



---

## FINAL MEETING REPORT

1st Meeting of the renewed Scientific Advisory Committee (SAC) on Ecohydrology

Paris, France (4 – 5 September 2006)

---

### Introduction

The SAC on Ecohydrology, which was reconstituted and formally appointed by the IHP Bureau at its 39th session in May 2006, met in UNESCO Headquarters, Paris, in September 2006. 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 discuss and develop strategies for implementation of UNESCO's ecohydrology activities for the biennium 2006 – 2007 and beyond. Major issues discussed were workplans of the different Task Forces (TFs) on Ecohydrology, activities to be implemented by SAC, and cooperation with related programmes. The agenda of the meeting is attached to this report (Annex I).

The meeting was opened by Mr András Szöllösi-Nagy, Secretary of the IHP. The first part of the meeting was chaired by the outgoing chairperson, Mr Maciej Zalewski (Director of the European Regional Centre on Ecohydrology in Lodz, Poland), while the newly elected chairperson, Mr Robert J. Naiman (Professor at University of Washington), chaired the second half. The meeting was attended by all seven members of SAC, who represent each of UNESCO's electoral regions as well as the International Council for Science (ICSU). Observers that participated in the meeting included representatives of three TFs on Ecohydrology and the United Nations Environment Programme. The list of participants is attached to this report (Annex II).

### Meeting Conclusions

The following seven points were discussed and finalized:

1. election of a new chairperson and finalization of Terms of Reference (ToR) for SAC: Mr Naiman was elected unanimously as the new chairperson, and a ToR—to be valid for two years and reviewed at the beginning of the next biennium—was finalized by SAC members.
2. activities to be conducted by SAC: activities to be implemented in this biennium by SAC members are expected to produce three main outputs: (a) a short ecohydrology definition paper, which would clarify the confusion that currently exists with regard to the meaning of ecohydrology, due to multiple definitions and to similar terms; (b) vision and long-term strategy of UNESCO's Ecohydrology Programme; and (c) a policy brief/ guidelines, which would facilitate linkage between activities of UNESCO's Ecohydrology Programme with decision-makers.
3. implementation of the Guadiana "integrated test site": an interdisciplinary, cross-cutting project involving master's students was proposed by the TF leaders as a way to move

implementation of the “test demonstration site” forward. The objective of this project is to test the integrated ecohydrology approach—which includes the social, educational, and coastal zone components—at Guadiana ecohydrology demonstration site and to create a model that could be applied to other demonstration project sites.

4. new demonstration project proposals: SAC did not examine in depth the two demonstration project site proposals that were submitted to the UNESCO Secretariat, but deferred selection of new sites until an additional demonstration project site proposal is submitted, and a set of criteria for selecting additional demonstration projects is developed.
5. workplans of each TF: workplans of the three TFs presented at the meeting were approved by SAC, although it was unable to examine in depth the workplans of the two TFs that were not represented: Demonstration Projects and Monitoring & Impacts of Global Change. Hence, approval of the workplans of these two TFs is still pending, and this would be done in due course.
6. linkages between SAC and TFs: it was agreed that linkages should be strengthened between SAC and the TFs.
7. cooperation/linkages with related programmes: it was agreed that cooperation with related programmes, most notably IHP-HELP, freshwaterDIVERSITAS, and GWSP should be strengthened.
8. next meeting of SAC: it was suggested that pending on the resources available, the next meeting of SAC be held early 2007, and that it would concentrate on substantive issues. Then, a second meeting, focussing on administrative issues, could take place back-to-back with the meeting of the TFs, planned to be held in September 2007.
9. outstanding issues: issues that remained to be further discussed included (a) how to integrate social sciences into ecohydrology; (b) how to incorporate emerging issues relevant to ecohydrology; (c) possibility of developing indicators and maps for ecohydrology; (d) how to conduct education and capacity-building for ecohydrology; (e) organizational structure of UNESCO’s Ecohydrology Programme; (f) the possible need for a new term to replace “ecohydrology”.

