UNESCO approve the Strategic Plan for the 7th Phase of the International Hydrological Programme at its 34th session.

Table 1

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 - Water as a shared responsibility: managing water across geographical and social boundaries

Focal area 2.5 - Resolving the water and energy nexus

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 (provisional title)

Theme 5 will be elaborated by a working group likely to be set up on water education (ref. Document IHP/IC-XVII/12) which will provide the Task Force with suggested focal areas for this theme.

Cross-cutting programmes: HELP, FRIEND

Associated programmes: International Flood Initiative (IFI)
International Sediment Initiative (ISI)
Water for Peace: From Potential Conflicts to Cooperation Potential (PCCP)
Joint International Isotope Hydrology Programme (JIHP)
Internationally Shared Aquifer Resources Management (ISARM)
Global Network on Water & 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

Figure 1
Overview of the relationships between the Core Themes of the IHP-VII and the cross-cutting and the associated programme components

