



DRAFT MEETING REPORT (v.13/11/2006)

First meeting of the Task Force on UNESCO's ecohydrology: Monitoring & Impacts of Global Change

Paris, France (24 – 25 October 2006)

Introduction

The Monitoring & Impacts of Global Change Task Force (MIGCTF) of UNESCO's Ecohydrology Programme was officially launched at its first meeting, held at UNESCO Headquarters in Paris in October 2006. The MIGCTF could not be launched with the other TFs at the meeting held in Faro, Portugal in June 2006 due to the fact that no member of MIGCTF was able to participate in that meeting. This meeting was organized as part of the joint work of UNESCO's International Hydrological Programme (IHP) and the Man and the Biosphere (MAB) Programme on "Managing Land-Water-Habitat Interactions through an Ecosystem Approach" for 2006 – 2007, in the broader context of the sixth phase of IHP (IHP-VI: 2002 – 2007).

The primary objective of the meeting was to formulate a workplan for the activities to be implemented by the MIGCTF in the biennium 2006 – 2007. The agenda of the meeting is attached to this report (Annex I).

The meeting was opened by Mr José Alberto Tejada-Guibert, Deputy Secretary of IHP. All but one member of the MIGCTF attended the meeting. Mr Charles Vörösmarty, a SAC member who is the liaison for this TF, joined a part of the meeting via teleconference. The list of participants is attached to this report (Annex II).

Meeting Conclusions

The TF developed its scientific workplan for the biennium 2006 – 2007. For this biennium, the MIGCTF will set up database to assess progress in the implementation of environmental flows, both in terms of quantification of environmental flows and adoption of e-flows policies.

In addition to the workplan, the following three points were discussed at the meeting:

1. Name of the TF: the TF suggested "Assessing Impacts of Global Change on Aquatic Systems" as an alternative name for the TF, and asked the SAC to approve this change.
2. Definition paper by the SAC: members of the TF commented on the paper written for the ESSP OSC by some SAC members, titled "The Science of Flow-Ecology Relationships: Clarifying Key Terms and Concepts". Some of the TF members suggested that the number of authors on the paper be increased, in order to involve additional prominent scientists in the field of ecohydrology and environmental flows. This would strengthen the definition as well as the scientific integrity of the paper. The TF members also felt that the submission of the definition paper to a peer review journal and/or the release of such paper at prominent international environmental flows fora will go a long way in harmonizing the different concepts used in ecohydrology.

3. Monitoring and demonstration projects: some TF members were concerned with the scope of the demonstration projects as well as their coherence with the principles of ecohydrology, and stressed the importance of having a monitoring mechanism for both the already-existing demonstration projects as well as the newly proposed ones. In particular concern was expressed with some projects that seem to focus on land use management, with little incorporation of what is happening in the river (e.g., lack of environmental flows estimation, lack of monitoring the condition of freshwater habitats and dependent fauna, and lack of evaluation and monitoring of the progress in sustaining a functional freshwater system after applying the principles of ecohydrology).

Detailed Scientific Workplan

1. *Co-chairpersons*: Ms Carmen Revenga and Mr Richard Robarts
2. *Terms of Reference*: Assessing and promoting the role of environmental water allocations (i.e., environmental flows) as a significant component of ecohydrology.
3. *Long-term vision and strategies*: vision—integrate environmental flows, biodiversity, and material loads into the concept of ecohydrology in order to improve the management of water resources and reduce the impacts on near-shore and inland aquatic environments. Strategy—to develop, during the next biennium (2008-2009), databases and other tools (e.g., indicators) which reflect the global status of key aspects of knowledge and application of ecohydrology principles.
4. *Workplans for the biennium 2006 – 2007*:
 - a. *Objective*: to set up a database to assess progress in the implementation of environmental flows, both in terms of quantification of environmental flows and adoption of e-flows policies, both lotic (flowing) and lentic (standing) waters.

If resources are available, the TF would also like to:

- compare global assessments of nitrogen loads to the coast with observed GEMStat data in coordination with existing initiatives (LOICZ, UNH, INI) and interpretation of what that means for aquatic ecosystems. Are there thresholds that can be identified? Can ecosystems at risk be identified?
- expand the coverage of the georeferenced Invasive Species Database on aquatic systems held by The Nature Conservancy in collaboration with IUCN and others.

b. *Expected results*:

- i. database on adoption of policies of environmental flows;
- ii. database on quantified environmental flows globally.

Potentially (if funding is available):

- iii. global assessment of nitrogen loads and impacts on aquatic systems;
- iv. global database on aquatic invasive species with scoring system regarding impacts and management difficulty.

c. *Activities*:

- i. Environmental flows database:
 - develop template for environmental flows database;

- database coding;
 - initial data collection and launch to announce the database and request input from GEMS/Water National Focal Points;
 - call for contributions to database.
- ii. Participation in meetings:
- GWSP technical meeting on the Dams database;
 - GWSP Steering Committee meeting in Beijing and the ESSP Open Science Conference.