## Details of Discussions

### 1. Election of a new chairperson and finalization of ToR:

Mr Zalewski—who had acted as chairperson of UNESCO’s Ecohydrology Programme for the past ten years and who recommended, in 2005, that SAC be “revitalized” in order to garner new momentum—stepped down as chairperson at this meeting. The nomination of Mr Naiman as the next chairperson was fully supported by the other SAC members. Mr Szöllösi-Nagy was joined by other meeting participants in thanking Mr Zalewski for the leadership shown and the momentous contribution made to the Programme since its launch.

Based on document IHP/Bur-XXXIX/13 “Ecohydrology: Appointment of the SAC and TFs”, members of the SAC finalized the ToR, with the understanding that this ToR would be valid for two years and would be reviewed at the beginning of the next biennium. SAC will:

- i. Set biannual and annual objectives within the framework of UNESCO’s c/5, and make sure that the planned objectives are being achieved;
- ii. Set strategic direction and advice concerning UNESCO’s ecohydrology activities;
- iii. Promote consolidation of ecohydrology activities in their respective regions as well

- as at the international level;
- iv. Facilitate further scientific research on ecohydrology, in particular to promote integration of the concept with related sciences and their application into practice for sustainable IWRM;
  - v. Promote UNESCO's work on ecohydrology through engaging in education, capacity-building, communication and information-dissemination efforts;
  - vi. Maintain and strengthen links of UNESCO's ecohydrology activities to other activities being undertaken by scientists and organizations around the world in the framework of ecohydrology;
  - vii. Attract donors and mobilise resources, as necessary.

## 2. Activities to be conducted by SAC:

It was agreed that the following three outputs will be produced by SAC in this biennium:

- a. *definition paper*: this short (2-3 pages) scientific article would clarify the confusion that currently exists with regard to the meaning of ecohydrology, due to multiple definitions of ecohydrology (especially other prevailing definitions such as the one by Rodríguez-Iturbe), as well as to similar terms (such as IWRM, ecohydraulics, environmental flows, hydroecology, hydrobiology, etc.). A paper of this sort would be helpful not only to the larger community, but also help to focus the work of SAC and the TFs and define the Programme's niche. The definition would need to capture the emerging transdisciplinary character of the ecohydrology concept as well.
- b. *vision and long-term strategy of UNESCO's Ecohydrology Programme*: pending on the budget, a brainstorming session could take place to formulate the vision and long-term strategy for UNESCO's Ecohydrology Programme. The timeframe for this strategy would be for the end of IHP-VII (2008-2013). See below (8. next meeting of SAC) for details concerning the timing of such a session.
- c. *policy brief/ guidelines*: such a document was deemed necessary to address the urgent need to link the activities of the Programme with decision-makers. The document would communicate the holistic model of thinking and articulate the different specializations that are necessary to solve different water-related issues. Another goal of this document would be to communicate the ecohydrology concept to those who conduct more applied/practical work. In this regard, disseminating "success stories" of ecohydrology application to the practical world was considered extremely useful.

## 3. Implementation of the Guadiana "integrated test site":

To follow up on one of the activities proposed at the meeting of the TFs in June—namely, to implement a truly integrated approach to demonstrating ecohydrology at the Guadiana ecohydrology demonstration site—two activities were proposed by representatives of the three TFs present at the meeting. The first is an interdisciplinary/ cross-cutting project involving master's students. The objective of this project is to test the integrated ecohydrology approach—which includes the social, educational, and coastal zones components—at Guadiana and to create a model that could be applied to other (demonstration project) sites.

The second activity proposed was to consider three main dimensions of integration—(1) impact of human systems on water systems; (2) impact of water systems on human, social and political systems; (3) the need to influence policy and social systems on their interaction with water systems—in order to identify the focus and to develop a proposal integrating the social sciences into the implementation of demonstration project sites from an academic perspective.

