



Water for Life

Unlocking the potential for healthy river basins to sustain people & nature



WATER & NATURE INITIATIVE





IUCN Water Programme

The IUCN Water Programme

The IUCN Water Programme delivers outcomes for people and nature from implementation of sustainable river basin management. The Water Programme influences, encourages and assists societies throughout the world, to conserve the integrity and diversity of nature and to ensure that any use of water resources is equitable and ecologically sustainable. The goal is to achieve healthy river basins that provide ecosystem services to sustain people and nature.

Across the globe, the IUCN Water Programme demonstrates how well-managed river basins and aquatic ecosystems provide goods and services that are essential to reducing poverty. These services provide the basic resources on which many

livelihoods depend. In its field projects, IUCN involves local communities, research organisations, expert networks, governments and non-governmental organisations to turn the principles of ecosystem management into sustainable solutions.

The result is relevant knowledge and know-how needed to advise natural resource managers around the world. This helps the development of policies, agreements and practices that allow healthy ecosystems to continue to contribute to economies, human well-being and biodiversity. By using a partnership approach and creating tangible results, IUCN remains at the forefront of enabling the changes needed for sustainable water resources management.

WANI: Catalysing Change in Water Management

The IUCN Water & Nature Initiative (WANI) develops and demonstrates practical approaches to the implementation of Integrated Water Resources Management (IWRM). It supports and catalyses national water reforms and builds needed capacities in local communities.

The first phase of WANI worked in 12 river basins and in over 30 countries worldwide from 2001 to 2008, with funding exceeding \$40m. Core funding was provided by the Dutch Ministry of Foreign Affairs (DGIS).

WANI demonstration projects showed how to improve the well-being of both people and ecosystems using sustainable

How the IUCN Water & Nature Initiative works

Learning & Leadership

Catalytic partnerships and communications

- Learning and communities of practice catalysing more widespread and effective IWRM implementation
- Demand for ecosystem service solutions expanded by publications, online services & media impact
- Network of change leaders championing transformation based on mainstreaming of ecosystem services

Economic Development & Sustainable Finance

The business case for ecosystem services applied from watershed to national levels

- Incentives delivering new investment in watershed services and supporting livelihoods
- IWRM and Multi-stakeholder platforms using strategic economic analysis in planning and decisions
- Water and ecosystem asset values informing national strategies for economic growth & water development

Good governance & Stakeholder Participation

Governance enabling national and regional impacts

- Multi-stakeholder platforms shaping consensus and making decisions more equitable across scales
- National legal and institutional reforms mainstreaming ecosystem services
- International basin organisations using information and dialogues to catalyse benefit sharing

Ecosystem Services & Water Security

Consolidates change reaching national & regional levels

- Country-wide initiatives building water security based on sustainable ecosystem management
- Integrated river basin management rolled out nationally and implementation underway
- Poor people expanding livelihood assets, including water & sanitation and income from small and medium enterprises
- Ecosystem services integral to local and national strategies for climate change adaptation

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river basin management. WANI projects are partnerships of local communities, IUCN members, civil society and governments. WANI helps to catalyse change, by integrating into practice development priorities, ecosystem services, good water governance, stakeholder participation, sustainable financing, learning and leadership

