



**Networks in Action**  
capacity building for sustainable water management



## What is Cap-Net?

Cap-Net is an international Network for Capacity Building in Integrated Water Resources Management. It is a partnership of autonomous international, regional and national institutions and networks committed to capacity building in the water sector.

A UNDP project, Cap-Net is funded by the Dutch Ministry of Foreign Affairs, Sida and the EU and hosted by the Water Research Commission, South Africa. EU funds from the Water Facility support actions in Africa and the Caribbean.

## UNDP

Cap-Net falls within the Energy and Environment Group of UNDP and works closely with the Water Governance Facility. UNDP recognizes the key role of capacity building for integrated water resources management as an important means in promoting sustainable development and in combating poverty. Water is a subject that runs across the Millennium Development Goals and Cap-Net is a response to the critical dimension of capacity development.



# Commitment to capacity development

## Capacity building challenge and Cap-Net

Lack of capacity is a continuing challenge to all fields of development and water is no exception. Water is a major contributor to improved quality of life, good health, and opportunity for enhancing people's wellbeing. However, poor water management contributes to poverty, a low standard of living and poor health. Pollution, water scarcity and increasing climate variability contribute to competition for scarce water resources resulting in pressures for improved water resource management, more equitable distribution of the benefits and better water services.

The need for improved water management, adopting an integrated approach to water resources management (IWRM), is driving water sector reform in many countries and bringing capacity development to the front line of challenges. In addition, scaling up water supply and sanitation services in terms of efficiency and coverage to meet the Millennium Development Goals and serve an additional two to three billion people demands large investments in human resources.

The need is emerging for a more coordinated approach to capacity development, better and quicker sharing of experience and common strategies for tackling the issues. The Cap-Net programme is contributing to this coordination and sharing through its network approach described below.

Cap-Net provides a logical framework for scaling up capacity development in integrated water management and the strategy is built on three principles:

1. Local ownership. To the extent possible, capacity building must be delivered from the local resource centres. This achieves social and cultural relevance as well as sustainability.
2. Partnership among capacity builders. In a complex world skills are spread widely and must be assembled locally and even weak institutions have some great strengths. Partnerships build a critical mass, overcome resource constraints and can increase efficiency.
3. Response to demand for capacity building. Scaling up capacity building becomes possible not only through adopting local ownership and partnerships but also requires improved linkages between water stakeholders and capacity builders.

### *New Knowledge*

New knowledge to guide actions has been developed from case studies, network experience on the ground and supplemented by international experts. Keeping a practical approach in mind, real problems are addressed with a sound academic foundation as a start. A challenge is writing in a style that meets the needs of managers and helps knowledge to cross disciplines.



