

# GWP in action



2004

The Global Water Partnership (GWP), established in 1996, is an international network open to all organizations involved in water resources management: developed and developing country government institutions, agencies of the United Nations, bilateral and multilateral development banks, professional associations, research institutions, non-governmental organizations, and the private sector. Its mission is to support countries in the sustainable management of their water resources.

Through its network, the GWP fosters integrated water resources management (IWRM). IWRM aims to ensure the coordinated development and management of water, land, and related resources in order to maximize economic and social welfare – without compromising the sustainability of vital environmental systems. The GWP promotes IWRM by facilitating dialogue at global, regional, area, national and local levels to support stakeholders in implementing IWRM.

The GWP network works in 14 regions: Southern Africa, Eastern Africa, Central Africa, West Africa, the Mediterranean, Central and Eastern Europe, Caribbean, Central America, South America, Central Asia and the Caucasus, South Asia, Southeast Asia, China and Australia. The GWP Secretariat is located in Stockholm, Sweden.

#### ACKNOWLEDGMENTS

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# Chair report

**W**ater problems – floods, droughts, shortages and irregular service to agriculture, industry and cities – hinder the ability of countries to prosper and develop. Without development and without growth it is improbable, if not impossible, to reduce poverty. Water is a vital resource need for poor people. Water for livelihoods. Water to grow food. Clean water to prevent disease transmission and reduce the number of days that illness pulls women away from productive labor.

The Millennium Development Goals (MDG) intertwine with the need for better managed water on all levels. In the year under review, the GWP's focus shifted into vigorous promotion of improved, more strategic and investment-oriented national water resource management, as well as the broad participatory processes required to build support for this type of change.

At the global level, the Millennium Development Reports endorse the critical importance of water and of more strategic approaches to water planning and management. The Committee on Sustainable Development meeting last year endorsed the Integrated Water Resources Management (IWRM) approach. Meeting after meeting underlines that progress is essential.

And there is progress. Around the globe, at workshops and sessions with governments and stakeholders, options are discussed, linkages explored, financial issues pondered, the water needs of agriculture and the environment talked through, argued about and fought over. This is core GWP work, the essential precursor to change in policy and practice.

During the year, more than eighteen governments asked the GWP country water partnerships for support with their efforts to develop their water resource management strategies. These requests were made in response to the target set by the World Summit for Sustainable Development (WSSD) in Johannesburg in 2002 to have IWRM and water efficiency strategies in place by 2005. The strategy development processes are neither managed nor owned by GWP, but are national government initiatives supported by the national and regional GWP bodies. The donor community has entrusted the GWP network to facilitate these processes by

providing funding to support these programs.

As you will read in this report, the first of these programs to get under way in 2004 was supported by the Canadian International Development Agency (CIDA) and included Kenya, Malawi, Mali, Senegal and Zambia. The GWP's strong country water partnerships were a key factor in being asked to support governments with the formulation of their national IWRM strategies.



Margaret Catley-Carlson  
Chair

A global movement needs guidelines. The GWP handbook *Catalyzing Change: A handbook for developing integrated water resources management (IWRM) and water efficiency strategies* was launched at the international conference on water hosted by the Japan Water Forum in Tokyo in December 2004. The handbook

shows how national water strategies can contribute both to meeting the larger social and economic goals and offers ways to deal with potential stumbling blocks (see pages 17–21).

The focus lies on both policy and practice; the world doesn't need more elegant, unimplemented policies, it needs implemented ones. But implementation is the difficult part – making the necessary policy, institutional and management adjustments, building capacity and finding the finance needed for investments and improved services. Crucially, if governments are serious about reaching the MDGs, these changes need to be made in an equitable and ecologically conscious fashion.

I am confident that the partners of the 13 regions of the GWP network will make useful and substantial contributions towards both better, integrated sustainable resource management and the attack on poverty implicit in the MDGs. With the Johannesburg 2005 target immediately in sight now, with heads of state ready to review their own performance in the MDGs in September, and strategy development plans beginning to take shape, 2005 is going to be another exciting year for the GWP!

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# Overview

This report comes at the end of a significant year in the development of the GWP, one that has seen the beginning of the implementation of the new five-year GWP Strategy and Work Plan. And one – within the process of progressively moving from advocacy to more targeted action, particularly at the country level – in which the international community has entrusted our Partnership with additional responsibilities and challenges.

Most water management practices are tied to policies at the national level. Consequently, the GWP can most effectively promote knowledge on more sustainable water management through cross-sectoral dialogue in individual countries through its country water partnerships. By 2004, most of the GWP regions had consolidated their regional networks and established country water partnerships. In the most recently established GWP regions, setting up country water partnerships was activity pursued, such as those in Eritrea and Sudan in Eastern Africa, for example. Two regional gaps were filled with the enrollment of Central Africa and the Caribbean, both of which are described in the first chapter of this report.

In June, the 9th Meeting of the GWP Consulting Partners provided the annual opportunity for GWP Partners from around the world to get together to discuss strategy and action in the network. This year, the CP Meeting was held in Kuala Lumpur as an integral part of the 1st Malaysian Water Week, an event organized by the Malaysian Water Partnership running from June 7–12.

Several activities were held, including the three-day Malaysian Water Forum, an exhibition on water-related products and services, and technical visits to useful sites from a water resources management perspective. The integration of these events enabled the participants from Malaysia to interact with a broad range of stakeholders from other parts of the world and vice-versa, providing useful points of contact and opportunities to share valuable experience and knowledge on common issues. In particular, much emphasis was placed on the issue of how the GWP's network of water partnerships could support countries in achieving the 2002 World Summit on Sustainable Development (WSSD) target of preparing

national IWRM strategies by 2005.

While the theoretical definition of IWRM may be elusive, practices based on an intuitive understanding of integrated processes are seen as the only possible way towards sustainability and the pursuit of the Millennium Development Goals. The GWP has not shied away from the challenge of explaining these processes and has engaged in a robust and frank debate on the



Emilio Gabbrielli  
*Executive Secretary*

practical implications of pursuing integrated water resources management.

As you will read in this report, through the work of the GWP Technical Committee and the Special Programs, the GWP is fully dedicated to the production and continuous update of guidelines – based on practical experience – which can help governments and stakeholders in the preparation of the national IWRM and water efficiency strategies called for by the World Summit on Sustainable Development in 2002.

Confirmation that the GWP could be an effective mechanism to facilitate the achievement of the 2005 IWRM national strategies target has been evidenced not only by the renewed support to GWP by donors at the global level, but also by requests by many governments for GWP's direct facilitation at the country level to support their efforts towards achieving the WSSD target. The practical work associated with these activities is reported on pages 12–16.

In this new phase of work, the GWP has strengthened the Stockholm Secretariat's capacity in its financial, human resources and management systems to support the network at large. With this in place, the Secretariat can now focus on providing more significant contributions to the network's activities to promote policies and practices leading to a more sustainable management of the world's water resources and a better life for all.

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# Partnerships: New organizations formed

The next few pages introduce two new partnerships and outline some of the specific challenges and opportunities encountered by each one. They also provide an update on the progress of the regional partnership for Central Asia and the Caucasus, another relatively recent addition to the GWP family.

**G**ood stewardship and equitable sharing of water from transboundary rivers, lakes and reservoirs are perhaps the most obvious reasons for regional or bilateral dialogue and action. But the benefits of collaboration between countries don't end there.

Clusters of countries tied together by geography and climate – and in some cases by language, culture, or history – also have much to learn from each other about the technical, social, financial and governance-related aspects of water, whether or not they share a transboundary water resource. And although water management processes are tied to national policies and institutions, there are economies of scale to be enjoyed through pooling expertise, knowledge, data and tools via regional mechanisms.

Since its formation in 1996, the GWP has attempted to maximize these benefits by actively fostering the creation of regional water partnerships. By 2004, 13 such groupings were in place and operating. In addition, Australia has established an autonomous country partnership. The GWP has also established links with the Northern Water Network, a grouping of country water partnerships in industrialized countries.

## GWP CARIBBEAN

When GWP Caribbean was launched on June 9, 2004, in a ceremony on the island of Tobago, the keynote address was delivered by Prime Minister Keith Mitchell of Grenada, who emphasized that water is everyone's business, requiring full involvement at all stages and levels of water protection, conservation and development. Providing the regional platform needed for such shared responsibility is a main aim of the new partnership.

It will achieve this by building capacity in water resources management, supporting public educa-

tion and awareness programs, facilitating knowledge sharing, and improving water governance. There will be something for everyone – from urban users of piped potable water and farmers confronted with the ill effects of a long dry season on crops and livestock, to water infrastructure managers and government ministers charged with making tough program funding decisions.

The vast majority of Caribbean countries and territories have joined the new partnership, whose formation was spearheaded by the Caribbean Council for Science and Technology, with the support of the Inter-American Development Bank and the Netherlands Government. "All have expressed a willingness to be part of the partnership – to work along jointly with us," reports Navin Chandarpal, Chair of the Partnership's Steering Committee and Adviser to the President of Guyana on science, technology and the environment. "What we hope to be able to do as a group is to provide a catalyst for the efforts within individual countries to manage water resources in an integrated way.

"The emphasis to date has been the delivery of potable water to communities and irrigation water for agriculture. Historically, many parts of our region have not had access to such a supply. People have been looking forward to this."

Chandarpal adds that the time has come for Caribbean countries to see water management within a context larger than the mere fulfillment of immediate domestic demand. "We are trying to get all the players in the region to recognize that there's much more to it than that. Our very sources of water are threatened. We need to have everyone on board to work in a coordinated way so that we can take a holistic, comprehensive approach to water as a resource."

Specifically, he cites pollution, conflict resolu-



Tourism, the economic anchor of many Caribbean islands, places heavy demands on water supply and infrastructure.

## THE CARIBBEAN: UNIQUE VULNERABILITIES AND ASSETS

Several factors give the Caribbean a unique set of challenges and opportunities for water management. Comprised mostly of island states, the region harbors many small, fragile ecosystems and is highly vulnerable to hurricanes and floods for several months each year. The deadly floods in Haiti in September 2004 bear witness to dangers posed by extreme climatic events in the Caribbean. Meanwhile, other water-related problems – contamination from agricultural runoff or saltwater intrusion into aquifers due to over-extraction of groundwater, for example – may go almost unnoticed by the public.

Tourism, the economic anchor of many Caribbean islands, raises a host of water issues at different levels – everything from national policies on investment in infrastructure to the more mundane question of how to prevent water wastage on golf courses, and the risks of tourism on fragile natural resources and ecosystems. Although foreign visitors contribute to local economies, they also place heavy demand on water supplies and infrastructure.