#### 4. New demonstration project proposals:

At this meeting, SAC did not examine in depth the two demonstration project site proposals that were submitted to the UNESCO Secretariat, but deferred selection of new sites until two additional elements are completed: (a) submission of an additional demonstration project site proposal in Volga Delta; and (b) development of a set of criteria for selection of additional demonstration projects. After criteria are developed and agreed upon, the selection process can be coordinated over the internet.

Additionally, many SAC members raised their concerns with the quality of existing demonstration projects, particularly whether: (i) these eight sites are being implemented in a coherent manner; and (ii) these sites as a group are functioning as a network or are simply a collection. In this regard, it was suggested that SAC develop a matrix to see where the gaps are in the current collection of sites. The chairperson concluded that the topic of demonstration project sites be one of the major topics for discussion at the next meeting of SAC; a meeting with demonstration project leaders was also suggested as necessary to enable SAC to effectively support the demonstration projects.

#### 5. Workplans of each TF:

Members of SAC noted with satisfaction the workplans developed by the TFs represented at the meeting, namely, Coastal Zones, Social Sciences, and Education & Capacity-building. SAC was unable to examine in depth the workplans of two TFs that were not represented:

Demonstration Projects (due to last-minute cancellation of the TF leader and no presentation sent in advance to the Secretariat) and Monitoring & Impacts of Global Change (because this TF did not meet in June and thus have yet to formulate a workplan). Approval of the workplans of these two TFs is still pending, and this would be done in due course.

Concerns were raised particularly with regard to the scope of the work of the TF on Education & Capacity-building as well as the quality of the demonstration projects (details are noted in 4. above and 9.d below).

A SAC member suggested that activities implemented in different regions of the world be also included in the document “Timeline of UNESCO’s ecohydrology activities for 2006 – 2007” that showed activities to be implemented by the different TFs. In response to this, it was agreed that having a global table of activities would be helpful, to facilitate communication among regions as well as for networking purposes.

#### 6. Linkages between SAC and TFs:

Members of SAC agreed that linkages should be strengthened between SAC and activities of the TFs. In response to this, a SAC member suggested a new organizational chart that defines the TFs on Social Sciences and Education & Capacity-building as cross-cutting ones (see also 9.e below). Furthermore, in order to facilitate systematic linkages between the SAC and TFs, a SAC member was tentatively assigned to each TF, who would act as a liaison: Mr Laurent Robison for Coastal Zones TF; Mr Charlie Vörösmarty for Monitoring & Impacts of Global Change TF; Ms Veronica Strang for Social Sciences TF; Mr Marcelo Gaviño for Education & Capacity-building TF; and Ms Zoubeida Bargaoui for Demonstration Project TF.

#### 7. Cooperation/linkages with related programmes

SAC agreed that cooperation with related programmes be strengthened. With regard to IHP’s HELP, in addition to the two venues for cooperation that had already been discussed by the TF on Demonstration Projects—namely: (a) cooperating at the site-level in joint ecohydrology demonstration site-HELP basins, of which there are currently three; (b) holding a session on ecohydrology at the HELP symposium in South Africa—an additional (yet related) venue of cooperation, i.e., testing the ecohydrology concept in HELP basins, was suggested. To start this process, SAC requested Mr Guillaume Narnio of the HELP Secretariat to provide a list

of HELP basins and the characteristics of these basins.

Concerning GWSP, Mr Vörösmarty suggested that the Programme and GWSP could jointly develop indicators that include social dimensions. With regard to DIVERSITAS, Mr Naiman mentioned the virtual database of freshwater biodiversity being developed, which possibly could be linked to the Programme; this would need to be further discussed with the leader of this initiative. Additionally, the possibility of the Ecohydrology Programme to be the “broker” between MAB’s world network of biosphere reserves (WNBR: 482 sites as of October 2004) and HELP basins (67 as of July 2004) and GWSP and DIVERSITAS was suggested. In this regard, SAC asked Mr Salvatore Arico to send additional information on the WNBR. SAC valued, and encouraged, strengthened collaboration between IHP and MAB as joint implementers of the Ecohydrology Programme.