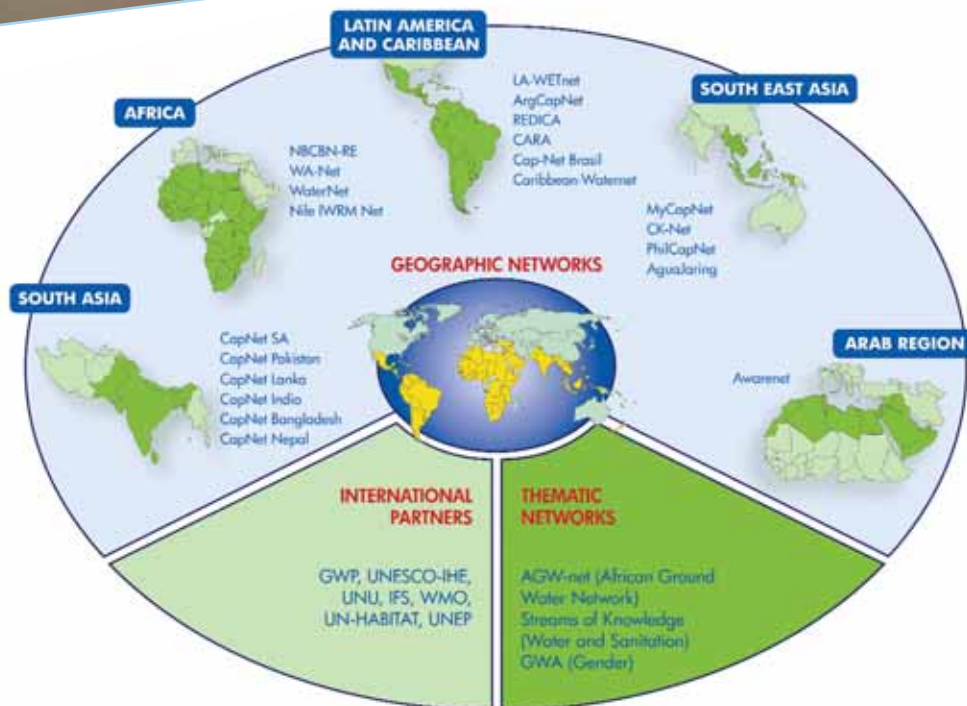
## Benefits from networks

The contribution of networks can be very significant to complement traditional capacity development activities. How have partnerships helped delivery of capacity building so far?

- More sharing and exchange of materials, case studies and information resulting in coordinated messages, economic efficiency and improved quality of information;
- Increased local ownership and control is leading to greater confidence, support and progress at the local level;
- Extended outreach by working in partnership is giving increased impact on the ground;
- Improved knowledge and competence of local capacity builders to address capacity needs;
- Increased relevance of training materials, translated and adapted at the local level;
- Networking has leveraged investment from local institutions, donors at the local level and international support.



# Building the global network



## Capacity building networks

- 21 capacity building networks and three thematic networks are in place linking hundreds of capacity building networks across the developing world.
- 3 networks have core project support from donors, others rely on seed funds from Cap-Net and voluntary time contributions from members for routine administration.
- Capacity building networks source funds from local donors or elsewhere to complement Cap-Net seed funding for capacity building actions. This strategy builds more partnerships and entrenches local ownership.
- Sustainability comes from anchoring knowledge in the members and the member institutions.
- Expertise for capacity building actions is exchanged across countries and regions to build network - network cooperation.
- Annual meetings of network managers strengthens global networking and commitment to action.
- The global network is strengthened by working with international partners. Joint activities between the partners and within the United Nations Development Programme family gives networks access to a broader audience as well as additional resources.

## Gender remains an issue

A gender tutorial and a gender resource guide have been developed by Cap-Net, UNDP and the Gender and Water Alliance. Gender, however, remains a marginal issue and the water sector remains dominated by male technical professionals. Having knowledge does not mean change will happen.

Cap-Net welcomes capacity building networks as partners and facilitates experience sharing and collaboration.

### Sharing and exchange

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Network management tools available on the Cap-Net website have been compiled from the experiences and practical examples of partner networks. They range from guidelines for establishing a network to advice for managing short training courses.

### Capacity needs

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In South East Asia AguaJaring and CK-Net (Indonesia) carried out training in capacity needs assessment for members in six countries who then returned home to carry out assessments

on the ground. Caribbean WaterNet used consultants to determine capacity needs in the Caribbean while Nile IWRMNet country coordinators are using an opportunity assessment methodology to identify the capacity needs that they are best equipped to respond to in the Nile basin.

Case studies can provide a solid foundation of evidence for capacity needs and this has been the basis for planning capacity development actions on water and sanitation in Latin America (LA-WETnet, REDICA, IIED) and on groundwater in Africa (WA-Net, WaterNet, Nile IWRMNet, BGR)

### Knowledge management

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Latin America has given knowledge management priority (LA-WETnet) with the development of a network strategy and



most networks are active throughout the knowledge management cycle (see fig). An information base is maintained on the Cap-Net website and at network level and communication within and between networks helps to keep members in touch.

The benefit of bringing network experts together for the development of training materials and strategies has been great. For example: Malaysia (Aguajaring), Sri Lanka (Cap-Net Lanka), Kenya (Nile IWRMNet) and Mexico (LA-WETnet) carried out case studies on River Basin Organisations, participated in a planning meeting and then assisted in the development of training materials on IWRM for River Basin

Organisations together with indicators to measure progress. The Global Water Partnership (GWP) and the European Union Water Financing Group (EUWFG) joined with networks (WaterNet, LA-WETnet) in the development of training materials on Economic and Financial instruments.

Actions for Climate Change Adaptation have been planned by REDICA, Nile IWRMNet, Cap-Net Bangladesh, CK-Net, AguaJaring, WaterNet, LA-WETnet and the World Meteorological Organisation/APFM. Such collaboration is a powerful tool for bringing relevant and practical knowledge together and forming the basis for scaling out with implementation on the ground in many countries.

