

**World Water Forum V
Istanbul, 16-22 March 2009**

**Revised Scoping Paper for
Theme VI - Education, knowledge and capacity development,
Topic 6.1 – Education, knowledge and capacity development strategies.**

**Topic Coordinating Group^a
Second Draft of 12 March 2008**

‘Bridging Divides for Water’ - the overarching theme for the 5th World Water Forum - means connecting stakeholders, sectors and regions¹. The theme involves water users, decision makers, the public and private sectors, water experts and practitioners as well as community organizations at national, regional and global levels. Water stakeholders should more and more cooperate with actors from other sectors such as health, education, agriculture and energy to strengthen the key role of water as an essential interlinkage for the achievement of all MDGs. It means connecting cultures, rich and poor, developing and developed regions of the world and especially the present with emphasis on intergenerational equity.

The programme framework for the forum identifies one overarching theme ‘Bridging divides for water’, 2 issues, 6 themes and 22 topics. The topic ‘Education and capacity building strategies’ is one of three making up the theme ‘Education, Knowledge and Capacity Building’ that is one of three themes in the issue of ‘Enabling Mechanisms for development’^b.

This note serves to explore a number of recent documents, to grasp the present-day issues and challenges and to identify the main question and a number of sub-questions that will steer the preparatory process and ultimately guide the sessions on the topic ‘Education and Capacity Building Strategies’ during the upcoming World Water Forum in Istanbul.

Reconnaissance of recent documents

The thematic document on capacity development and social learning that was prepared for the IVth World Water Forum² states that with the establishment of the Millennium Development Goals (MDGs) and the launching of the United Nations’ International Decade for Action ‘Water for Life’ on World Water Day 2005, pressure is increasing to show definitive progress in implementing commitments towards poverty

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^b Authors propose that theme VI be re-named ‘Knowledge and Capacity Development’ and topic 6.1 be named “Knowledge and Capacity Development Strategies”

reduction and environmental sustainability. As such, actions to reduce poverty shall directly be addressed in sub-sectors such as irrigation and water for agriculture, water supply, education, sanitation and human settlements. Yet, other sub-sectors such as hydropower might have a strong influence in poverty reduction by means of increasing the economic capabilities of local communities. All stakeholders are looking for ways to contribute in a measurable and sustainable fashion to the MDGs.

The paper states that it is clear that lack of technology or even funding are no longer the main obstacles to making progress in terms of the MDGs. The real bottleneck lies in the capacity or the lack thereof to address the problems faced in an effective and sustainable way over a period of time. The need for increased capacity in many developing countries also needs to be understood in terms of the paradigm shift that is taking place in the water sector towards:

- Decentralization of responsibilities,
- More attention for the management and O&M of water systems,
- Demand driven decision processes,
- Stakeholder involvement at all steps in the planning and monitoring processes,
- Orientation on improved water service delivery, cost recovery and efficiency.

Throughout the different sub-sectors, a number of actors such as suppliers, communities, user associations, governments at regional, national and local levels, universities, UN agencies, NGO's, and some networks and partnerships among these actors in both the South and the North are working to find solutions to these mandates. Each one possesses a part of the puzzle.

