

**Submitted by - International Water-related Associations' Liaison Committee (IWALC)**

**SCOPING PAPER FOR THEME VI, TOPIC 3**

**Using Professional Networks and Associations to Strengthen the Water Sector**

Theme	<b>6. Education, Knowledge and Capacity Building</b>
Topic	<b>6.3 Using Professional Networks and Associations to Strengthen the Water Sector</b>
Main Question	How can professional networks be encouraged to work more closely together to bring innovative solutions to global, regional and local water issues?
Related sub-questions	<p><i>Question 1 How can collaboration be enhanced between scientific networks and networks of professionals working in practice for better innovation at the national, regional and global levels?</i></p> <p><i>Question 2 How can professional networks be encouraged to look holistically at water issues?</i></p> <p><i>Question 3: How can professional networks contribute to national and international reforms in science, technology and knowledge?</i></p> <p><i>Question 4: How can professional networks help to build scientific and technological capacities in developing countries?</i></p> <p><i>Question 5: Could the water professional associations develop a global monitoring system to keep track of progress or of difficulties on water issues?</i></p> <p><i>Question 6: How can adequate financial and other support be obtained for the development of the technology needed to solve water problems?</i></p> <p><i>Question 7: What are the criteria (practice) for really successful partnerships that overcome the "gap" in power differences?</i></p>
<u>General introduction</u>	<p>Our scarce water resources are often managed wastefully. More efficient solutions are viable, based on thorough understanding and innovation provided through science, technology, and the expertise which professionals can bring to bear. Too often solutions to water issues are inappropriate. The traditional technocratic approach of dykes, concrete and steel can lead to solutions which may turn out not to be sustainable. A new balance between natural, economic and social functions is needed. This approach is much more difficult than the simplistic approaches of the past, requires a deep understanding of these functions, and calls for a knowledge-based, integrated approach in information gathering, modelling and decision-making. Decision-makers at government level will need to make informed selections among options which are frequently in conflict and uncertain. These decisions can be made in the best way possible if science, technology and knowledge benefits are harnessed. Water issues are global – but the solutions are local. In scientific terms, it is much easier to solve problems with dams, pumping stations and canals than to build with nature and people!</p> <p>In the complex modern world we seek to manage and consequently interfere with nature. But in the future the sequence of steps in our approach must change. Instead of our traditional approach of designing interventions and then looking at the possible effects, we must now define the system as desired with all its natural values, social</p>

and economic functions, then design the intervention that should bring about the desired results. This calls for difficult predictions, not only in terms of hydrology, hydraulics and morphology but also of social and ecological effects. The chain of professional disciplines involved means that complexity increase rapidly.

A new approach to strengthening the water sector critically requires education, knowledge and capacity building. To have any chance of success, this new approach must be founded upon the existing competencies and resources of the professional disciplines and - de facto - their representative networks and associations..

The professionals working in the water sector are grouped in a disjointed "patchwork" of local, national and international networks and associations – some of which are entirely focussed on water, but many others of which overlap with water (eg civil engineers, geologists or lawyers) and which usually represent one specific professional discipline. These professional networks and associations are generally well-organised and well established in themselves and provide a very effective medium for disseminating knowledge amongst their members through journals, magazines, books, training events, and meetings – but only in their specific regions and or disciplines ! These networks in the richer countries are close to their specific stakeholders, are well-established, and tend to be well-respected. They are mostly self-financing or nearly so. However, in the developing world professional networks and associations are much weaker and less-effective

If we are to implement a new sustainable approach to facilitate innovative solutions to water problems the water sector must embrace existing professional networks and and encourage them to develop more effectively.

*Resulting Main Question: How can professional networks be encouraged to work more closely together to bring innovative solutions to global and regional water issues?*

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Understanding of science and technology is an essential pre-requisite for making wise choices in the acquisition and utilisation of knowledge resources, which can then be deployed for the purposes of human development and welfare. The scientific community, and the university sector in particular, is often criticised for being out of touch with real issues. In many countries there are weak links between science enterprises and political/administrative institutions – which can result in the sidelining of science and education. At one time university research responded much more closely to the needs of practice. A professor of hydraulic engineering, might ,for example, be closely involved in applying the results of his research to the innovative design of a spillway structure. Over the last fifty years research has become more and more detached from reality, and researchers (and teachers) less in contact with needs. The journals in which research is published are read only by other researchers in that same discipline and rarely by professionals working in practice. The networks and activities which represent these different professional groups need to overlap more significantly to ensure an effective loop of useful innovations crossing into practice.

*Resulting Question 1 How can collaboration be enhanced between scientific networks and networks of professionals working in practice for better innovation at the national, regional and global levels?*

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As described in the introduction, a new balance between natural, economic and social functions is needed if present and future water issues are to be effectively resolved.. This approach is much more difficult than the simplistic approaches of the