#### [www.cap-net.org](http://www.cap-net.org)

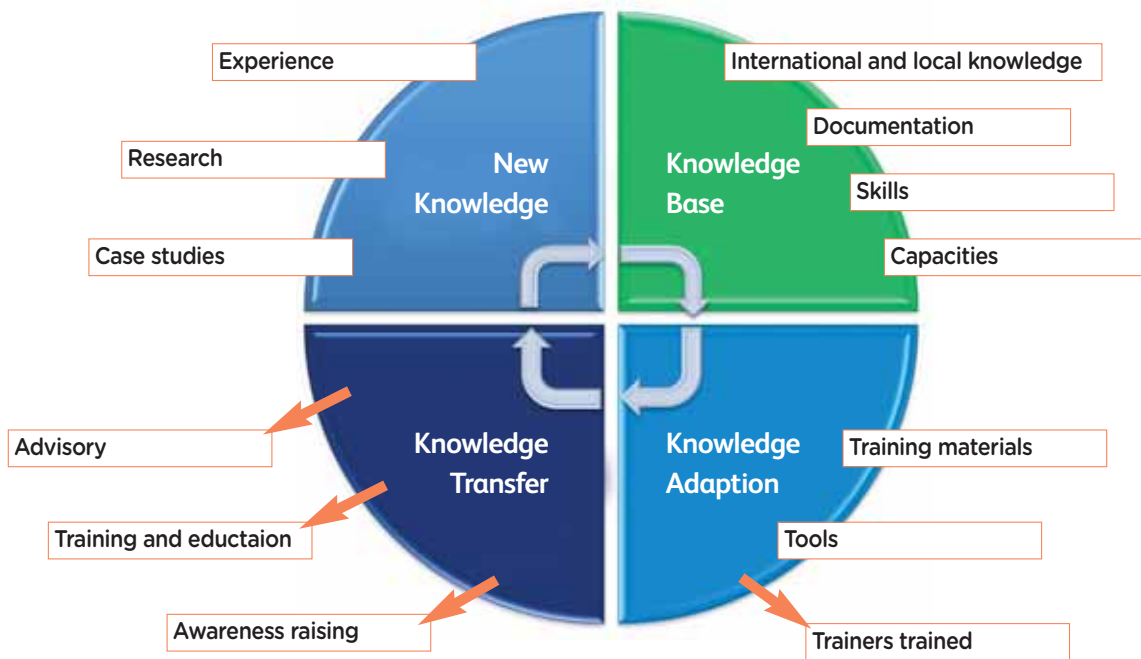
- The Cap-Net website is primarily a data base of integrated water resources management tools and training materials. An information source for capacity building networks and a communication tool for the global network.
- New training and resource materials are continuously uploaded. The site is becoming a reference point to find information and materials on capacity building for IWRM. Most of the materials are downloadable for use and adaptation to local training needs.

#### [www.cap-net-esp.org](http://www.cap-net-esp.org)

- The Spanish website is hosted and managed by the Latin America network, LA-WETnet, and has additional materials developed in the region.



# Cap-Net Knowledge Management Cycle



The Cap-Net Knowledge Management Cycle offers guidance to the affiliated capacity building networks to extend their knowledge base, develop and adapt programmes, transfer knowledge through capacity building delivery, and feed experiences and acquired knowledge back into the knowledge base. Understanding that Knowledge Management is a process that helps organisations to deliver on their objectives and to structure action leading to improved knowledge, the cycle encapsulates all stages of capacity building and forms a workable framework for focused delivery.



# On the ground

## Effective networks

The rationale of supporting capacity building networks for IWRM is to achieve action on the ground. However, networks have to operate effectively to be able to assemble skilled capacity builders and plan successful actions.

### Training of trainers

All new action areas in IWRM have a training of trainers' component. However, it is common practice to bring together trainers and practitioners because an important part of the learning by trainers is to understand the issues and realities faced by practitioners.

Recently much interest from networks has been in training their members (and practitioners) in economic and financial instruments for IWRM with courses being held in Mexico by Cap-Net and subsequently in West Africa (WA-Net), Southern Africa (GWP and WaterNet), East Africa (Nile IWRM-Net and GWP) Thailand (AguaJaring), Caribbean (Caribbean Waternet) and Colombia (LA-WETnet). This is a typical example of how

new materials and knowledge are scaled up over a short period of time.