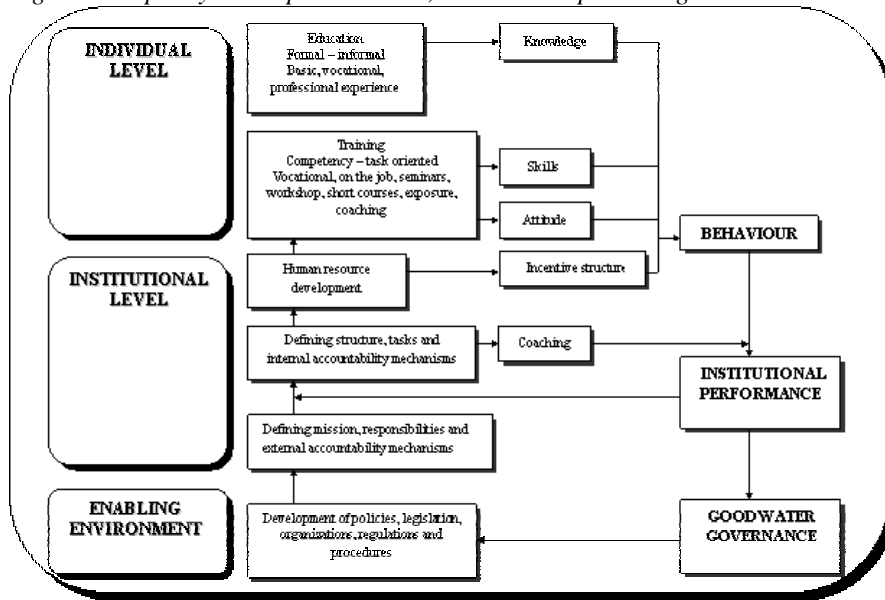
Capacity development is not new on the agenda. Also in the former International Water Supply and Sanitation Decade (1981-1990), capacity development was identified as an important factor. Significant insights and expertise have been acquired over the last few years. A variety of schools, approaches and methodologies have been developed and applied. Today, the broad umbrella of capacity development covers tools such as gap analysis of organizational systems and functions, strategic visioning and planning, (vocational) training and human resources development, leadership development, financial management and results orientation. It also includes activities related to networking, service delivery models, social accountability, ICT & development, learning processes and the learning organization, regulatory frameworks, institutional rules and reform and improved policy environments. Also, it was acknowledged that the new strategy for capacity development needs to be developed, reflecting local ownership, partnerships and demand responsiveness.

The main components of capacity development programs are³:

- (1) the creation of an *enabling environment* with appropriate policy and legal frameworks;
- (2) *institutional development*, including community participation,
- (3) *human resources development* and the strengthening of managerial systems.

These three components of capacity development, their activities, outputs and goals are described in figure 1⁴.

Figure 1. Capacity development: levels, activities outputs and goals



The messages that were identified in the above referred contribution on capacity building and social learning to the Fourth World Water Forum in Mexico City in 2006 included the following:

1. Capacity development is also about developing adequate incentives and the enabling environment while identifying and responding to needs of marginalized groups.
2. Capacity development requires a holistic and integrated approach.
3. Investing in capacity will pay off in the long-term.
4. Capacity development actions require knowledge management systems to encourage exchange and dissemination.
5. Capacity development actions in the water sector need to be scaled up.
6. Gender mainstreaming is of particular relevance in capacity development programs.
7. Capacity development actions need to support emerging actors in water management with particular regard to the local and intermediate levels.
8. Capacity development actions should shift to more locally owned and implemented actions.
9. Developing the adequate incentives and institutional and human capacity among farmers is essential.
10. Capacities to reduce the exposure to risks in the future must be built now, involving both specialists and the public.

With “Local Actions for a Global Challenge” as its overarching theme, the 4th Forum highlighted the importance of local knowledge for solving local water issues. Recently, this knowledge has received greater attention, owing to a number of unsuccessful attempts to implement technologies, which failed to pay proper attention to local conditions and knowledge. However, research and development still remain important for innovative technologies, and the decision now focuses on the proper mix of traditional, technological and scientific knowledge.

Capacity development is a key element for successful knowledge dissemination, and significant progress was made at the Forum in awareness raising and mobilizing decision makers and stakeholders on its crucial role. In this perspective, the role of networks and partnerships was strongly emphasized during the Forum, such as capacity-development networks, scientific networks, river basin interdisciplinary networks, national, regional or global networks, livelihoods based networks and so on.

The Forum⁵ concluded that:

- Science and technology development requires an appropriate environment
- The main objective of the transfer of technological know-how should be to improve local autonomy
- Local knowledge also needs to be replicated elsewhere
- The use of local and traditional knowledge should be evaluated before adopting and adapting technologies
- A proper mix of science, technology and local knowledge is required
- Capacity-development is the key to moving from knowledge management to knowledge development
- Networks and partnerships are important knowledge tools

The second World Water Development Report⁶ argues that an adequate knowledge base must be available to the water sector worldwide in order to understand and deal with current changes. Besides data describing the state of water resources and their management, there is an urgent need for good applied research to generate knowledge on the current challenges facing the water sector and to collect and share the existing experiences of communities as they develop capacity. Because the knowledge base must also address the socio-cultural and economic processes that feed into all levels of capacity, factors related to collective learning processes, and democratic participation and empowerment must also be taken into account, requiring knowledge acquisition covering areas far beyond those concerned solely with the state of the resource.