	<p>past, requires a deep understanding of these functions and calls for a knowledge-based, integrated approach to information gathering, modelling and decision-making. Decision-makers at government level will need to make informed selections among options which are frequently in conflict and uncertain. These decisions can be made in the best way possible if science, technology and knowledge benefits are harnessed. To bring this about engineers and limnologists (for example) will need to be capable of communicating effectively with social scientists, geologists, geographers, lawyers; and their corresponding professional networks need to take the lead in bringing this about.</p> <p><i>Resulting Question 2 How can professional networks be encouraged to look holistically at water issues?</i></p> <p>-----</p> <p>A strengthened sustainable water sector in the future will depend on a reformed science and technological infrastructure. This will come about only if the scientists, practitioners working in the sector can justify, advocate and promote the role and importance of their disciplines to policy makers.</p> <p><i>Resulting Question 3: How can professional networks contribute to national and international reforms in science, technology and knowledge?</i></p> <p>-----</p> <p>The role of knowledge – expressed in a technological change with scientific basis and institutional innovation – is in the center of the development process. However, with regard to science, technology and knowledge, there is an ever-wider and growing gap between countries that are already developed and those that are on the way. Whilst high income economies invest heavily in higher education and scientific and technological research, most poor countries are at best users of technological advances borrowed from high income countries. Decisions and actions implemented in the water sector must be based upon the best (appropriate) science and best technology available, taking into account local factors. This requires much closer collaboration in developing centers of excellence in poorer countries, and, in particular, the active involvement of global networks of universities to build scientific capacities of poorer countries.</p> <p><i>Resulting Question 4: How can professional networks help to build scientific and technological capacities in developing countries?</i></p> <p>-----</p> <p><i>Resulting Question 5: Could the water professional associations develop a global monitoring system to keep track of progress or of difficulties on water issues?</i></p> <p>-----</p> <p><i>Resulting Question 6: How can adequate financial and other support be obtained for the development of the technology needed to solve water problems?</i></p> <p>-----</p> <p><i>Resulting Question 7: What are the criteria (practice) for really successful partnerships that overcome the “gap” in power differences?</i></p>
(Types of ) Organizations to be	<p>International Agencies: UNESCO, WMO, UN Water</p> <p>International Professional Networks: IWALC, FIDIC, World Council of Civil Engineers,</p>

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involved in topic consultations	World Federation of Engineering Organisations, IUCN, IPTRID National Professional Networks: ASCE/EWRI (USA), ICE (London), SHF (France) CHES (China), National CID National Centres of Excellence: UNESCO-IHE, WAREM, IWMI, DHI, Deltares Multilateral donors: World Bank, AFDB, ADB
Process of paper and session development:	<ol style="list-style-type: none"><li>1. Draft 1 of topic scoping paper to be sent to key institutions for comments</li><li>2. Improved draft to be placed on website</li><li>3. Improved draft with comments received to be discussed at the February coordinators meeting to:<ol style="list-style-type: none"><li>a. Agree on key questions</li><li>b. Agree on the topic document so that it can be placed on the Forum website</li><li>c. Agree on key stakeholders to take part in the development of the topic</li><li>d. Agree on consultation process: relevant meetings with key stakeholders</li><li>e. Agree on the process and actors to develop the forum session.</li></ol></li></ol>

### Session Development level

<b>Question 1.</b>	<i>1 How can collaboration be enhanced between scientific networks and networks of professionals working in practice for better innovation at the national, regional and global levels?</i>
<b>Statement 1</b>	Professional networks need to collaborate much more closely
	<p>Professional associations and other networks, especially in the developed world, are generally well-organised, well- established, and respected by their members. Many of these networks increasingly appreciate the need for a more holistic approach to their disciplines, but often suffer from a reluctance or inability to change. Examples of this include ever more specialist scientific journals, and long-established conference series.</p> <p>Proposed Actions</p> <p>Strengthen umbrella bodies such as the International Water Associations Liaison Committee (IWALC) by creating a professional secretariat based in UNESCO with a specific aim to facilitate greater network collaboration.</p> <p>Create IWALC Bluelines – “worldwide knowledge network of water research institutes</p>
(Types of ) Organizations to be involved in session consultations	<p>International Agencies: UNESCO, ICSU, FIDIC, UN Water Decade</p> <p>National Governments (min of science, public works)</p> <p>Professional Association(s) : IWALC ( members), overlap bodies AGU</p> <p>Professional Networks: CAPNET, NBCBN_RE, etc...</p> <p>Multilateral donors: World Bank, AFDB, ADB</p> <p>Related national organisations, NGOs and local civil society.</p>
Process of session development:	<ol style="list-style-type: none"> <li>1. Draft 1 of session description to be sent to key institutions for comments</li> <li>2. Improved draft to be placed on website/included in announcements</li> <li>3. Call for session participation (March 2008) and selection of candidates</li> <li>4. Collaborative work to develop sessions, with or without resource base assistance</li> </ol>

First Draft C.B.George/IAHR 30Jan2008

### Sources:

2003 Solutions Through Innovation, IWALC Position Statement, WWF2, Kyoto, Japan

2003 Education, Training and Capacity Building, Challenges of the Learning Society of the Water World. Keynote Address, Janus Bogardi, 30th IAHR Biennial Congress, Thessaloniki

2006 Baseline Document, Transverse Perspective D, Science and Technology, WWF4, Mexico

2006 Notes on Water Research Institutes Directors’ Meeting, WWF4, Mexico (Bluelines)

2007 Restoring and Protecting New Orleans and Coastal Louisiana: Harmonizing the Efforts of Engineers, Scientists, Politicians and the People. Keynote Address G.E.Galloway, 32<sup>nd</sup> IAHR Biennial Congress, Venice, Italy

Fifth World Water Forum, Istanbul, Turkey, 2009

2007 WWF 5 Thematic Coordinators Meeting Group 6 Report

2008 Key Topic Questions: Input for the Development of Forum Sessions