With regard to UNEP, cooperation through materials on phytotechnology was offered by Mr Vicente Santiago.

8. Next meeting of SAC:

It was agreed that during the current transition period, SAC should meet twice a year, pending available financial resources. It was suggested that the next meeting could be held either: (a) late February/early March 2007 in Argentina, in conjunction with a meeting to be organized by IHP-LAC; or (b) February or early April in Europe. Then, a second meeting, focussing on administrative issues, could take place back-to-back with the meeting of the TFs, in September 2007. It was suggested that at the next meeting brainstorming discussions on substantive issues should take place, as well as some time for each SAC member to describe to each other about his/her own organizations/networks and discuss the different linkages and synergies.

9. Outstanding issues: the following seven issues are those that were discussed at the meeting but from which no conclusions were drawn:

- a. *how to integrate social sciences into ecohydrology:* although all meeting participants recognized the importance of incorporating social and cultural factors into ecohydrology, a consensus on how to go about doing so (i.e., methodology) did not emerge. While some SAC members were keen to do the “real science” (i.e., hydrology/biology/ecology) first and only incorporate social/ policy sciences and educational components later, others emphasized the need to include social and cultural factors from the beginning as a science and called for recognition of social sciences as “real science”. Social scientists present at the meeting emphasized the need to move away from considering “social issues” as simply tools for outreach, education and implementation. The position paper to be written by the Social Sciences TF may help clarify these issues.
- b. *how to incorporate emerging issues:* in addition to the need to integrate the social sciences, SAC members noted the importance of integrating other emerging issues into ecohydrology, such as meteorological aspects such as global change and risk management/ early warning systems. However, there was no conclusion with regard to how exactly these emerging topics could be dealt with.
- c. *possibility of developing indicators and maps:* the issue of developing indicators and maps related to ecohydrology, e.g., mapping for aquatic ecosystems, was raised by a SAC member. The issue of including social indicators and/or cultural mapping was mentioned by other SAC members, and thereby a need for a system that integrates all hydrological, ecological and social data. At the same time, the possibility to develop indicators jointly with policy-makers, which would then help bridge the gap that currently exist, was also raised. However, no concrete details concerning this possible activity were finalized at this SAC meeting.

- 
- d. *education and capacity-building for ecohydrology*: while all SAC members recognized the importance of education and capacity-building (and thus the work of the Education & Capacity-building TF), questions were raised concerning the scope of the work of the TF as well as how ecohydrology educational activities should be conducted. Concerning the latter, there was general agreement that instead of teaching ecohydrology *per se*, facilitating interdisciplinary team work (i.e., bringing together students from different specializations to form a team and conduct joint research) would be a better tool to teach ecohydrology to tertiary-level students. A SAC member recommended that the Programme host a competition for students' teams to develop different ecohydrology solutions. No conclusion was reached on discussions concerning the former.
- e. *organizational structure of the Ecohydrology Programme*: there was discussion concerning the organization chart on p.3 of the Bureau document IHP/Bur-XXXIX/13. While most SAC members agreed that linkages between TFs and SAC be strengthened (see 6. above), the degree of autonomy that TFs would have and to what extent SAC members should be involved in the work of the TFs (ranging from simple advisory capacity to working as a team on TFs) is something that needs to be further discussed.
- f. *need for a term to replace "ecohydrology"*: many SAC members voiced their concern with the terminology "ecohydrology", that it did not sufficiently convey the interdisciplinarity nor its contribution to sustainable development that the term should encompass. It was judged, however, that this issue of name change should be revisited in the near future.