Enhancement of knowledge and local capacities is needed to fill the gap between the current state and the desired sustainable solution. Success in water development can only be achieved when local capacities have been enhanced to address the context-specific water-related problem.

It is widely acknowledged that greater efforts are required to understand the complex processes of change within all levels of development. While case studies, working papers, reports, manuals, best practices, guidelines, and the like are all valuable sources of knowledge, comprehensive cross-country comparisons of existing knowledge and capacity are needed as are analyses of capacity development initiatives undertaken in the past. Today, little data is available to allow the identification of national capacities to address development problems specific to water.

The report contains the following key messages on capacity development:

- Self-assessments of knowledge and capacity needs are urgently required,

- It is essential that the knowledge base of capacity development be enhanced and that the capabilities of national statistical agencies are improved,
- Increased access to education at all levels through information and communication technologies is a cornerstone to development,
- Knowledge requires continuous investments to enable society to adapt to an uncertain future generated by climate change,
- The capacity of water management institutions should be increased.

The International Symposium Water for a changing world: enhancing knowledge and capacity (2007) reports⁷ that investments in Knowledge and Capacity Development (KCD) pay off. Recent evaluations have demonstrated that development projects in the water sector are now decidedly more effective and sustainable than, say, before the mid-nineties. This can be attributed for a large part to stronger institutions, better governance and more technical and managerial competence in the developing countries whose capacity has been strengthened. Several studies on irrigation have shown that the best return on the investment in canal improvement is achieved when a substantial effort is also placed in capacity development –including empowerment– of irrigators and government officials.

The symposium concluded that further strengthening of stakeholders is required and should consist of following approaches:

- Build on existing knowledge
- Raise awareness
- Promote integrated approaches
- Transform organisations to make them more effective
- Reform the water sector
- Build learning networks
- Target and encourage leader and champions
- Share information and knowledge

The Symposium had five policy recommendations:

- Capacity and knowledge development require long-term time horizons
- Developing countries must become more independent in their own problem-solving
- Capacity development is a goal in itself, not just a tool
- Start early: at primary school and beyond
- Make knowledge and capacity development more effective

Present-day Context and Challenges

The world is in a state of accelerated change. Over the past two decades the world's population has grown by two billion people, and most of them are poor. By 2030 nearly 60% of the population in developing countries will live in urban centers - the engines of job creation and economic growth. These sprawling settlements are rapidly changing the land use in the watersheds, especially the river flood plains, and thus exacerbating floods. People are demanding more clean tap water and sanitation that works. Improving the

often weak urban water systems in developing countries will become increasingly critical.

All easily available water resources are now in use, so responding to increased demand for water now implies intense competition. With such large numbers of people and economies increasingly dependent on water, the new uncertainties and risks created by *climatic variability* pose a special challenge. By 2025 the number of people facing water scarcity is projected to double. The impacts on food production, health and livelihoods are still unclear, but it is sure that many communities will suffer from strong negative effects.

Our water systems and policies must be re-designed with the specific objective to enhance their resilience against climate change and the other global changes. To achieve proper water resource management, coordination between institutions must be deepened and more structural capacity developed. It also follows that awareness raising and education for all stakeholder groups from local communities to politicians must be well-targeted and sustained. Integrated water resources management (IWRM) must take into account the specific conditions of each situation. It is contextually shaped through dialogue and stakeholder involvement in order to encompass the different dimensions of sustainability (ecological, biophysical, economic, social and institutional). Thus, effective IWRM is knowledge-intensive. It cannot be imposed from outside and will require a slow incremental and patchy process.

But the knowledge and institutional capacity of many countries to readily “absorb” all of these funds remain severely constrained--that is, key stakeholders are unable to rapidly bring to the table concepts and designs for projects and investments that are economically and socially robust and sustainable, and can be properly implemented, operated and maintained. The weakness in knowledge and capacity is becoming therefore the key constraint to sustainable development.