Nevertheless, Joycelyn Lee Young, a specialist in comparative development with Trinidad and Tobago's National Institute of Higher Education, Research, Science and Technology, points out that while the Caribbean has vulnerabilities, it also has key social assets that favor the necessary move to more integrated management of water. Among other things, it has a small population and a high literacy rate compared to other sub-regions of the developing world.

"These factors should facilitate public education and participation and our work to promote more integrated approaches," says Lee Young. "We also see our diversity as an asset. The Caribbean is a rich laboratory for the sharing of knowledge and experiences."

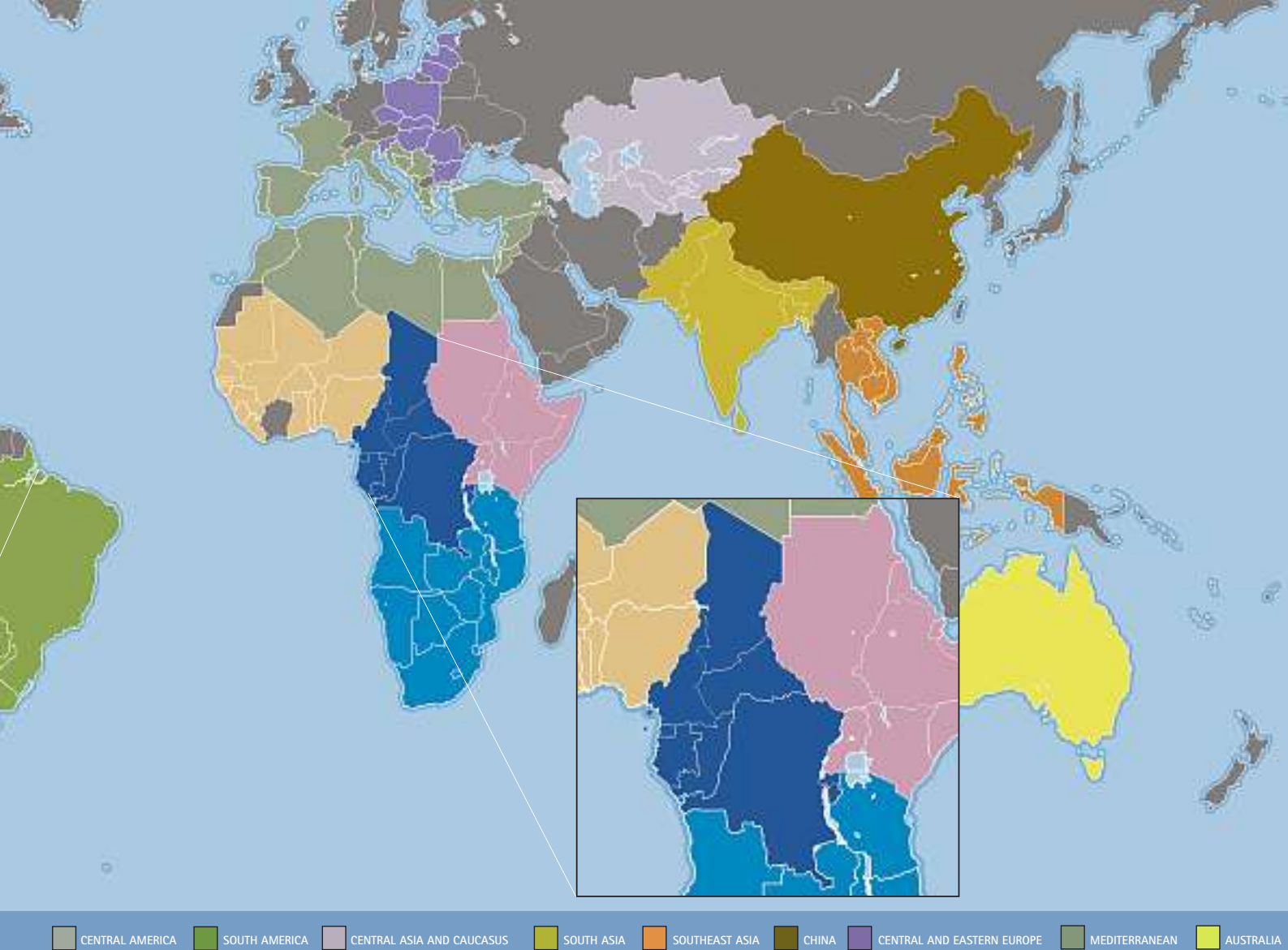
Another asset is the shared vision of the small island countries. The Small Island Developing States (SIDS) conference held a decade ago in Barbados was a catalyst for technical cooperation, says Navin Chandarpal, Chair of the Partnership's Steering Committee and Adviser to the President of Guyana on science, technology and the environment, and provided a framework for joint projects. "We're not starting from scratch. We've got good ground on which to build."



tion, governance, water-related disasters, and access to technical information as areas in need of attention. In Guyana in 1995, for example, a spill from an industrial containment pond sent cyanide-laden effluent, a byproduct of gold mining, rushing into a stream and, from there, into a river. It contaminated the drinking water supplies of local people downstream and undermined their fishing operations. Another example is the leakage of stored industrial byproducts from the refinement of bauxite for the aluminum industry that has polluted groundwater supplies in Jamaica.

Where water quality isn't an issue, quantity may be the problem. Chandarpal, a former Minister of Agriculture for Guyana, recalls a controversy some years ago between two farming groups during a severe dry spell. The rice growers complained that sugar estate owners, who were closer to the reservoir, were consuming all the water. Indeed, many rice farmers ended up suffering severe crop damage that year. "Abuse by one user can jeopardize the activities of another," he notes. Such inequities are similar to those seen in a recent study of Asian irrigation schemes by the International Water Management Institute (IWMI).





### GWP CENTRAL AFRICA

April 1, 2004 marks not just the creation of GWP Central Africa, but also the day on which all of continental Africa was brought into the GWP family through regional partnerships.

The new Partnership was three years in the making. In August 2001, during an international GWP consultation in Stockholm, Sweden, Central African representatives expressed their collective interest in setting up a regional partnership to promote more sustainable water management. Follow-up meetings in August 2003, again in Stockholm, paved the way for the official launch of GWP Central Africa seven months later, in Brazzaville, Congo.

The 10 members of the new grouping are Burundi, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo (DRC), Equatorial Guinea, Gabon, Rwanda, and São Tomé and Príncipe. The Partnership comprises a diverse mix of water-rich and water-poor countries. The partnership is also concerned with two major basins: Congo Basin and Chad Lake Basin, on which the development of the integrated approach is a key element for sustainable economic development in the region.

“A lot of people think that because our sub-region on the whole possesses a lot of water resources, there aren’t many water-related problems to deal with, but that’s not the case,” comments Jean Michel Ossété, Chair of the five-person Technical Advisory Committee of GWP Central Africa, adding that several problems in the area of water use and management are common to much of Central Africa.

- Most countries of the sub-region lack national water policies and laws, and institutions with water-related responsibilities tend to be weak.
- The penetration of services providing clean drinking water and sanitation facilities is quite low in Central Africa compared with both the global situation and that for Africa as a whole.
- There is little use of water resources to enhance crop and livestock production and industry and the region’s hydroelectric potential is under-exploited.
- Insufficient technical capacity to monitor the quantity and quality of water resources makes for weak understanding of the sub-region’s hydrology.
- Until now, there has been no framework for water-sector cooperation among Central African countries.

## THE HUMAN SIDE OF WATER IN CENTRAL AFRICA

More sustainable water management can contribute, in one way or another, to achieving several of the 18 targets set by the United Nations as specific objectives of the Millennium Development Goals for 2015. One target explicitly mentions water: a 50% reduction in the proportion of the human population without sustainable access to safe drinking water and sanitation.

A stated aim of the newly created GWP Central Africa is to help its 10 member countries pursue these goals and targets. The bottom row of figures in the accompanying table corroborates the wisdom of that strategy. The percentages are based on national statistics for 8 of the 10 countries covered by GWP Central Africa. These countries account for 97% of the subregion's estimated population of 97.2 million in 2000.

Figures for 2000	People served by improved water supply % of population	People with access to sanitation facilities (for disposal of human waste) % of population
World	85	78
Africa	62	60
Central Africa	48	37

The underlying national figures were taken from the Global Water Supply and Sanitation Assessment 2000 Report, prepared by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). For more details, see

[http://www.who.int/docstore/water\\_sanitation\\_health/Globassessment/](http://www.who.int/docstore/water_sanitation_health/Globassessment/)

Ossété, who is also Director-General, Hydraulics, in the Congo's Ministry of Mines, Energy and Hydraulics, cites these sub-region-wide challenges as key reasons for setting up GWP Central Africa. But the regional Partnership, he adds, will also assist member countries in dealing with problems or factors specific to their climatic zone.

Perhaps the most evident of these zonal variations is the extent of water endowment. For example, the equatorial band of Central Africa, shared by five countries (Central African Republic, Congo, Democratic Republic of Congo (DRC), Equatorial Guinea and Gabon), has a significant surplus of water. These resources demand special management, including measures to prevent floods or mitigate their effects. By way of contrast, water is much less abundant in the

Sahelian or Saharan zones, such as northern Cameroon, northern Central African Republic and Chad. Here, sound policies for rational water conservation are needed. The same applies to the Great Lakes zone of Central Africa (eastern DRC, Rwanda and Burundi) where, ironically, water resources are quite limited.

GWP Central Africa, which is hosted by the World Conservation Union (IUCN) office in Brazzaville, provides a platform from which member countries, whatever their water endowment, can plan joint water projects. In some instances, explains Ossété, these will be designed to better share water between the surplus and deficit zones. A project to transfer water from the Congo basin to that of Lake Chad, for

example, is on the drawing board. The execution of all such projects, Ossété stresses, will be subject to the findings of exhaustive impact studies.

In the coming months and years, GWP Central Africa's efforts to promote better water management will be guided by specific social and economic objectives that are linked, directly or indirectly, to water use and management. These are: to expand potable water supplies and sanitation; to conserve ecosystems; to enhance food production and security; and to develop hydroelectric power and more environmentally sound industries.

### Helping to design policies

In practice, the Partnership's role in promoting these aims will be to help member countries design national water policies, legal frameworks and institutions, all grounded in IWRM approaches. To this end, the Partnership has been working with the subregion's water ministers to create a new subregional body: the Authority for Integrated Water Management in Central Africa (also known by its French acronym AGIEAC). It is also assisting the Economic Community of Central African States (also known by its French acronym CEEAC) with the implementation of a water program launched under the auspices of the New Partnership for Africa's Development (NEPAD).