## Follow-up Actions

<i>due date</i>	<i>Action</i>	<i>responsible member(s)</i>	<i>other comments</i>
September 2006	selection of <u>additional demonstration projects</u> (reference: 4.)	Development of criteria to be used to judge the three proposals, by Ms <u>Bargaoui</u> and Mr <u>Robison</u>  Submission of an additional proposal to be followed up by Mr <u>Chicharo</u>	<u>UNESCO Secretariat</u> to coordinate the selection process by e-mail
November 2006	<u>definition paper</u> (ref: 2.a)	<u>Mr Naiman</u> with the help of Mr <u>Zalewski</u> and Mr <u>Vörösmarty</u>	to be finalized before any other documents are completed by SAC
	<u>outline of vision and long-term strategy</u> (ref: 2.b)	<u>Mr Gavino</u> in cooperation with Mr <u>Vörösmarty</u> and Ms <u>Strang</u>	to be circulated to other SAC members and then followed up during the proposed brainstorming session
December 2006	<u>proposal for implementation of Guadiana “integrated test demosite”</u> (ref: 3.)	All TF leaders to work together on the proposal. <u>Mr Chicharo</u> to identify issues in the specific context of Guadiana & identify client(s) for the project; <u>Ms Rickwood</u> to lead the writing of a two-page proposal for the project & evaluate the applicability of the Guadiana model to other parts of the world; <u>Ms Lemos</u> to present the proposal to students at Univ. of Michigan.	Draft proposal to be developed by December for comments by SAC  Students would be recruited around February 2007
January 2007	<u>policy brief/ guidelines</u> (ref: 2.c)	Ms <u>Strang</u> , in cooperation with Mr <u>Vörösmarty</u> and Mr <u>Gavino(?)</u> , to develop the theoretical framework	to be followed up at the next brainstorming session
Information or documents to be provided	table of global UNESCO ecohydrology activities (ref: 5.)	<u>UNESCO Secretariat</u>	
	Information on WNBRs	<u>Mr Arico</u>	
	list of HELP basins and their characteristics (ref: 6.)	<u>Mr Narnio</u>	
	ecohydrology workplans for LAC	<u>Mr Gaviño</u>	
	latest version of the document concerning IHP-VII	<u>UNESCO Secretariat</u>	




---

## FINAL AGENDA

1st Meeting of the renewed Scientific Advisory Committee (SAC) on Ecohydrology  
Paris, France (4 – 5 September 2006)

---

### Day 1      Monday, 4 September (09:30 – 18:00)

- 09:30-09:40      Welcome by UNESCO (A. Szöllösi-Nagy, Secretary, IHP)
- 09:40-09:55      Evolution of ecohydrology: state of the art and future perspectives (M. Zalewski, incumbent Chairperson, SAC on UNESCO's Ecohydrology)
- 09:55-10:15      Progress in the implementation of UNESCO's ecohydrology programme in biennia 2004 – 2005 & 2006 – 2007 (L. Hiwasaki, IHP)
- 10:15-11:30      Presentations on overview of activities related to ecohydrology conducted in their regions and ideas for future work of SAC (each SAC member, 15 mins each)
- 11:30-11:45      *Coffee/tea break*
- 11:45-12:15      Continuation of presentations & discussions
- 12:15-13:00      Presentations by TF members on their workplans for biennium 2006-2007 (each TF leader, 15 mins each)\*
- 13:00-14:30      *Lunch*
- 14:30-16:15      Continuation of presentations by TF leaders and discussions on:
  - workplans of each TF
  - setting objectives, targets and benchmarks for ecohydrology activities for the biennium 2006 – 2007
- 16:15-16:30      *Coffee/tea break*

*Break-up into two meetings:*

- 16:30-18:00      *Meeting of SAC:*
- election of a new chairperson of SAC
  - discussion on draft Terms of Reference (ToR) for the SAC
  - long-term vision and strategy for UNESCO's ecohydrology activities
  - activities to be conducted by SAC in the biennium 2006 – 2007