Issues and Questions

We recognize the following issues and divides:

Some countries already enjoy a strong knowledge base and educational system, and a public administration system that has a good performance, is capable of looking into the future and incorporating lessons learned. But many, poorer countries, have not yet caught up developing such strong capabilities, and they probably will find it increasingly more difficult to catch up, leaving them unprepared and very vulnerable to changes.

Across the world but especially in some of the developing countries, large numbers of the poor remain disenfranchised and lack access to water services, resources and education. They are unable to influence political decision-making, and are not assisted with development of their local capabilities.

Water is an open-access resource, and access and abuse are difficult to control. We see a growing divide between rational policies - as exhorted by national governments and at international fora where well-educated people meet - and the often harsh realities in the field.

The translation of good policy into effective and equitable action by a capable civil service and an engaging civil society, remains elusive.

Globalization is a reality that on some counts pushes poor and industrialized countries farther apart, but at the same time offers the avenues to better disseminate and share knowledge and reduce the divide between rich and poor countries.

We propose the following questions:

Main Question: How can knowledge and capacity development be (better) used so that all stakeholders can contribute, have equitable and meaningful access to, use and benefit from the vast and fast growing body of knowledge and experience on the water sector?

Question 1: What "Capacity" are we looking for?

From intuition and by experience we recognize that capacity is necessary for a healthy and sustainable water sector - but what kind and size of capacity should we be looking for? What are features or indicators for a "healthy" capacity? And what would be benchmarks to attain that would ensure "healthy" capacity, so that we would be able to assess current capacity and its gaps as compared to these benchmarks? We want to derive guidance from cases and examples, taken from countries' experience, studies, experience of local communities, or other sectors?

Question 2: How can capacity be created or utilized to foster and implement reform?

In an ever-changing world, water sector organisations need to re-invent themselves or reform to remain effective. Private firms have a lot of experience with the drive to continually restructure to keep offering relevant products or services. How can we develop a large, applied and accessible knowledge base available to water sector stakeholders, on institutional arrangements including public, private and community management, sector reform including legislation and regulation, organisational design, change and key processes such that water organisations can be put in place that keep providing high quality services at a minimum cost? Can capacity assist in facilitating change processes in these organizations? Do we have helpful examples from countries, or from the corporate sector.

Question 3: Climate and other change force us to make better forecasts for future events - what kind of knowledge development system is required, and how can we ensure all countries develop these to improve their preparedness?

What capacities and resources are required to allow us to identify at an early stage significant external change factors, and subsequently prepare and respond to these? Simulation models and scenario analysis are rapidly becoming essential tools for

decision making, however, they require a solid scientific capability and strong communication across the sector. The sector - government agencies, NGOs and civil society - need to learn from the past and from experiences elsewhere.

Question 4: Each and everyone is a stakeholder in water management and daily takes decisions on water use. Good governance is essential to achieve an overall effective water management, but how can knowledge and capacity be shared within this extensive network of actors?

We will discuss how education and capacity development can be (better) applied so that all stakeholders can contribute and have equitable and meaningful access to, and benefit from the vast body of knowledge and experience on the water sector in the world?

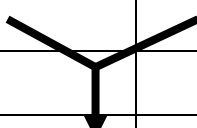



Question 5: Given the challenges, what are the new powerful tools in knowledge-sharing, education and capacity development?

We will be discussing recent advances and case reports, educational tools, networking, interactive platforms for dialogue and negotiation, the driving role of Information and Communication Systems, etc.

Results from the Istanbul Coordination Meeting, 7 and 8 February 2008 Sessions, Questions, Placeholders, Coordination, Interested parties and Follow-up

The main issues and related questions were debated in Istanbul during the Second Coordination Meeting on 7 and 8 February 2008, on the basis of the above text that was prepared and presented by the UNESCO-IHE Institute for Water Education. The participants supported the proposal to re-name topic 6.1. as “Education, Knowledge and Capacity Development Strategies’, and requested that the title of Theme VI be adjusted accordingly.