The long-term success of integrated approaches to better water management depends to a large extent on the creation and maintenance of a sound technical knowledge base. For this reason, GWP Central Africa is also committed to helping strengthen national hydrological services, especially for inventorying and monitoring water resources and changes in the environment.

### GWP CENTRAL ASIA AND CAUCASUS

The regional partnership for eight countries of Central Asia and Caucasus was formed following a major conference of water stakeholders in February 2002. Member countries in the Caucasus sub-region are Azerbaijan, Armenia and Georgia. Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan are the Central Asian members. The Partnership's Secretariat is hosted by the International Water Management Institute at its regional office in Tashkent, Uzbekistan. A Regional Technical Advisory Committee (RTAC) serves as its principal management and administrative arm.

Since its creation, the Partnership has undertaken numerous advisory, technical, public

awareness and capacity-building activities in the area of IWRM. One of the most ambitious and fruitful initiatives to date has been a collaboration with the pilot project to implement more sustainable and equitable water management in the most populous part of Central Asia, the Fergana Valley, which is shared by Kyrgyz Republic, Tajikistan and Uzbekistan. Funded by the Swiss Agency for Development and Cooperation, the four-year project has been operating in all three countries, but at the sub-national level.

“We have been able to establish a new institutional structure for water governance along pilot water systems in the Valley – that are organized along hydrographic rather than administrative boundaries,” explains Vadim Sokolov, who chairs the RTAC and serves as co-manager of the Fergana Valley project.

### Scaling up reforms

GWP Central Asia and Caucasus recently made recommendations on how to scale up the process of institutional reform from the pilot level to the national level in each country. A more recent initiative was the creation in May 2004 of the Kazakhstan Water Partnership, which will operate under the guidance of a seven-member national committee. Equally important, and coinciding with its inauguration, was a set of meetings to launch a national water planning exercise in Kazakhstan, to be funded by the Government of Norway.

Expected to run until June 2007, the planning project will be carried out jointly by the Kazakhstan Country Water Partnership and the United Nations Development Programme. The planners will organize public and organizational consultations in all eight of the country’s river basins. “This is not just a matter of raising public



Photo: Phoenix

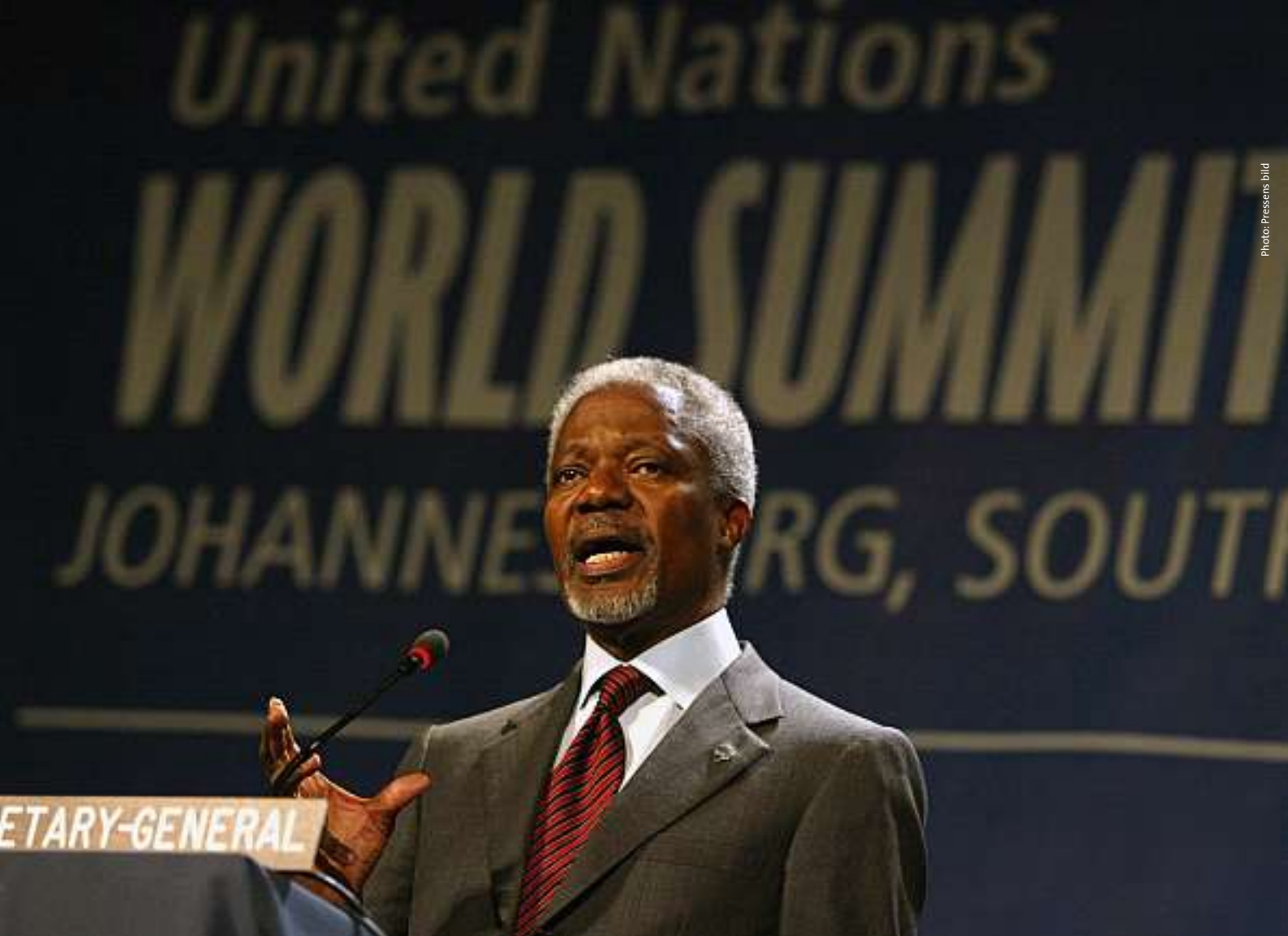
awareness,” says Sokolov. “It means ensuring real public participation in decision-making through social mobilization. The local basin organizations, together with people who participate in the public consultations, will end up being the driving force behind the implementation of IWRM and the national water efficiency plan.”

**Local stakeholders will be the driving force behind the implementation of more sustainable water management practices.**

Finally, the regional partnership is contributing to the implementation of water reforms in Armenia, which adopted a new water code in 2003 that makes the integrated approach the basis of water-sector governance. It is the first country in the region to put the management of domestic water use and agricultural water use under a single authority, the State Committee for Water Management. The partnership will work with the Armenian authorities to set up a suitable institutional structure and legal mechanisms, as well as a system for training water professionals, water users, and decision makers. It is good opportunity to use Armenian experience as a model for neighboring countries, and in this respect the GWP will be the most significant promoter.



Eight countries in Central Asia and Caucasus formed a regional partnership in February 2002.



In 2002, the United Nations set water-related strategy goals for 2005 at the World Summit for Sustainable Development in Johannesburg, South Africa.

# National IWRM strategies in Africa

Based on funding provided by the Canadian International Development Agency (CIDA), the GWP has embarked on an ambitious, three-year project to support five African countries in the development of their integrated water resources management and water efficiency strategies.

A coordinated initiative called the Partnership for African Water Development (PAWD) was launched in 2003 in Kenya, Malawi and Zambia in eastern and southern Africa and in Mali and Senegal in western Africa. PAWD aims to assist countries in their efforts to achieve the United Nations' water-related Millennium Development Goals and to meet the 2005 IWRM strategy deadline set by the World Summit on Sustainable Development in 2002. This is fully congruent with GWP's strategy for 2004–2008, outlined in the 2003 issue of *GWP in action*.

In each of the five participating countries, planning activities in the GWP project are meant to complement, not replace, ongoing or planned changes in water management, such as institutional and legal reforms. In 2004, the first full year of operation, the proportion of project resources earmarked for IWRM planning varied markedly from country to country, depending on stated national priorities, the extent of water-sector reforms to date, and the level of maturity of country-level water partnerships.

Achievement of the 2005 national IWRM

strategies is a pre-condition for reaching the MDG goal of bringing water to half of the people currently without sustainable access to safe drinking water and basic sanitation. This means that between 2000 and 2015 around 1.5 billion people need to be provided with access to safe water and 2 billion provided with access to basic sanitation facilities.

At the end of 2003, GWP conducted an informal survey among the countries in the GWP network of country-level progress toward the achievement of integrated approaches to water resources management and development. The survey, which excluded members of the Organisation for Economic Co-operation and Development, grouped countries into three categories: countries that have made “good progress,” those that have taken “some steps” but need to do more, and those that remain at the “initial stages of the process.” Kenya, Malawi and Senegal fit into the intermediate category; Mali and Zambia were assessed as countries still at the “initial stages.”

While none of the five participating countries was at an advanced stage of developing their strategies when they were selected for the PAWD project, there was in each case clear political commitment to an integrated approach and indications of stakeholder “buy in” to the process. In addition, the countries eventually selected for the project were all politically stable and some government resources had already been made available, or at least pledged, for the development of a national IWRM strategy. Importantly, synergies with already existing initiatives and programs were considered to avoid duplication.

### GWP SUPPORT AT THREE LEVELS

The Global Water Partnership is a natural partner for the CIDA initiative, since five regional partnerships and over a dozen country water partnerships are already in place in Africa to promote knowledge exchange and support multiple stakeholder participation in the development of IWRM strategies, water planning and implementation. Indeed, the project has been set up to take advantage of the GWP’s network of regional and country water partnerships.

At the global level, the GWP Secretariat in Stockholm ensures overall project coordination and management. For example, it serves as the link between the donor, the project-oversight body, the regional partnerships and the national planning teams. It also operates the financial and progress-reporting mechanisms for the project, identifies resource persons, and provides guidance and docu-



After the 2002 summit of the G8 leaders in Kananaskis, Canada, the Canadian government launched a major initiative to support African development, specifying water as one of the focal areas. CIDA agreed to provide CAD50 million (USD40 million) over five years to improve water management and access to water and sanitation, plus CAD10 million for collaboration with the African Development Bank to develop financially viable water projects. Funding for PAWD, amounting to CA\$10 million over three years, is part of this overall commitment by Canada.

mentation about sustainable water management.