*Meeting of TF leaders:*

- discussion on how to implement the Guadiana integrated “test site”

---

**Day 2            Tuesday, 5 September (09:30 – 18:00)**

- 09:30-11:15    Joint discussions to share and finalize:
- ToR for the SAC
  - activities to be conducted by SAC
  - objectives, targets and benchmarks for ecohydrology activities
  - long-term vision and strategy for UNESCO's ecohydrology activities
  - workplans for the biennium
  - implementing the Guadiana integrated "test site"
- 11:15-11:30    *Coffee/tea break*
- 11:30-13:00    Continuation of discussions
- 13:00-14:30    *Lunch*
- 14:30-16:00    Examination of new demonstration project proposals
- 16:00-16:15    *Coffee/tea break*
- 16:15-18:00    Other matters:
- cooperation/linkages with programmes such as DIVERSITAS, IHP-HELP and GEF
  - next meeting in 2007: dates & venue
- Wrap-up  
Closure
- 

**Meeting documents**

*Working documents*

- Agenda
- IHP/Bur-XXXIX/13 "Ecohydrology: Appointment of the SAC and TFs"
- List of participants
- Timeline of UNESCO's ecohydrology activities for 2006 – 2007
- Ecohydrology demonstration project proposals

*Information documents*

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

*Reference documents*

- Past SAC meeting reports (2004 & 2005)
- Publications on or related to ecohydrology

*Output of the meeting*

- Report of SAC meeting
- 

\* The TFs that will present their workplans are: Coastal Zones; Social Sciences; Education & Capacity-building; and Demonstration Projects. Members of the TF on Monitoring and Impacts of Global Change have yet to meet to formulate a workplan



---

## FINAL LIST OF PARTICIPANTS

1st Meeting of the renewed Scientific Advisory Committee (SAC) on Ecohydrology

Paris, France (4 – 5 September 2006)

---

**Ms Zoubeida Bargaoui Kebaili**

Professor of Hydrology  
Laboratoire de Modélisation en Hydraulique et  
Environnement  
Ecole Nationale d'Ingénieurs de Tunis-  
Université El Manar  
Tunisia  
Phone/Fax: +216 70 860 396  
Email: [lab.hydenv@enit.rnu.tn](mailto:lab.hydenv@enit.rnu.tn)

**Mr Laurent Roger Robison**

Docteur Hydrobiologiste  
Centre National de Recherche sur  
l'Environnement (CNRE)  
B.P 1739 Antananarivo 101  
Madagascar  
Phone: +261 20 22 264 69  
Email: [robison\\_laurent@yahoo.fr](mailto:robison_laurent@yahoo.fr)

**Mr Marcelo Gaviño Novillo**

Professor of Hydrology and Environmental  
Management – Hydraulic Department  
University of La Plata  
Calle 47 N° 200 - 1900 - La Plata  
Phone/Fax : +54 221 4531996

Ministerio de Planificación Federal  
Inversión Pública y Servicios  
Paseo Colón 189 Piso 12  
C1086 AAB Buenos Aires  
Argentina  
Email: [e3@netverk.com.ar](mailto:e3@netverk.com.ar)  
[marcelogavino@yahoo.com.ar](mailto:marcelogavino@yahoo.com.ar)

**Ms Veronica Strang**

Professor of Social Anthropology  
Department of Anthropology  
Faculty of Arts  
The University of Auckland  
Human Sciences Building, 8th Floor  
10 Symonds Street  
Auckland  
New Zealand  
Phone : +64 9 373 7599 ext 82458  
Email [v.strang@auckland.ac.nz](mailto:v.strang@auckland.ac.nz)

**Mr Robert J. Naiman**

Professor  
University of Washington  
School of Aquatic & Fishery Sciences  
Campus Box 355020  
Seattle, WA 98195-5020  
U.S.A.  
Phone: +1 206 685 2025  
Fax: +1 206 685 7471  
Email: [naiman@u.washington.edu](mailto:naiman@u.washington.edu)