### Research

There is a collaborative programme between the International Foundation for Science (IFS) and Cap-Net. Cap-Net Bangladesh, Cap-Net Lanka and REDICA have been working with IFS on training in research methodology and implementing research activities. Activities at the World Water Week give additional exposure to the research programme.

In the Nile River Basin NBCBN-RE provides an example of the effectiveness of communities of practice by linking up countries in 13 research themes ranging from floods to hydropower. Each research cluster is formed with four to seven countries enhancing the research skills and capacity in a particular topic in river engineering. Cap-Net Bangladesh has carried out research on gender vulnerability to natural water hazards as well as water and sanitation topics. Research is also a strong component of WaterNet in Southern Africa.

### Impact of the ToT programme

- Several hundred trainers trained with incorporation of knowledge into ongoing programmes and new courses;
- Materials being adapted and translated for use at local level;
- Knowledge, information and skills directly impacting in several regions with training of implementers.





### Communication

Dissemination of information, sharing, exchange of staff and experience, collaborating together are all characteristics of effective networks. Most networks have websites and the Cap-Net website acts as a central space for key resource materials on water resources management capacity building.

Regional meetings are important venues for sharing knowledge. WaterNet with GWP have held eight Annual Water Symposia bringing many young (and not so young) scientists together to present and discuss scientific papers around water. AguaJaring has worked with GWP in organising the South East Asia Water Forum and AWARENET has worked with the Economic and Social Commission for Western Asia at several regional meetings in the Middle East. Cap-Net SA organised, together with Arghyam Foundation, a regional meeting on ecological sanitation with the objective to develop a capacity building programme for the region.

### Capacity development

Addressing the huge capacity gap requires a scaling up in delivery of capacity building services. Networks don't replace

traditional service providers but are a catalyst for new ideas and new partnerships to address gaps and un-met capacity challenges. Cap-Net and partner networks are change agents and bring member expertise together where they can add value.

### IWRM

Hundreds of water stakeholders from community level to politicians are reached each year addressing a wide range of water management issues. While priorities differ from country to country there are common core messages and a large amount of regional exchange.

Gender and water continues as an important subject with five courses recently held. Four were regional covering 10 countries in West Africa (WA-Net), eight countries in South East Asia (AguaJaring) 12 countries in the Middle East (AWARENET) and the Caribbean countries (Caribbean Waternet). A national level course was held in Argentina (ArgCap-Net).

Climate change is gaining increasing attention. Networks have already been addressing climate issues for several years, particularly in the context of urban and community flood

#### *In 2007 Cap-Net partner networks:*

- carried out over 40 training events;
- reached over 1 800 participants; and
- assisted over 70 countries.

management (Cap-Net-Brasil, REDICA, CK-Net, Nile IWRMNet, Cap-Net Bangladesh). Combining this expertise in collaboration with the Associated Programme on Flood Management of World Meteorological Organisation (WMO) and providing the linkage with water resources management has strengthened the global network approach on adaptation to climate change.

Many more issues are being addressed on a regular basis or under development, such as:

- Conflict resolution and negotiation skills;
- Legal and institutional arrangements for IWRM;
- Groundwater management;
- River basin organisations;
- Water integrity.

### Water supply and sanitation

STREAMS of knowledge, LA-WETnet, Cap-Net Brasil, REDICA, Cap-Net Bangladesh and Cap-Net SA have been leading the way with studies and actions on water supply and sanitation. In Africa a focus on water utilities (WA-Net, Nile IWRMNet, WaterNet, STREAMS of Knowledge) has explored the linkage to water resources management and capacity building actions have been developed in partnership with UN-HABITAT and the Global Water

Operators Partnership as well as the Africa WOP. Strengthening the collaboration between utility training institutions and peer to peer learning are strategies being adopted to assist utilities improve services delivery and reduce negative impacts on water resources.

### Training and education

Composed of capacity building institutions such as universities, several regional and country networks have engaged in developing educational programmes on IWRM. WaterNet, ArgCap-Net, Cap-Net SA, MyCap-Net and CARA have developed MSC programmes in IWRM with different modes of instruction. The programmes in Malaysia and South Asia are mainly internet-based distance learning programmes, whereas in southern Africa and Argentina the instruction is classroom based with students and teachers commuting between the participating institutions.