However, the most important functions of the global unit – functions it shares with the regional and country water partnerships – are to foster and maintain a learning environment for project participants and to ensure that experience is widely shared with other countries. This task is critical since, to date, few people have acquired first-hand experience in the formulation of an integrated national level water strategy and there are currently not that many precedents to emulate in the way of good practices.

The learning curve for such large-scale, long-term planning is, in any case, very steep. Therefore, the upward trek is best done with good climbing tools and preferably in the company of like-minded people – namely, fellow water planners from neighboring countries. The GWP handbook *Catalyzing Change* (see pages 17–21) provides a useful tool for guiding this process.

“We’re also working closely with the GWP regional water partnership offices so that they can provide direct support to their countries when requested,” says Daniel Lopez, the GWP’s Special Programs Team Administrator. This regional contribution consists of providing administrative and technical assistance to the national planning teams, assisting with the hiring of national coordinators, and reporting progress to the global secretariat semi-annually and annually. The regional office may even step in and temporarily fill a gap if, for some reason, the national team is unable to carry out a function.

Of course, the bulk of the work takes place at the country level. The exact nature and pace of the IWRM strategy development component, as well as the evolving role played by national water partnerships, vary from country to country. Zambia, for example, got off to a quick start by launching the PAWD initiative early in the year. The Zambia Water Partnership held a workshop on January 8–9 in Lusaka to agree on the terms of reference for the Steering Committee, team members and manager of the program. The workshop, opened by the Hon George Mpombo, Minister of Energy and Water Development, was attended by forty-nine key partners. Following the workshop, a draft work program was mapped out. In February, two team members participated in a global meeting on the program at the GWP Secretariat in Stockholm and subsequently finalized the work plan that was discussed with the government.

A government reshuffle then delayed events but

#### KEY LESSONS LEARNED FROM THE CIDA PROGRAM

The nature and pace of IWRM strategy development varies in the PAWD, as they do elsewhere. Nevertheless, a number of key lessons with broad application have already come out of the CIDA program.

- Government as a key stakeholder in the planning process is a very special issue and needs special attention. Political support at the country level is one of the keys for the development of the PAWD. Developing it can be a long process in some countries.
- A clear understanding of the work to be done is a must. For a sound start, the planning team needs to deepen its knowledge in project management, and participatory approaches.
- A dynamic network of resource persons is necessary at the beginning of the process.
- Host institutions need support in the planning process for the development of capacities. Training exercises should be tailor-made to suit the local needs and purposes of the program and stakeholders involved.
- Communication media can play a significant role. Information material and awareness-raising activities should highlight relevant gender roles and responsibilities in the process.
- Ensure that strategy leads to implementation.

agreements were eventually signed with the Ministry of Finance and Economic Planning – the Ministry responsible for the national development plans and the poverty reduction strategies. The program manager and team are now in place and work, in tight collaboration with the Ministry of Energy and Water Development’s Water Resources Action Programme (WRAP) funded by Norway and Denmark is now well under way.

In contrast, PAWD activities have proceeded more slowly in Mali despite strong political commitment within the senior levels of government. This is because the project needed to be integrated and coordinated with on-going IWRM strategy development

initiatives funded by the World Bank and other donors. (In fact, the GWP believes the forging of such collaborative links through the PAWD program is essential and may help to give structure to donor-sponsored planning programs elsewhere in Africa.)

Being the first year of a process-oriented program and, most importantly, one that draws on broad participation from Ministers right down to individuals at the community level, the principal activities across all the countries in the program focused on building awareness, political support and multi-stakeholder participation. Importantly, the actual strategy development processes are not those initiated or owned by GWP, but national government initiatives supported by the GWP’s country water partnerships.

#### THE CASE OF SENEGAL

The PAWD builds on and gives more focus to earlier political buy-in to GWP and sustainable water management. It is not a step that can be taken overnight, as the case of Senegal illustrates. “During the early part of 2000, IWRM was being promoted in Senegal but we were not very convinced as we did not understand what IWRM was,” says Oumar Ndiaye, the GWP coordinator of the CIDA initiative in Senegal. “It was not well articulated by the GWP and others.

“A turning point was the 2003 October water meeting held in Ouagadougou in Burkina Faso, where the concept of integrated water resources management was better explained by GWP, with a logical approach and links to achievement of the MDGs. As a result, officials from the Directorate of Water were happy to support the move to establish the Senegal Water Partnership and provided an office in the department to facilitate their initiative.”

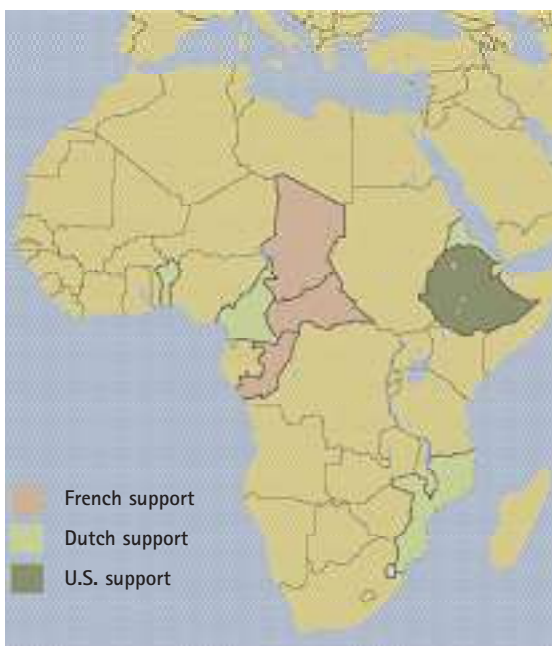
The potential risk that the GWP office would be dominated, if not directed, by the government proved unfounded as Mme Anta Seck, Director General of Agriculture and Hydraulic Planning of Water Resources, ensured that they remained independent.

In Senegal there is a tradition of community participation. There are many other water initiatives but it was the GWP partnership that was called on to support the government’s initiative to develop IWRM strategies in response to the WSSD declaration. “It is the GWP inclusive and integrated approach to the problem that is critical here,” says Ndiaye. “Other initiatives came from specific sectors or perspectives but the holistic

view of IWRM makes sense and again, ties in with government initiatives leading towards achieving the MDGs.”

However, there was a fear that the roles of the GWP water partnership and the government could be confused in the strategy development processes. “Clearly, we are working together,” says Babaca Dieng, Chairman of the Senegal Water Partnership. “Solidarity is the word. We are no threat. Decision-making lies in government hands, but the GWP can help widen the process of participation and processes. We help with the development of the required work plans together with local institutions – that is a direct consequence of our broad-based nature.”

Once the strategies are in place, implementation will follow. Doing this successfully requires that people from all levels meet and discuss what needs to be done and develop the capacity to do it, from the regional right down to the local levels. This process is already being started by groups of fifty people in each of the eleven regions of the country. “After the strategies are written and adopted, involvement by the Water Partnership in the implementation and follow-up will be a key activity for us!” concludes Dieng.



Three other donors are working with the GWP to support national endeavors in Africa to develop IWRM and water efficiency strategies: the United States Agency for International Development (USAID), which supports Ethiopia; the Netherlands, which supports Cape Verde, Benin, Cameroon, Eritrea, Mozambique and Swaziland; and France which supports Chad, Central African Republic, and Congo.

#### WORKING IN TANDEM

Five countries stretching from West to Southern Africa covering a distance of 6,480 km as the crow flies – each working on the same process,



Representatives from five countries, the GWP Secretariat and the Canadian International Development Agency met in Dakar, Senegal, November 26–27.

but with different systems and priorities – presents a challenge for knowledge management and information exchange among those participating in the program. The need to work together and exchange ideas, experiences and tips and tricks cannot be underestimated if coherency in developing IWRM and water efficiency strategies is to be achieved.

To help, two workshops have been held bringing people together to explain to each other what they are doing, what went well, what was more difficult and what challenges they are facing. The first workshop, held in Lusaka, Zambia, August 21–28, 2004 took a strategic view of the development of the program. In addition to reviewing progress at the global, regional and country levels, the participants examined the proposed outputs for their strategic planning work within the PAWD and consolidated them into a nine-point plan of action.

#### FOCUS ON LESSONS AND PRIORITIES

The second workshop was held in Dakar in Senegal on November 26–27. Attended by stakeholders and representatives from the government of the five countries in the program, the respective GWP country and regional water partnerships, and the GWP Secretariat together with several resource persons including representatives from CIDA, it focused much more on what had been achieved, the lessons learned and the priorities in taking the next steps during 2005.

One striking feature arising in the Dakar workshop was the use of a “peer review” of the regional and country water partnership programs. This approach, where each water partnership examined the work program and results of another, was recognized as a most valuable means for exchanging experiences between countries and regions and proved to be a significant support to strengthening and aligning the programs.

Beyond the five-country PAWD initiative, which in many ways is a pilot program for the design of national IWRM strategies, the global, regional and national GWP network continues to

support strategy development efforts in other parts of the world. It does this through consultations, local and international capacity-building events supported by Cap-Net, the ToolBox and the guidelines for IWRM strategy formulation. It is anticipated that the knowledge and lessons now being recorded and synthesized from experience in Africa and elsewhere will prove highly relevant and useful to the water community at large.

Building the strategy is the first step. The next step, a much longer and difficult one, is to implement the necessary policy, institutional and management adjustments, build capacity and find the financing to implement the changes. This will provide a far greater challenge for governments in their efforts to reach the MDGs. The role of the GWP country water partnerships during the implementation of the strategies will need to continue, bringing the various stakeholders together and promoting knowledge exchange among them and others in the wider GWP network.

The media can play a significant role in raising awareness of the issues.





# Catalyzing Change: A strategy handbook

A handbook drawing on the knowledge of hundreds of experts in the GWP's extensive international network has been developed to assist national IWRM planning aimed at meeting the water-related goals set two years ago by world leaders at the World Summit on Sustainable Development in Johannesburg, South Africa.

**A**round the world, institutions leading a national IWRM strategic planning exercise are either gearing up for the challenge or, in some instances, already fully engaged in it. Whatever a country's progress to date on this complex multi-sectoral, multi-disciplinary, multi-stakeholder task, the 2005 target date for initiating this process, set two years ago by world leaders at the World Summit on Sustainable Development (WSSD) in Johannesburg, is now just around the corner. Yet in many quarters, senior officials still need practical guidance on launching a participatory planning process, sustaining support for it at all levels, and moving boldly into implementation – without losing momentum.