Sessions and questions: The participants identified the following issues for topic 6.1.: (i) Capacity assessment, (ii) Capacity development approaches and tools, (iii) Response to external pressures such as climate change, and (iv) Knowledge management. In addition four levels were identified for capacity development: a) the Institutional level, b) the Organisational level, the level of c) the Individual, and that of d) Children and youth. The participants concluded that under topic 6.1. four sessions were to be organized, one for the issue on (1) Knowledge Management and three sessions directed at (2) the Institutional level, at the levels of (3) Organisation and Individual and at the level of (4) Children and Youth, as shown by the arrows in the following table. Where session 1 will cover knowledge management for all levels, sessions 2, 3 and 4 will address the issues of capacity assessment, approaches and tools and response to external changes.

Level \ Issue	Individual	Organisational	Institutional	Children and Youth
Capacity assessment				
CD approaches and tools				
Response to External changes	Session 3		Session 2	Session 4
Knowledge Management				

The Main question for topic 6.1 is: ‘How can knowledge and capacity development be (better) used so that all stakeholders can contribute, have equitable and meaningful access to, use and benefit from the vast and fast growing body of knowledge and experience on the water sector?’

The tentative titles and leading questions for each of the sessions were discussed and resulted in the following:

For session 1: title ‘Knowledge for all, all for knowledge’ and question: ‘What interactions are needed to ensure that scientists are working on the priority issues from the ground and what are appropriate systems for sharing and making newly gained knowledge available?’

For session 2: title: Plugging that hole in the bucket?.....(institutional)..... and question: ‘What institutional capacity development is necessary to provide appropriate policy and legal frameworks and how do we ensure that capacity development reflects local needs?’

For session 3: title:(organisation and individual).....and question: ‘What organisational and individual capacity development is necessary to enhance the performance of service delivery and how do we ensure that capacity development reflects local needs?’

For session 4: title: ‘Action Education / Bridging divide for future generation’ and question: ‘How can children, youth and educators in schools and communities make a difference in reducing the impact of major water problems?’

Placeholders: Discussions took place on a number of issues and questions that need to find their place in the further development of topic 6.1. These include the notions that:

- a definition of the institutional level is required and will include the rules of the game (legislation, regulation, conventions, beliefs, mandates) and those who set and enforce these rules (politicians, government and non-executive departments)
- the ‘stakeholders’ include all levels that are distinguished above (i.e. institutional, organisational, individual, children and youth, and including the grassroots level and the major groups);

- the capacity development tools include awareness raising, formal and non-formal education and training, lifelong learning for all ages and include the notions of targeted and action oriented capacity development;
- water education is not the exclusive domain of the Science teacher at school. Water education must be addressed from all subjects or disciplines (from Law to Literature or Math), at all levels, and shall be reinforced by non formal education;
- the efficiency of investments in capacity building have to be evaluated. Even if resources are available to support capacity-building efforts, it is not known whether this has always been beneficial for lack of a concrete assessment on the use of tools acquired.
- effective capacity development includes the conversion and dissemination of knowledge for specific target groups and that these groups have their own 'language'; also, that it is important to document successful cases;
- there is a need to organize and develop systems for the transfer and sharing of knowledge, data and information between capacity builders that transcends local, national, regional and continental levels;
- demand and supply of capacity development is not always balanced and that supply needs to follow demand; and also, that the development of capacity is much behind the requirements brought about by the Millennium Development Goals;
- the institutional and organisational levels require changes in strategy, structure, culture, procedures and incentive systems, in addition to staff training, to become really effective;
- scientists need to respond to demand, i.e. the real questions from the ground; that it is not only scientists that develop relevant knowledge and also, that there is ample indigenous knowledge that must be tapped into and shared.

The issue of capacity assessment was discussed in some detail and the following question was formulated:

- How do we ensure that capacity development reflects local needs?
- How do we assess capacity needs?
- How do we assess existing capacity and ensure that capacity development compliments this?
- How do we ensure all stakeholders are involved in this assessment?