Some networks are active in developing programmes for schools through teacher training programmes. LA-WETNet partnered with Project WET and educational authorities to start a teachers' training course. WA-Net has similar plans for West Africa. Cap-Net Lanka member institutions visit schools to deliver guest lectures on IWRM and related topics.



### Open source

The Cap-Net website makes all training and information materials freely available for download and adaptation to meet local needs. This open source approach improves efficiency and assists networks and practitioners in the development of a common platform of knowledge and practice.

# What's new?

Cap-Net and our partners have been promoting the concepts of integrated water resources management (IWRM) for several years. Many countries have changed their water laws and changed structures to take on board the IWRM principles of economic efficiency, social equity and environmental sustainability. These principles are widely accepted but they cannot be achieved overnight or in one drastic sector reform. They require many small steps, but in the right direction. Capacity challenges emerge when taking the principles into implementation and focusing on sustainable development. Cap-Net has been taking the lead to assemble experience and good practice in these challenging areas.

## Some new issues

Groundwater: Following case studies conducted in East, West and Southern Africa by Nile IWRMNet, WA-Net, and WaterNet in collaboration with the German BGR it is clear that

groundwater is being left behind in water sector reforms and there are large capacity needs. Groundwater experts across Africa have formed a capacity building network, AGW-net, to start addressing the problem.

IWRM and River Basin Organisations (RBOs): Case studies showed that new organisations to manage water at the river basin level are struggling to make progress (LA-WETnet, Nile IWRMNet, Lanka Cap-Net, AguaJaring, UNESCO-IHE). Cap-Net has taken the initiative to develop indicators to measure water resources management at river basin level and the indicators have been used as the basis of a training course for RBOs.

Water supply and sanitation: Improving water resources management cannot be achieved without working with the main water users. Work with utilities started with training utility managers in the Caribbean (Caribbean WaterNet) and has continued with case studies in Africa and is being followed by



promoting better water management in utilities through the Water Operators Partnership and working with UN-HABITAT.

Climate change: Droughts and floods are already with us and are an essential part of water management. An expected increase in frequency and intensity of water related manifestations of climate variability emphasises the need to address impacts and drivers in water management. Bringing together various water management skills under the umbrella of climate change helps to build adaptation skills and prepare for an uncertain future. Learning and exchanging experience on floods and drought from partner networks in Bangladesh, Brazil, Kenya, and Indonesia is underway. New programmes

on IWRM and Climate Change Adaptation are underway with REDICA, the World Meteorological Organisation, UNESCO-IHE and others.

Water integrity: Together with UNDP Water Governance Programme, SIWI and WaterNet, Cap-Net has engaged in mapping measures that have been taken in SADC to improve transparency in decision-making and fight corruption in the water sector. The collaborative programme will now focus on the development of a training programme and package based on conceptual grounding in the area of integrity and accountability, introduction of tools and methodologies, and provide examples of good practices.



### **Measuring impact**

Measuring impact of capacity development activities is difficult. As first steps Cap-Net has developed a Monitoring, Evaluation and Learning (MEL) Plan. Gradually implemented, it is improving data collection and analysis and provides a framework for more effective follow up of activities to assess outcomes.

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### AGW-net – African ground water network

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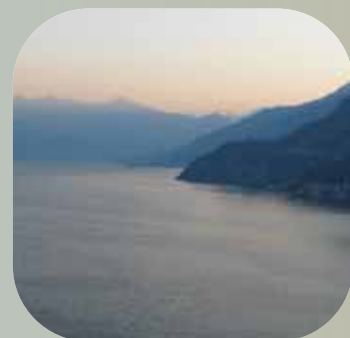
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**Training packages**

Several training packages supported by PowerPoint presentations in several languages are available from Cap-Net.

- Economics in Sustainable Water Management,
- Legal and regulatory framework for IWRM
- Integrated Water Resources Management for River Basin Organisations
- Integrated Water Resources Management Planning
- Water Resources Assessment in Ungauged and Data Scarce Basins
- Conflict resolution and negotiation skills.

[Check the website for these and new products.](#)

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