The GWP recently responded with the publication of *Catalyzing Change: A handbook for developing integrated water resources management (IWRM) and water efficiency strategies*. Among the beacons that prompted development of the handbook were the results of an informal but large-scale international survey that GWP conducted at the end of 2003. That monitoring exercise showed that only about 13 percent of the countries surveyed had made good progress in adopting integrated approaches (see box on page 18).

Apart from the country survey, the handbook authors also tapped the knowledge of hundreds of individual experts from many disciplines via the GWP's extensive international network. During 2004 they drew on the findings of a GWP-convened workshop in Stockholm in February that was attended by some fifty water experts from around the world; on the deliberations of a review group whose members included

water professionals already helping to prepare IWRM plans; on the 9th GWP Consulting Partners Meeting held in June in Kuala Lumpur; and on an electronic discussion and parallel consultation in Buenos Aires in July. Backing up this direct input was the GWP's series of TEC background papers.

The resulting 50-page handbook, produced under the direction of GWP's Technical Committee, covers all of the major ingredients of a national strategic planning exercise. Among these are public awareness building, mobilizing political and financial support, assembling a knowledge base, securing stakeholder participation, conflict resolution, capacity building, and monitoring and evaluation. The handbook supports discussion of these tasks and phases with definitions of key concepts (such as the notions of water efficiency and integrated management), water-specific country examples, checklists and resource references – including website links – technical documents, and specific tools in the ToolBox.



The actual language of the WSSD action target is "integrated water resources management plans." We have chosen to use the word "strategy," rather than "plan," to emphasize the dynamic and change-oriented nature of the process.

The main strength of the handbook lies in the macro messages about the ultimate purpose of the strategy development process and the need to get on with the job – even when the environment for change is not ideal (It never is!). In the words of the handbook’s authors, “Strategies should catalyze action, not retard it. Each country must decide the scope and time line for change based on its goals and its resources. The important thing is to take the first steps.”

### TAKING THE DEVELOPING WORLD'S IWRM PULSE

In late 2003, the GWP carried out an informal survey of water stakeholders in 108 countries, mostly in the South, to determine how well they are progressing toward more integrated approaches to water resources development and management. A key finding was that countries that had advanced farthest in this area often started their reform process by focusing on specific water challenges – such as coping with drought, supplying water for crops or improving the urban water supply.

Funded by the Norwegian Ministry of the Environment, the survey had two aims: to help countries learn from each other’s experiences, and to provide a baseline for monitoring progress towards more integrated sustainable water management. But the results have also proved extremely useful to the GWP in the preparation of *Catalyzing Change: A handbook for developing integrated water resources management (IWRM) and water efficiency strategies*.

The GWP stresses that, while official government views were in many instances taken into account, the survey must nevertheless be considered informal, since many assessments about the maturity of water-related reforms in various countries are preliminary and subjective. Thus, comparative judgments between specific countries can’t be considered hard and fast; the utility of the data lies in the broad regional trends they point to and the general conclusion that, while some progress has been made, much needs to be done.

Country reports prepared by national contacts provided the raw material for the survey. These descriptive documents covered policy, institutional and operational developments. In each region, the information gathering process was coordinated by a GWP regional contact who then analyzed the resulting national documents and aggregated the information into regional reports. The regional analysts ranked countries by their IWRM maturity level and also provided detailed assessments on the degree of readiness of countries to prepare IWRM plans to meet the 2005 target date set in Johannesburg.

There are three categories for ranking IWRM maturity, and global results for the 108 participating countries.

- Countries that have made good progress toward more integrated approaches: 14 (13 percent).
- Countries that have taken some steps toward more integrated approaches but need to increase their efforts: 51 (47 percent).
- Countries that remain at the initial stages of the process leading to more integrated approaches: 43 (40 percent).

The survey report, which includes brief notes on each participating country, is accessible from the GWP website: [www.gwpforum.org](http://www.gwpforum.org).

In a section titled Concepts, the handbook notes that sustainable water management is fundamentally about change in water governance, that is, in “the range of political, social, economic and administrative systems that are in place to develop and manage water resources and deliver water services, at different levels of society.” Reforming these systems implies overcoming institutional inertia.

### FINDING THE RIGHT ENTRY POINT

The handbook underlines the importance of identifying a suitable entry point(s) from which the promoters of the integrated approach can overcome institutional inertia – to get the ball rolling so to speak. In theory, the best entry point is that more sustainable water management will help achieve broad development goals. The argument here is that enthusiasm for the water planning process should be easy to kindle if its relevance to a pre-approved and widely accepted national agenda is made plainly obvious to key stakeholders. That agenda, which may include the Millennium Development Goals, will likely be embodied in a national development plan and, in most instances, in companion documents covering areas such as biodiversity conservation, poverty alleviation, and public health.

Nevertheless, presenting integrated water management in this way could seem too ambitious for some. A specific water-sector problem, especially a high-profile one amenable to rapid resolution without enormous investment, may better serve as the entry point, albeit a narrower one. The issue might be high pollution levels in a major waterway, seasonal flooding in a vulnerable river valley, or unreliable water services. Here’s an example from the handbook: “. . . South Africa developed one of the most progressive approaches to water in the world by focusing first on the challenge of providing every citizen with access to good quality drinking water.” The handbook cautions, however, that when a specific water issue serves as the entry point, care must be taken to ensure that the commitment to using the integrated approach to achieve broader, long-term development goals is not set aside. While picking the “low-hanging fruit” may be a viable entrance tactic, it is essential that the water strategy not be hijacked for short-term decision making.

In summary, the key message about entry points is that sweeping changes in the water sector aren’t necessarily needed at the outset to ignite a longer-term process of positive change

## BRIEFING THE POLICY MAKERS

The GWP has produced a policy briefing paper on IWRM strategy formulation. Intended for senior policy makers, this six-page document outlines the case for taking a more integrated approach to developing and managing water resources, not just for better water management, controlling floods and mitigating the effects of droughts, but for addressing other goals such as reducing poverty, increasing food security, fostering economic growth and protecting ecosystems.

To help understanding, the brief provides a short list of bullet points on what this integrated approach entails. It also highlights the need for governments to find a balance between a fully integrated approach that risks getting bogged down in complexity and the more standard approach where each sector blindly pursues its own narrowly defined systems without looking at the impacts in the larger picture.

The brief also describes how an integrated approach can get the most value from scarce natural and financial resources, and provides guidance on thirteen priority areas for change in the enabling environment, institutional roles and management instruments. Suggestions are also provided on how roles and responsibilities can be assigned in formulating an strategy.

Recommendations are given on seven key things policy makers need to do when initiating the process and the paper concludes by stating that starting the strategy development process “does not mean throwing everything away and starting over. More often, it means adapting and building on existing institutions and planning procedures to achieve a more integrated approach.”

This companion document to the handbook can be downloaded from the GWP website:

[www.gwpforum.org](http://www.gwpforum.org)



toward more sustainable water management. Rather, a bite-sized success story may be all that is initially needed to whet stakeholders' appetite for more reform and to secure their commitment.

## SUSTAINING MOMENTUM

Once inertia has been conquered, inaugural speeches have been delivered by supportive ministers, journalists have written their front-page water stories, and strategy formulation is under way, how do the planners and implementers keep the wind in the sails of this process? What should they do to maintain or increase their hard-earned momentum so that they successfully navigate the difficulties of implementation?

The results of the informal GWP country survey, as well as other feedback from partners, are instructive here. They reveal the three most common reasons why strategy development and implementation often slow down or even end up becalmed:

- lack of broad public support for the process
- lack of funding
- lack of human and institutional capacity.

The handbook proposes concrete options for avoiding or overcoming these stumbling blocks. For

example, support for an IWRM strategy shouldn't be restricted to government circles, since goodwill or favor carried even in high places, can quickly evaporate with a change of regime or personnel. The handbook recommends cultivating support at all levels, “from the Prime Minister down to the farmer in the field.”

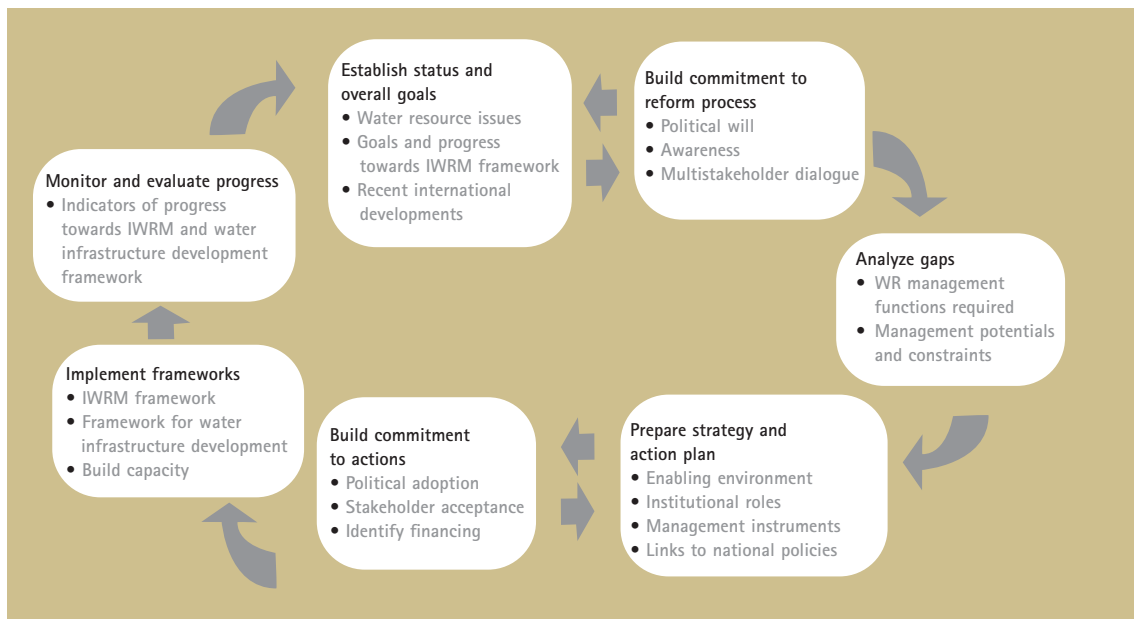
Showcasing past success stories that reflect an integrated approach to water management is one way to build public support for the strategy formulation process. An example of the kind of positive experience that can be highlighted comes from Sri Lanka. The Mahaweli



Courtesy of NASA

In 2003, the GWP took the world's IWRM pulse to determine how well countries are progressing towards more integrated approaches to water resources development and management.

Integrated water resources management is an ongoing process to respond to changing situations and needs.



