World Water Forum V, Istanbul, 2009

Preparation for the proposed paper for
Theme VI - Education, knowledge and capacity building,
Topic 6.1 - Education and capacity building strategies.

First Note

UNESCO-IHE Institute for Water education
Delft, 1 February 2008

'Bridging Divides for Water' - the overarching theme for the 5th World Water Forum - means connecting stakeholders, sectors and regions[1]. The theme involves water users, decision makers, the public and private sectors, experts and water practitioners at local, national, regional and global levels. Water stakeholders should more and more cooperate with actors from other sectors such as health, agriculture or energy to strengthen the key role of water 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 the future generations.

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'[a].

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 Forum[2] 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 reduction and environmental sustainability. As such, actions to reduce poverty shall directly be addressed in sub-sectors such as irrigation, water supply, 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

[a] Authors propose that theme VI be re-named 'Knowledge and Capacity Development' and topic 6.1 be named "Knowledge and Capacity Development Strategies'

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.

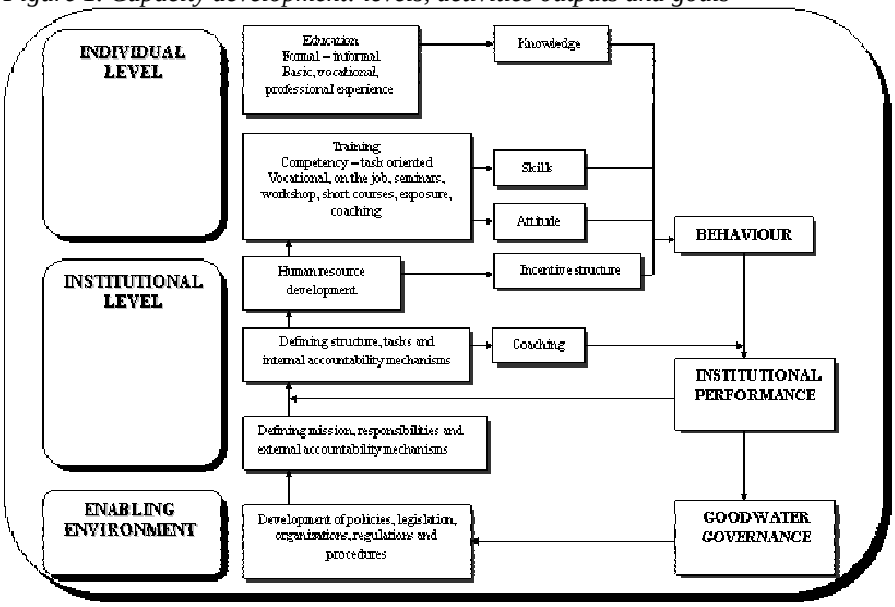
Capacity development is not new on the agenda. Also in the former International Water Supply and Sanitation Decade (1981-1990), capacity development was identified as an important factor. Significant insights and expertise have been acquired over the last few years. A variety of schools, approaches and 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, 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 are[3]:

(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 1[4].

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.
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, and so on.

The Forum[5] 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 Report[6] 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, and sSuccess in water development can only be achieved when local capacities have been enhanced to address the 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) reports[7] 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 independant 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 <u>issues</u> 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 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.

---

[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.