**Mr Charles J. Vörösmarty**

Director  
Water Systems Analysis Group  
Institute for the Study of Earth, Oceans, and  
Space  
University of New Hampshire  
211 Morse Hall, 39 College Road  
Durham, New Hampshire 03824  
U.S.A.  
Phone: +1 603 862 0850  
Fax: +1 603 862 0587  
Email: [charles.vorosmarty@unh.edu](mailto:charles.vorosmarty@unh.edu)

**Mr Maciej Zalewski**

Director  
International Centre for Ecology  
Polish Academy of Sciences  
90-364 Lodz  
3 Tylna St.  
Poland  
Phone/Fax : +48 42 6655819  
Email: [mzal@biol.uni.lodz.pl](mailto:mzal@biol.uni.lodz.pl)

**Observers****Mr Luis Chicharo**

Associate Professor  
Faculty of Marine and Environmental Sciences  
University of Algarve  
CCMAR, Campus de Gambelas (FCMA)  
8000-810 Faro  
Portugal  
Phone: +351 289 800953  
Fax : +351 289 818353  
E-mail: [lichichar@ualg.pt](mailto:lichichar@ualg.pt)

**Ms Carrie J. Rickwood**

Postdoctoral Fellow  
UNEP GEMS/Water Programme  
c/o Place Vincent Massey, 8th Floor  
351 St Joseph Boulevard  
Gatineau, QC, K1A 0H3  
Phone: +1 819 934 5567  
Fax: +1 819 953 0461  
Email: [carrie.rickwood@gemswater.org](mailto:carrie.rickwood@gemswater.org)  
[carrie.rickwood@ec.gc.ca](mailto:carrie.rickwood@ec.gc.ca)

**Ms Maria Carmen Lemos**

Associate Professor  
School of Natural Resources & Environment  
University of Michigan  
2006 Dana Building  
440 Church St. Ann Arbor  
MI 48109-1041  
U.S.A.  
Phone: +1 734 764 9315  
Fax: +1 734 936 2195  
E-mail: [lemos@umich.edu](mailto:lemos@umich.edu)

**Mr Vicente Santiago-Fandino**

Water Officer  
UNEP-IETC  
1091 Oroshimo-cho  
Kusatsu City,  
Shiga 525-0001  
Japan  
Phone: +81 77 568 4585  
Fax: +81 77 568 4587  
Email: [Vicente.Santiago@unep.or.jp](mailto:Vicente.Santiago@unep.or.jp)

**UNESCO Secretariat****Mr András Szöllösi-Nagy**

Director

Division of Water Sciences

UNESCO

1 rue Miollis

75015 Paris

France

Phone: +33 1 45 68 40 02

Fax: +33 1 45 68 58 11

E-mail : [a.szollosi-nagy@unesco.org](mailto:a.szollosi-nagy@unesco.org)**Mr Salvatore Arico**

Programme Specialist

Division of Ecological and Earth Sciences

UNESCO

1 rue Miollis

75015 Paris

France

Phone: +33 1 45 68 40 01

Fax: +33 1 45 68 58 04

E-mail : [s.arico@unesco.org](mailto:s.arico@unesco.org)**Ms Lisa Hiwasaki**

Assistant Programme Specialist

Division of Water Sciences

UNESCO

1 rue Miollis

75015 Paris

France

Phone: +33 1 45 68 40 29

Fax: +33 1 45 68 58 11

E-mail : [l.hiwasaki@unesco.org](mailto:l.hiwasaki@unesco.org)**Mr Guillaume Narnio**

HELP Secretariat

Division of Water Sciences

UNESCO

1 rue Miollis

75015 Paris

France

Phone: +33 1 45 68 39 54

Fax: +33 1 45 68 58 11

E-mail : [g.narnio@unesco.org](mailto:g.narnio@unesco.org)