Potentially (if funding is available):

- iii. get funding for part-time researcher at GEMS/Water to work with partners and carry out assessment/comparison and interpretation of nitrogen loads.
 - iv. get funding for research assistant to help populate the global database on aquatic invasive species with scoring system regarding impacts and management difficulty;
 - v. joint activities with other TFs (especially Guadiana “integrated demonstration site” cross-cutting activity):
 - demonstration sites, where applicable, will be included in the databases of the TF on environmental flows and invasive species;
 - encourage and catalyze the assessment of socio-economic benefits of environmental flows in Guadiana to set a pilot example for other demonstration sites and highlight the importance of environmental flows within the ecohydrology framework.
- d. *Timeline of activities, responsibilities & tasks of each TF member.*
- i. designing the template for environmental flows databases (Mr Vladimir Smakhtin and Ms Revenga, with input from Mr Brian Richter at TNC), by March 2007;
 - ii. Upload interactive database (coding, design, etc.) on to the internet (Mr Robarts and Mr Smakhtin), by July 2007;
 - iii. Launching and call for contributions (Mr Robarts with support from UNESCO Secretariat), in September 2007, potentially at Brisbane River Symposium;
 - iv. Contact demonstration sites and other case studies for initial data on environmental flows and invasives (Mr Smakhtin, Ms Revenga, Mr Ulric Trotz, Mr Arun Shrestha);
 - v. Contact Guadiana demo site for socio-economic benefit analysis (Mr Robarts and Mr Smakhtin).

Potentially:

- vi. Investigate funding opportunities within UNESCO-IHP and other sources for nitrogen loads (Mr Trotz, July- December 2007) and invasive species work (Mr Trotz, January-July 2007).

5. *Partnerships:*

- a. Emerging Global Environmental Flows Network (IWMI, IUCN, TNC, DHI, Delft Hydrolics, SIWI, Swedish Water House, CEH, etc);

Potentially:

- b. UNH, INI, LOICZ and the Guadiana Demonstration site.



AGENDA

First meeting of the Task Force on UNESCO's ecohydrology: Monitoring & Impacts of Global Change

Paris, France (24 – 25 October 2006)

Day 1 Tuesday, 24 October (09:30 – 18:15)

- 09:30-09:45 Welcome by host of meeting (J. A. Tejada-Guibert, Deputy Secretary, IHP)
- 09:45-10:05 Introduction to UNESCO's Ecohydrology Programme: the context of UNESCO's ecohydrology TFs, progress in the implementation of activities in biennia 2004 – 2005 & 2006 – 2007, and the goals & organisation of the meeting (L. Hiwasaki, IHP)
- 10:05-11:00 Presentations by each TF member (20 - 25 mins each)
- 11:00-11:15 *Coffee/tea break*
- 11:15-13:00 Continuation of presentations and discussions
- 13:00-14:30 *Lunch*
- 14:30-16:00 Discussions on:
- electing chairperson/ TF leader
 - finalizing Terms of Reference (ToR)
 - developing long-term vision and strategies of the TF
 - workplans for the biennium 2006 – 2007: objectives, expected results & activities (including joint activities with different TFs)
- 16:00-16:15 *Coffee/tea break*
- 16:15-18:15 The Global Water System Project: Its Agenda for Integrative Water Studies and Links to Ecohydrology (presentation by and discussions with C. J. Vörösmarty, GWSP & UNESCO Ecohydrology SAC member, via teleconference)

Day 2 Wednesday, 25 October (09:30 – 13:00)

- 09:30-11:00 Review of Day 1 discussions by TF leader in order to finalize:
- ToR
 - strategies for implementation of activities
 - workplans for the biennium, including timeline
- 11:00-11:15 *Coffee/tea break*
- 11:15-12:30 Continuation of discussions

12:30-13:00 Wrap-up
 Closure of meeting

Meeting documents

Working documents

- Agenda
- IHP/Bur-XXXIX/13 “Ecohydrology: Appointment of the SAC and TFs”
(a document prepared for the IHP Bureau, regarding ecohydrology activities to be conducted under IHP for this biennium (2006 – 2007) and the organizational structure and general terms of reference (ToR) for SAC & TFs)
- Timeline of UNESCO’s ecohydrology activities for 2006 – 2007
- List of participants

Information documents

- Members of UNESCO’s SAC & TFs on ecohydrology
- Compilation of inputs prepared by TF members
- Reports of the two TF meetings in Faro, Portugal, June 2006

Output of the meeting

- Report of the TF meeting (to be drafted by the TF leader)



LIST OF PARTICIPANTS

First meeting of the Task Force on UNESCO's ecohydrology:
Monitoring & Impacts of Global Change

Paris, France (24-25 October 2006)

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Via teleconference

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