### THE FOUNDATIONS OF A SUCCESSFUL IWRM STRATEGY

One of most practical sections of GWP’s *Catalyzing Change* handbook is titled “The nuts and bolts of strategy development.” It discusses key tasks and processes demanded by a successful planning process: division of responsibilities (e.g., among top government officials, a steering group, management team, and a facilitating institution); stakeholder participation; creating a knowledge base (including resource inventories); setting time frames and milestones; and monitoring and evaluation, including the definition of indicators.

Some of the reflections on those topics have been distilled into a brief list of actions that comprise the foundations of a successful IWRM strategy:

- Agree on goals and targets.
- Lay down a framework for better decision making on a permanent basis.
- Link to broader development goals and other national development planning processes.
- Anticipate capacity needs and invest adequately in capacity building.
- Involve stakeholders and gain their support.
- Allocate sufficient human and financial resources to the process.
- Set a timetable with milestones/targets.
- Put in place monitoring and evaluation mechanisms.

Basin authority, the Ministry of Health and the local farmer organizations worked in unison to tackle a serious health problem: malaria. This was a multipronged attack on the disease, including the elimination of mosquito breeding sites in irrigated areas and the introduction of better land and water management practices.

Another approach to sustaining support is to provide pre-project estimates of cost-benefit ratios for new infrastructure or other interventions framed in an IWRM setting. Such analyses may suggest beneficial synergies – such as generating employment by creating an aquaculture industry in tandem with an irrigation scheme – that might not be possible under a more conventional sectoral project. The idea is to show that with an integrated approach it is easier to identify and exploit opportunities, in other words, to add value to investments.

Conversely, it is also useful to point out flaws in “business as usual” approaches to water management, showing how losses or other problems could have been avoided through integrated approaches. In Nigeria, for example, economic analysis of the Kano River irrigation project painted a startling image of the full scheme’s probable long-term impact. Researchers calculated that construction of all the planned upstream dams and large-scale irrigation systems would result in net losses of just over US\$20 million, rather than a net gain. The reason was that the original plan didn’t adequately account for the loss of economic benefits already being generated downstream in the fertile and water-efficient floodplain. The fertile land-water resource –

supporting many livelihoods such as farming, fishing and fuel-wood production – would shrink due to upstream water extraction for irrigation.

## TWO FUNDING CHALLENGES

In the realm of funding, IWRM strategy exercises are faced with two main challenges. One is the failure to draft a plan for sustainable financing of the implementation of the water strategy.

The other is postponement of fund-raising and budgeting for this purpose until after the strategy is approved. The planning process itself should not prove to be a financial burden for very many countries since several donor agencies, some working with and through GWP, have pledged funding assistance to lower-income countries, in keeping with WSSD insistence on this point.

However, the picture is not yet so clear for the much more expensive and longer-term strategy implementation. Since investments may be very large, particularly for such physical infrastructure as pipelines, irrigation systems and water treatment plants, strategists need to continually conduct financial reality checks on what they are proposing. This is why budget planning is essential from the outset.

“For countries counting on donor support for implementation,” notes the handbook, “holding donor meetings to secure buy-in during strategy preparation makes good sense.” As a rule of thumb, “soft” interventions, such as policy work, governance reforms, and capacity building, will typically amount to 3 to 5 percent of the final cost of infrastructure investments.

Finally, in the area of capacity-building, a common pitfall is over-reliance on external consultants, a practice that may inadvertently deter the development of local know-how in water management planning and implementation. As with “hard” versus “soft” interventions, there will be both technical and social sciences capacities needed during strategy development and during implementation. These include knowledge and skills in communications, conflict resolution, community outreach, economics, law, planning and information management.

As the ultimate success or failure of a new strategy will depend heavily on popular buy-in to the process and on stakeholder participation, capacity building shouldn't be limited to a handful of specialists in water agencies. It must include individuals from higher education, the private sector and non-governmental organizations. And wherever possible, it should be complemented by institution-strengthening.

The handbook has been designed to support the activities reported in other chapters in this report, most importantly those described on pages 12–16, where GWP country water partnerships are working with governments on developing national strategies.

Apart from their guidance to those involved in the national strategy development processes, the authors of the handbook also have two suggestions for water event organizers at the global level. First, they recommend that the Fourth World Water Forum, to be held in Mexico in March 2006, be used as an occasion for all countries to share their experiences in developing national strategies. Second, they suggest that the World Water Development Report, a joint effort



of several UN agencies, begin to address the issue of strategy implementation, starting in the 2006 issue. “In this way, the Report could help monitor the progress towards more sustainable approaches to water development and management, and track how such progress impacts larger development goals.”

Countries will be able to share their experiences in developing national IWRM strategies at the Fourth World Water Forum, to be held in Mexico City (above) in 2006.



# The ToolBox: Supporting

The next few pages provide a brief update on how the ToolBox is being used. Launched in late 2001, this database of knowledge, experience and guidance on IWRM processes has undergone expansion and fine-tuning. It is continuously updated, thanks to a steady flow of input from water practitioners, researchers and other experts around the world.

**T**raditionally, a broad mix of trades and professions, some age-old, others modern, supports the water sector at the operational level. These range from well-drilling, hydrology and flood control, to hydraulic and civil engineering, ecotoxicology, microbiology and limnology. Each technical group has its own

set of tools which, having evolved within a narrow range of disciplines, or even within a single professional niche, tend to be highly specialized.

As countries begin planning and implementing more sustainable water management, new tools to support the processes become increasingly important. The repertoire of tools and techniques for planning and executing these tasks however, is not nearly so well developed or comprehensive as those used by the more traditional practitioners in the water sector.

**USERS:** Most users of the ToolBox are educators, trainers, academics and/or water management practitioners. At least 80% of the respondents hold at least an MSc-degree. Only a fifth of the users are policy-makers – the principal target group – and some related this to the difficulty they experienced in using the ToolBox.



Photo: Gevly Images

More sustainable and equitable water management can be a useful tool for optimizing water's contribution to achieving social, economic and environmental goals.

# better water management

This constitutes a major resource gap – one that the GWP has been helping to fill since it launched its ToolBox three years ago. As the GWP's rationale for the ToolBox states: "IWRM places novel demands on the policymaker, operator and water user, but offers more comprehensive, efficient and powerful approaches than those tried hitherto."

Typical tasks that require adjustment or reform in approaches to better water management include infrastructure planning for services, system- and resource-modeling, institutional development or reform, finance, policy and law-making, conflict resolution, stakeholder relations, public awareness, capacity-building and knowledge-sharing. Monitoring and evaluation of water-related interventions to shed light on their environmental, social and economic impacts are also part and parcel of this approach. And of

course, there are still the traditional service tasks to perform, such as managing water treatment plants, hydroelectric plants and irrigation systems.

Importantly, the integrated water resources management approach can be a useful tool for addressing specific development challenges and optimizing water's contribution to achieving social, economic and environmental goals. Other sectors have a stake too and – as competition for water increases along with population, climate change and pollution of useable supplies – policymakers in other sectors should be taking an active interest in how water decisions are made, as well as how their own decision-making impacts their coun-

**AWARENESS:** Most users got to know the ToolBox through the GWP network, conferences, workshops and colleagues. However, acquaintance rates among relevant groups are still low and there is a need for stronger promotion.

CONTENT: The ToolBox is mainly used for guidance on IWRM planning, finding reference material and for education purposes. The cases are seen as a vital and possibly even the most important part of the ToolBox, but lack sufficient practical details on lessons learned to be applied elsewhere.

try's water resources. Many of the experts needed to be involved in these decisions are drawn from the conventional pool of water-related disciplines and professions mentioned above. Others however, come from backgrounds where specific training on water management has not figured prominently or at all. Among the newcomers to the water sector are politicians, community leaders and activists, lawyers, public health promoters, communicators and information specialists, economists, experts in organizational dynamics and other social scientists.

Whatever the background of those called on to be involved in the broader processes, these people need techniques and tools – tested and adapted for use in water management – as well as access to relevant experience, especially best practices.

#### DEVELOPMENT, PROMOTION, TRAINING

For the purposes of enhancing the ToolBox, promoting it, building national capacity and obtaining country-level feedback, the GWP clusters the various regional Partnerships around the world into four large geographic groupings. Each has its own ToolBox hub or “focal point.” Through these points, located in Slovakia, Malaysia, Costa Rica and South Africa, users in each super-region can share information about the ToolBox, participate in training events, and seek guidance on the preparation of case studies.

Over the past three years, the ToolBox focal point in Slovakia, serving GWP Central and Eastern Europe (CEE) and Central Asia and Caucasus (CACENA) with support of the GWP Mediterranean, has been especially active. In CEE, the ToolBox has been used mainly in academic and advanced post-graduate training. Seminars have been organized to enhance knowledge of sustainable water management, the main objective being to help new members of the EU to implement the EU Water Framework Directive. Participants were given the opportunity to explore the extent of congruence between IWRM principles, the new national water plans and water polices in CEE countries.

“A point of consensus was that while IWRM principles are well known, implementation lags,” says Danka Thalmeinerova, a project manager at the Soil Science and Conservation Research Institute in Slovakia and the CEE focal point coordinator for the ToolBox. “When participants tried to identify examples of good practices in this region, they could list only a few cases. This wasn't really unexpected, though, since sectoral



rather than cross-sectoral or integrated approaches to management were typical of the centrally planned economies that many of these countries had until quite recently.”

The experience of CEE countries, says Thalmeinerova, is directly relevant to the eight countries that make up the two sub-regions of CACENA. Despite geographic separation, the two components of CACENA have much in common with each other and with Eastern and Central Europe. They emerged as democratic countries in the wake of the collapse of the Soviet Union and its system of centrally planned economies. They have also undergone turbulent economic development and, in some instances, bear a heavy burden from past environmental practices.

In 2004, the CEE focal point teamed up with CACENA to begin extending the use of the ToolBox to the latter region. A training workshop organized by Thalmeinerova and her CACENA counterparts was staged in August in the Kyrgyz Republic for about 20 water stakeholders. Its aim was to promote the application of good practices covered by the ToolBox and share CEE experience and lessons. Topics included public participation, negotiation of conflicts





and water project development. The training event also opened the door for CACENA countries to begin contributing to the expanding international collection of ToolBox case studies.

### SUPPORTING COSTA RICA'S PLANNING

The 2002 World Summit on Sustainable Development (WSSD) in Johannesburg was much more than a progress report on efforts since the 1992 Earth Summit in Rio. Many hoped and expected the conference to light a fire under every national government, heating up political will and prompting positive action in every corner of the planet. Water, along with climate change, was included as one of five hot topics on the international environmental agenda. (The five topics were: water, energy, health, agriculture, biodiversity). Proof of the grave and growing concern was the 2005 deadline that the Summit set for the formulation of national IWRM and water efficiency

plans. By any standard of country-level strategic planning, it was a tall order.