Coordination: The matter of coordinating the activities for topic 6.1. was discussed and it was decided that both at topic and session levels the coordination will be undertaken by a partnership to ensure regional balance and equity (and in particular gender balance). The following arrangement was proposed and endorsed by the participants:

Item:	Organisation:	Person:
Theme VI	UNESCO	Mr. Andras Szollosi-Nagy
Topic 6.1	UNESCO-IHE Women for Water Partnership	Mr. Richard Meganck Ms. Kusum Athukorala
Session 6.1.1	Office International de l'Eau GWP West Africa	Mr. Daniel Valensuela Ms. Mame Dagou Diop

Session 6.1.2	UNW-DPCD Arab Water Council	Mr. Reza Ardakanian
Session 6.1.3	UNESCO-IHE Women for Water Partnership	Mr. Maarten Blokland Ms. Kusum Athukorala
Session 6.1.4	WET project IMTA	Mr. Dennis Nelson Ms. Rita Vazquez (IMTA)

The participants have proposed that UNESCO as Theme Coordinator considers the institution of a “House of Knowledge’ during the WWF5, at their stand at the fair. At this venue a continuous programme of activities can be organized including the presentation of relevant materials, video presentations, poster and training sessions, presentations and demonstrations, informal debates, etc..

Interested parties: Further to the above many of the parties present or represented expressed the wish to be further involved with the development of the topic. The names of the organisations and their expressed interests in the various sessions are shown in the table below.

	Session 1: Knowledge management	Session 2: Institutional level	Session 3: Organisation al and Individual	Session 4: Children and Youth
Arab Water Council		√		
AWIS (Africa Water Info. system)	√			
Bugday Association		√	√	
CapNet	√		√	
CapNet Pak (Pakistan)		√		√
Doga Dernegi (Turkey)			√	√
EMWIS (Meditt. Water Info. syst.)	√			
GEF/IW-Learn	√			
GEF/other programmes, to be named		√		
Green Water Belgium				√
Intern. Secr. for Water (Can)	√			√
International Office for Water (F)	√			
InWent (BMZ-Germany)		√		
IWRM-NET programme	√			
Knowledge Management Hub Asia	√			
Korea Water Forum (KWF)				√
Mike Muller		√		
Min. of National Education (Turkey)				√
Pakistan Water Partnership				√
Stakeholder Forum			√	
Striver programme	√			
Thimun (Youth Net)				√
Tokyo MIZC				√
TUNZA (UNEP)				√
TWCA (Turkish Women Cult. Assoc.)			√	√
UNESCO-IHE	√	√	√	
UNW-DPC		√	√	
Wageningen Int'l	√	√	√	
WET project				√
Youth Action for Change				√

Follow-up: Our agenda is:

1. To get communication going on WWC electronic platform (from 19 February onwards);
2. To get more precise dates for the required completion of the various activities below;
3. To revise the present paper with inputs from the Istanbul meeting (revise, circulate for comments to session coordinators, post on electronic WWC platform for further comments, finalize by mid March 2008);
4. To develop a paper on the topic of 'education, knowledge and capacity building strategies' that will serve as the leading document for the sessions and to which contributions can be invited from all interested parties (to be printed by December 2008);
5. To come up with session titles (in time for the 2nd announcement);
6. To prepare complete session designs including title, session consortium, type of session, speakers, panel, etc.. (in time for 3rd and final announcement);
7. To complete detailed preparations for the sessions (end of 2008);
8. To run the sessions during WWF5 (March 2009).

¹ 5th World Water Forum Secretariat, (2007). *5th World Water Forum: First Announcement*. Istanbul.

² UNESCO-IHE et al, (2006). *Cross-cutting Perspective C: Capacity Development and Social Learning*. Thematic Document, 4th World Water Forum, March 2006, Mexico City.

³ Alaerts, G.J., Hartvelt, F.J.A. and Patorni, F.M. (eds), (1996). *A Strategy for Water Sector Capacity Building*. UNDP/IHE, New York/Delft.

⁴ Van Hofwegen (2004). *Capacity-building for water and irrigation sector management with application in Indonesia*. Capacity Development in Irrigation and Drainage Issues, Challenges and the Way Ahead. FAO Water Reports, 26. FAO, Rome.

⁵ Martinez Austria P., van Hofwegen P. (eds), (2006). *Synthesis of the 4th World Water Forum*, Mexico City, 2006

⁶ UNESCO, (2006). *Water: A Shared Responsibility*. The UN World Water Development Report 2, UNESCO, Paris.

⁷ UNESCO-IHE (2007) *Water for a Changing World. Enhancing Local Knowledge and Capacity*. International Symposium. UNESCO-IHE, Delft.