While the deadline for many countries may be too tight, the ToolBox nevertheless has a central role to play in helping WSSD signatory countries to meet their commitments. "We see this as a key tool in supporting national water planning work," says Danka Thalmeinerova.

Costa Rica is one of several countries whose national water-sector planners are now beginning to put the ToolBox to good use. Although this small Central American country accounts for less than 0.5 percent of the world's land area, biologists believe it harbors up to half a million species, perhaps 4 to 5 percent of our planet's terrestrial biodiversity. Safeguarding the habitat-related environmental services furnished by the country's waterways and rainforests is vital to both species diversity and the national economy, the two being closely linked by the country's vibrant ecotourism industry. Two other major issues for the country are inefficiencies in the use of water for irrigation and the deteriorating state of the Tarcoles River basin, whose central valley is home to a large proportion of the human population.

Costa Rica, which biologists believe harbors up to 4–5 percent of the planet's terrestrial biodiversity, is one country now putting the ToolBox to good use.

**ACCESS:** The study mainly focused on the Internet version of the ToolBox. In some African countries slow internet connections were specifically mentioned as a problem in accessing the ToolBox, though the CD version helps get around this problem.

**STRUCTURE:** The structure of the online and CD version of the ToolBox is clearly problematic for a large group of people. There are too many possibilities to choose from on the main page and the most valuable information (the cases) is too many clicks away. The current structure gives maximum opportunities for cross-linkages, but it is confusing, with little transparency and hard for a novice to grasp. Users who have found their way around, though, appreciate it and know how to get what they want within reasonable time.

### WHAT TOOLBOX USERS WANT

Knowing the likes and dislikes of ToolBox users and how well the service's content and structure meet their professional needs is of great importance to the GWP, especially as national planning exercises move into full gear. In October 2004, with support from the Japan Water Forum (JWF), the National Institute for Land and Infrastructure, and the Japan Water Resources Association, the GWP surveyed users by putting 20 questions to ToolBox list-serv subscribers. The questionnaire was also posted on the GWP website. The survey results and analysis form the basis of actions required to improve the ToolBox.

- Restructure and simplify the navigation and update the design.
- Increase the options on the search page, e.g., searching by region.
- Improve readability of texts, make the ones that are read online more concise.
- Improve online promotion and linkage to the site and improving the visibility of the pages to search engines.
- Increase offline promotion, especially among organisations currently less familiar with GWP and the ToolBox.
- Make the process of submitting cases easier and the review process quicker and more transparent.
- Make tools more specific, giving more details on the "how to" of processes.
- Expand the number of cases, especially related to some of the gaps in content.

"The country really needs a water plan," says ToolBox user and management consultant Carlos Espinoza,

who is assisting the government with institutional and investment aspects of the planning exercise with support from the Inter-American Development Bank (IADB). The overall planning project is coordinated by the environment and energy ministries. "Having an integrated management plan will make it possible to analyze the financial resources we will need and set priorities, phase by phase. At the moment, each institution goes to the financial authorities to request funds for its particular project. But the government doesn't have a procedure to harmo-

nize, approve or reject projects according to need and priority, to relate resources to requirements. Too many issues are being treated in isolation."

For Espinoza, rehabilitation of the Tarcoles basin is one of the biggest challenges facing Costa Rica. "Water management must take into account that a major objective for the near future is to develop a project to clean up this very polluted watershed. We're talking about a long-term cost of perhaps US\$1 billion over 10 years – which is a lot of money for a small country like ours."

There was no formal decision taken to use the ToolBox for planning purposes, explains Espinoza. Rather, it was a matter of having a GWP representative on the planning team who introduced fellow members to a variety of information sources

including the ToolBox. "I have found them to be attractive resources, very good tools to work with. Although I'm Costa Rican, I used to be a manager in the petroleum industry in Venezuela. I came to this water strategy project to study the institutional framework and see what improvements we might be able to make within it.

"But I am not a water specialist and the first thing I needed to do was to organize my thinking about water issues. I ended up dividing my document into that same three-part structure – an enabling environment, institutional framework, and management instruments. So the ToolBox provided a practical template for analyzing what is needed for good water management."

Environmental and agricultural economist Jaime Echeverría is also a member of the national planning team and a user of the ToolBox. His role is to analyze the demand side of the Costa Rican water equation, including use efficiency in agriculture, industry, households and other settings. He notes that Costa Rican agriculture is the largest user of water after electric power generation (which in any case releases water for other uses without altering it). Farms consume about five cubic kilometers of water per year – roughly eight times more than the water drawn for domestic purposes.

The problem is that agriculture, particularly sugarcane and rice production, isn't nearly as efficient in its use of water as it could be. Turning that situation around will be a key goal of the national plan.

"For me, the tools in the ToolBox provide a nice knowledge base on integrated water resources management. It's a great way to learn about what's going on in our countries – to find out about the experiences of others." By letter and number, he rattles off the three sections most useful in his work: A3 (five tools on financing and incentive structures); C3 (three tools on demand management and efficiency); and C7 (four tools on economic instruments such as water pricing and pollution charges).

While Echeverría likes the brevity of the tool texts, he finds the case study materials time-consuming to read. He also believes that the ToolBox still has too low a profile among water stakeholders in his country. "Not enough people know about it yet, including those in decision-making positions. Somehow you've got to direct traffic to the ToolBox. A bit of Internet spam (unsolicited advertising)," he says jokingly, "may be in order!"



Costa Rican agriculture is the largest user of water after electric power generation.

# Capacity-building: Key to local effectiveness

There is an urgent need to train professionals to understand what needs to be done and how to actually implement the range of processes involved in more sustainable and equitable water resources management. The following pages illustrate several important principles in building capacity for this approach and highlight progress around the world.

Throughout the world, awareness is growing that current approaches to water management are unsustainable and many countries are introducing major water sector reforms. But what policy changes should be made? How are new policies to be translated into laws and regulations? What are the best institutional arrangements? Often, the knowledge needed to answer such questions is just not there. Clearly, there is an urgent need to train professionals to help understand what needs to be done and how to actually implement the range of processes involved in the integrated approach to water

resource management – thus capacity-building goes hand-in-hand with reform.

Experience gained over the past two decades shows that networking and partnerships are the key to effective, wide-reaching capacity-building and that knowledge has to be disassembled, modified and recombined to fit local needs. Networks offer an alternative to the old model of one-way, North–South information flows. According to the United Nations Development

Programme (UNDP), the new motto is: “scan globally, reinvent locally.” This philosophy can turn networks into powerful tools for coordinating the design and delivery of capacity-building resources and services to local people and institutions

The International Network for Capacity Building in IWRM (Cap-Net) is a UNDP initiative and an associated program of the GWP, which leads the GWP’s capacity-building initiatives. It is committed to responding to demand, promoting local ownership and control, and working through partnerships where the achievement of common goals demands synergy and cooperation (see box).

## NETWORKS ACT AS FOCAL POINTS

The main strength of Cap-Net is its global network, which links capacity-building institutions across the world. “The South-South exchanges are a particularly significant achievement as they share experiences related to reform of developing water sectors,” says Paul Taylor, Cap-Net Director.

There are now twenty country and regional networks committed to capacity-building in the water sector and linked through Cap-Net for the sharing of expertise, experience and information. The network develops, adapts and shares training materials and carries out training and education activities in fields related to improved water management processes.

Strong links between the Cap-Net networks and the GWP regional and country water partnerships, together with additional links with key government implementing agencies, put the networks in an ideal position to act as focal points

## CAP-NET GUIDING PRINCIPLES

- Local ownership and control of the capacity-building process. This increases the relevance and sustainability of capacity-building and focuses attention on the need to build local knowledge centers.
- Strength through partnerships. Partnership among capacity building institutions is an effective strategy for sharing experience and skills and reaching a critical mass of expertise. A partnership approach maximizes use of limited educational and training capacity, enhances local delivery of capacity-building services and improves links between the capacity builder and implementing agencies.
- Response to demand. Capacity-building institutions and networks for capacity building improve impact and their own sustainability when they respond to the immediate needs and demands of water managers and decision-makers.



Photo: Gustav Emroth/Photoix

for information and training on strategic planning for improved water resources management.

In 2004, the extensive Cap-Net network of capacity-building institutions focused its activities on supporting capacity building for the creation and implementation of water resources and water efficiency strategies. The program encompasses training of trainers, awareness-raising and strengthening of partnerships. It is decentralized and operates through regional and country networks of capacity building institutions and, in parallel, collaborates closely with other GWP initiatives.

As part of this focus, Cap-Net provided support to African countries embarking on the IWRM planning process in a start-up workshop organized by the GWP's Partnership for Africa Water Development (PAWD) program held in Nairobi in March 2004 (see pages 12–16). The

workshop was attended by GWP regional staff and participants from the five countries in the PAWD program – Kenya, Malawi, Mali, Senegal and Zambia. Participants identified their countries' capacity-building needs, shared materials and tools available for strategic planning, and developed a capacity building plan. Three networks active in the region – the Nile Basin network, southern Africa's WaterNet and the West Africa network, WA-Net – were also represented at the workshop and will be able to provide ongoing support to the five countries.

Kojo Kpordze, Co-ordinator of WA-Net, summarizes the benefits of the workshop: "Everyone improved their knowledge of the IWRM planning process and we learned new strategies for identifying major stakeholders – a central part of the process. We made many useful personal con-

**Networks as focal points:**  
Cap-Net provided capacity-building support to African countries embarking on the IWRM planning process.

Getting the point: Students in an integrated water resources management training course go on a field trip in Switzerland.



tacts, which will help us to improve cooperation in our capacity-building efforts – especially between regional and country networks.”

“This initiative should have a spin-off effect, since the strategies and materials developed during the workshop and subsequent activities can be shared and adapted by other networks and countries,” comments Cap-Net’s Taylor. And the “spin-off” is already happening – for example through the capacity building workshop held in Zambia in August (see page 16).

#### ASSESSING THE STATUS OF IWRM

The first step towards building capacity for national IWRM plans is to find out what already exists, including current knowledge and skills that could be further developed. In 2003 and 2004, seven networks performed an assessment of the status of IWRM in their regions and identified the most important resource centers. In Asia, assessments of current IWRM status and capacity-building needs have been completed for Indonesia, Laos, the Philippines and Vietnam and network members have compiled databases of useful resource centers. AwareNet, the regional capacity building network for the Arab Region, has conducted similar assessments for western Asia.

Excellent progress has also been made in Latin

America, where the regional network (LA-WETnet) has completed an inventory of resource centers and assessed the IWRM status of nine of its member countries. As part of this initiative, the Argentinian network, ArgCapNet, assessed the country’s current capacity-building institutions and looked at the demand for training, with a view to tailoring post-graduate programs in water management to local needs. The Central American Water Resource Management Network (CARA) has assessed IWRM capacity and priorities for Costa Rica, Nicaragua and Guatemala and is conducting a similar assessment for El Salvador and Honduras.

In South Asia, SaciWATERs (South Asia Consortium for Interdisciplinary Water Resources Studies) is preparing an inventory study of the main resource centers for capacity building in sustainable water management. They have assessed current tertiary education programs in water resources management in Bangladesh, Bhutan, India, Nepal, Pakistan and Sri Lanka, and have looked at the types of jobs the graduates are going into. The results show that existing courses are heavily biased towards engineering and most lack a historical or social science component. There is little contact with the field and “real life” problems of water scarcity and graduates tend to leave with a government-oriented

or top-down approach to water management.

“The courses need to evolve and expand their focus if they are to respond to real problems and needs,” comments Jasveen Jairath, Regional Coordinator of Cap-Net South Asia. “Graduates need a broader curriculum, including social and economic aspects of water management, and more field-based training, where they can learn the value of local traditions and knowledge.”

SaciWATERS is now looking at different options to improve the quality of training, for example, setting up a virtual water resources academy or establishing a new regional center of excellence. Members are also looking at how they can increase demand in the workplace for the new generation of water professionals.

#### TRAINING THE TRAINERS

Assembling the skills and knowledge needed to support government and decision-makers in improved water governance and other aspects of water resources management requires active programs of research and training. The train-the-trainer approach allows for the development and delivery of global-level training for network members, starting a cascade effect, with courses

being delivered by the networks at the regional and local level. “So far, we have delivered courses on three topics: basic principles, gender mainstreaming, and legal and regulatory frameworks,” says Taylor, “and we are preparing additional topics, including planning, institutional arrangements and negotiation skills. We have involved over 200 trainers who are committed to delivering training courses at the local level.”

The cascade effect is working well in Latin America, where LA-WETnet and the Central America Network of Engineering Institutions (REDICA) trained more than 60 trainers in Mexico and Peru in 2003–2004, with further courses planned in Argentina, Bolivia, Brazil and Mexico in 2005. CARA sent three professors to the course held in Toluca, Mexico and is planning a Central American version to be held in Guatemala in 2005.

David Bethune, CARA Project Manager, explains the importance of tailoring capacity building programs to demand. “In Central America, IWRM must be put into the context of a highly groundwater-dependent region. Groundwater not only supplies most of the water for human needs, but also supports the region’s

## Latin America: The need for change

THE ‘DRY’ STATISTICS suggest that South America is blessed with ample water supplies: the continent possesses around 28 percent of the world’s renewable water resources, yet has only 6 percent of the world’s population. However, the basic figures mask huge variations in water availability within and between countries.

Around 23 percent of the continent suffers from permanent or seasonal drought, and the threat of serious flooding hangs over many major cities. Around 60–100 million people still lack access to clean drinking water and basic sanitation. High rates of population growth and urbanization have led to predictions that, by 2025, 70 percent more water will be needed to support human lives and livelihoods. Such increasing demand will, inevitably, lead to con-

flict between competing water users, including the natural environment.

Water resources planning in South and Central America has traditionally lacked vision. Rather, it has simply responded to crises such as floods, droughts and public health emergencies. Adoption of forward planning and a more holistic approach to managing water resources will depend on collecting data and acquiring greater knowledge about integrated processes in the regional context. There are now four Latin American capacity building networks (linked through Cap-Net) and their members are making good progress in coordinating the region’s efforts to build capacity relevant to local needs, thereby promoting more sustainable use of water resources.



Capacity-building networks have facilitated one global and six regional courses on gender mainstreaming in water resources management involving more than 150 water professionals.

surface waters, wetlands and lowland ecology. Groundwater quality and quantity is under threat and we need to tailor our training mainly to the science of hydrogeology. Scientists and decision-makers also need to learn to integrate their skills within the entire socioeconomic, legal and political framework.”

#### UNIVERSITY PROGRAMS ESTABLISHED

Working closely with the Gender and Water Alliance, a GWP Associated Program, capacity-building networks have facilitated one global and six regional courses on Gender Mainstreaming in water resources management involving over 150 water professionals. Training materials have been translated into several languages and fully adapted to local conditions.

The Central American Water Resource Management Network (CARA) network links several Central American universities offering Master’s programs in IWRM. So far, forty-five students have attained their MSc and hundreds of water sector professionals have attended short courses. Creating local ownership and control of

the capacity building process is an important objective here, as David Bethune explains. “While our MSc programs emphasize the science of hydrogeology, they also offer modules in economics, water law, institutional aspects and community development. Our students are mainly employees of key national government agencies working in the water resource sector.

“All students work with government bodies to conduct applied thesis projects that address water resource issues of national importance. The same government agencies were consulted on the design of the programs and actively participate in

#### ADDITIONAL RESOURCES FROM CAP-NET (WWW.CAP-NET.ORG):

- 35 training materials
- 8 network management tools
- 38 water management instruments
- 37 publications and case studies
- information on 277 resource centres
- information on 58 training courses





## THE IWRM TUTORIAL

What does integrated water resources management mean exactly? Why is it important? What happens without it? Why should we introduce it? Why isn't everybody doing it already?

Questions like these are answered in detail in high-level post-graduate courses and train-the-trainer programs. The answers to these and other questions can be found in the Toolbox. Drawing information from the Toolbox and other sources, Cap-Net has published a tutorial that provides a basic introduction to sustainable water management that can be tailored and adapted for use all around the world.

The IWRM Tutorial is a brief but colorful presentation that explains IWRM concepts and gives an overview of the interactions between water uses in the environment, agriculture and the water supply and sanitation sector. It is aimed at policy makers, water managers, trainers and educators who want a basic understanding of integrated approaches.

A review of the tutorial conducted earlier this year yielded many positive comments such as: "It explains IWRM in a nutshell; I like the

idea of having a CD-ROM interactive tutorial" and "It is very useful as an introductory presentation for audiences with no previous training in integrated water management." Most of the recipients have distributed the tutorial within their own organization, and have used it for workshops, seminars, training of practitioners and to support advocacy. "More informal feedback tells us it has been used by UNDP for training its own staff (there is a link to the tutorial from the UNDP website) and by the World Bank Institute at their recent global training workshop," says Paul Taylor, Cap-Net Director.

The tutorial will shortly be updated with improved navigation and will be available in Portuguese as well as English, French and Spanish on the Cap-Net website: [www.capnet.org](http://www.capnet.org)

The IWRM Tutorial is a brief but colorful presentation that can be viewed on-screen or projected for group meetings.

Participants in a course on institutional arrangements for sustainable water management in Cape Town, South Africa.



associated short courses and conferences.” Courses are currently offered in Costa Rica, Guatemala and Nicaragua and will be introduced in the next few years in El Salvador and Honduras.

In southern Africa, WaterNet has introduced a Master’s program at the Universities of Zimbabwe and Dar es Salaam. It is a broad program with optional specialization tailored to a wide spectrum of postgraduate students, including lawyers, economists and social scientists. Fellowships are available through WaterNet and fourteen students have already graduated. In the future, specialist modules offered with partner institutions in the region are planned, thereby enhancing the practical relevance of the program.

SaciWATERs has successfully completed studies on the current status of higher education in water resources in six South Asian countries. The study is available as a publication and reveals many crucial issues, such as weak integration of ecological sustainability, institutional dimensions, gender issues and water resources management in water education. On the basis of this study, the network has developed a collaborative proposal for an inter-country program on regional capacity building for water management and gender mainstreaming in South Asia.

In Vietnam, VietCapNet has organized two short courses on GIS applications in water resources management and on hydrology and water resource modeling. These are targeted at

lecturers and professors at the Hanoi Water Resources University and research staff at the Institute of Water Resources Research. The courses aim to introduce new methods, tools and approaches to water professionals. The network has planned a train-the-trainer course on agricultural and rural water supply and sanitation and is also conducting short courses on the application of models to the broader aspects of managing water resources.

The number of capacity-building networks has grown dramatically since Cap-Net was established in 2002. But efforts to address the huge capacity gap must be expanded quickly if new water laws and governance systems are to be based on truly integrated principles. Most regional and country networks for capacity-building have no external funding and have to recover their own activity costs. Sourcing operational funds is one of the challenges facing networks as they move from being committed partners to becoming effective implementers.

“We are asking the networks to focus on increased service delivery to support sustainable water management,” says Taylor. “Different stakeholders are being targeted, ranging from students and technical experts to local government officers and key national politicians.

“Assessing impact is difficult, but we believe that delivery is already beginning to scale up as a result of our activities.”

For more information, contact  
the GWP Secretariat or your  
nearest regional office:

#### REGIONAL CONTACTS

##### Australia

[awp@awa.asn.au](mailto:awp@awa.asn.au)

##### Caribbean

[jleeyoung@niherst.gov.tt](mailto:jleeyoung@niherst.gov.tt)

##### Central Africa

[jmossete@yahoo.fr](mailto:jmossete@yahoo.fr)

##### Central America

[gwpc@gwpcentroamerica.or](mailto:gwpc@gwpcentroamerica.or)

##### Central Asia and the Caucasus

[i.babaev@cgiar.org](mailto:i.babaev@cgiar.org)

##### Central and Eastern Europe

[gwpc@shmu.sk](mailto:gwpc@shmu.sk)

##### China

[duzhk@iwhr.com](mailto:duzhk@iwhr.com)

##### Eastern Africa

[gwpena@nilesec.org](mailto:gwpena@nilesec.org)

##### Mediterranean

[secretariat@gwpmed.org](mailto:secretariat@gwpmed.org)

##### Southeast Asia

[secretariat@gwpsea.org](mailto:secretariat@gwpsea.org)

##### Southern Africa

[secretariat@gwpsa.org.zw](mailto:secretariat@gwpsa.org.zw)

##### South America

[gwpsamtac@cepal.cl](mailto:gwpsamtac@cepal.cl)

##### South Asia

[n.abeywickrama@cgiar.org](mailto:n.abeywickrama@cgiar.org)

##### West Africa

[watac@fasonet.bf](mailto:watac@fasonet.bf)



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