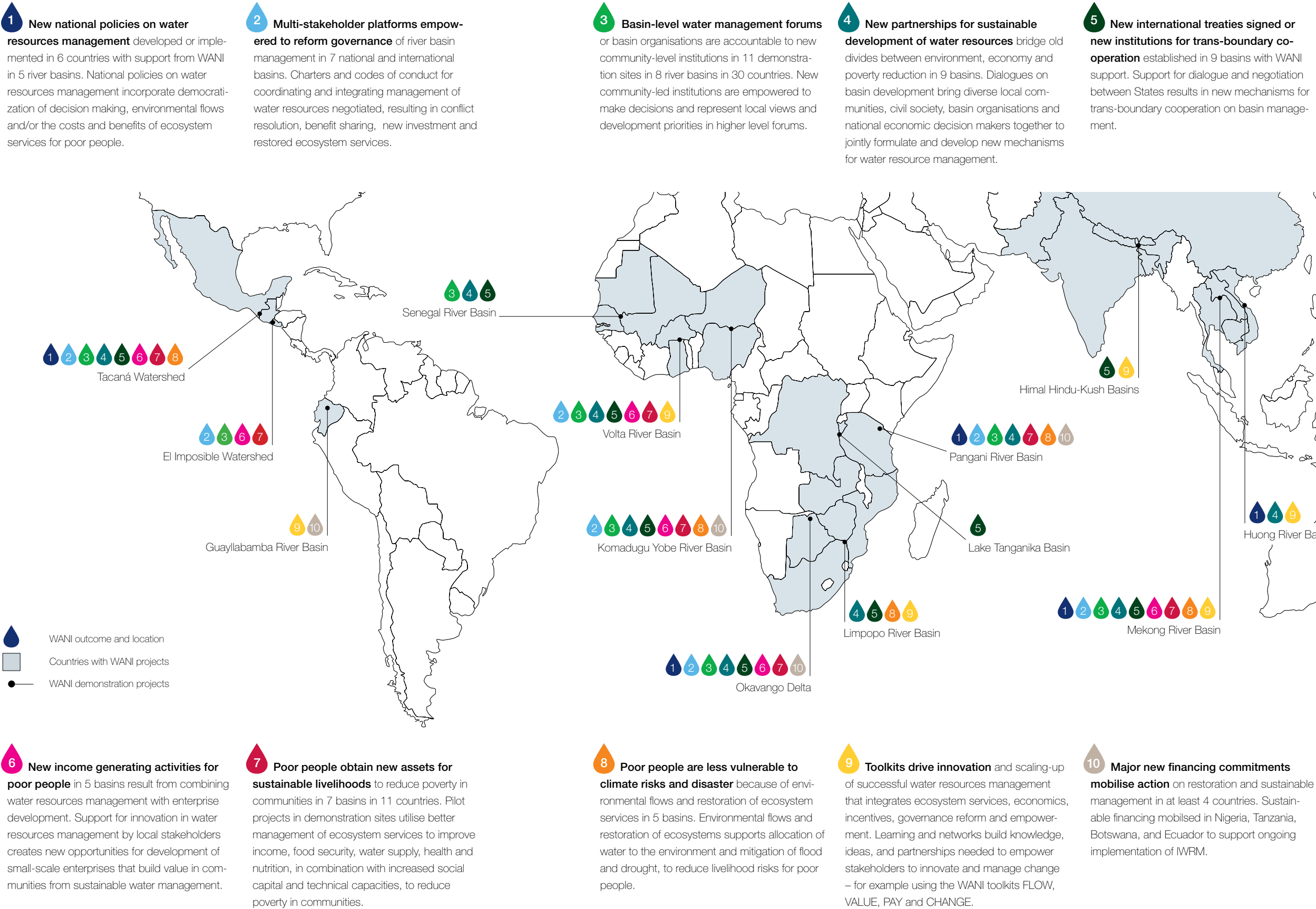
Outcomes Delivered for People & Nature

WANI works with what works to deliver sustainable solutions for water resources management. By applying what works through its local and global networks of governments, members and partners, IUCN is empowering action and enabling healthy river basins to sustain people, economies and nature. WANI focused on local and national priorities and adapted the principles of ecosystem management to realities on the ground through learning by doing. Through coalitions and engagement in global policy processes for water, environment and development, results guided investment strategies and policy reform.

The first phase of WANI delivered outcomes encompassing ecosystem services, water security, poverty reduction, governance reform, new financing for basin restoration and transboundary cooperation

What has WANI done?

The map illustrates 10 of the many achievements of the WANI projects around the world. Each project has different results depending on local needs.



Demonstrating Results

Ecosystem Services & Water Security

IUCN demonstrated the sustainable use of ecosystem services in water management, leading to implementation of IWRM through learning by doing. Services delivered by nature are integral to water security, which is needed for poverty reduction and economic growth.

The micro-watershed councils in the Tacaná watersheds, on the Guatemala-Mexico border, used ecosystem services to catalyse development. Action on watershed restoration has led to innovation in

farming and new enterprises that are creating jobs for young people. The councils made protection of groundwater springs a priority, attracting new investment in distribution systems for safe water supply to households.

Dams and drought have devastated the flow of the Komadugu Yobe River (Nigeria) to Lake Chad, strangling the livelihoods of fishers, farmers and herders. Rising conflict and crisis led to action. With WANI support, stakeholders negotiated a plan to restore the river and demonstrated practi-

cal ways that ecosystem services build security for local communities. Convinced, governments are directing a flow of new investments into a trust fund for restoration of the Komadugu Yobe.

WANI demonstrated learning by doing needed for implementation of sustainable water management. Support for integrating ecosystem services ensures that IWRM leads to positive outcomes for both human well-being and environmental sustainability.



STORY FROM THE FIELD

Communities in Lao PDR made their wetlands pay dividends

Rural communities of Attapeu, in Lao PDR, were less than poor. They lived in a forested swamp. Half the year their homes were submerged. They gathered fruit and caught barely enough fish to survive. Malaria was rife, malnutrition rampant. The conventional solution: clear land; drain the swamps; plant rice. But disrupting traditional livelihoods and diets would leave poor rural communities sicker than before. So WANI and its partners worked with local villagers to determine the nutritional value locked in their wetland, to better conserve and harness it. With the groundwork laid for a better diet, locals began to document the state of their own fish and plant foods. Villagers catalogued species' breeding habits and availability. Shocked to find key species in decline, villagers created wetland conservation zones, protecting key habitats from fishing for a period, and then restricting catches afterwards. The abundant fishery results of these 'sweat equity' investments are so astounding that word is spreading around the province.

Demonstrating Results

Environmental Flows

IUCN demonstrated application of environmental flows to support the health of aquatic ecosystems and the well-being of people who depend on them. Where dams and abstraction regulate flows, environmental flow regimes integrate the needs of people and nature according to the priorities negotiated by stakeholders.

On the Tempisque, Huong, Limpopo and Pangani, from Costa Rica to Vietnam to Zimbabwe to Tanzania, WANI helped integrate environmental flows into policy and practice. Stakeholders, basin managers and policy makers alike learned, using the WANI toolkit FLOW, that including ecosystems in water allocation decisions can mitigate the impacts of dams and support development.

WANI demonstrated that environmental flows catalyse development of knowledge, capacities and institutions needed to move beyond IWRM planning to implementation. In the Huong Basin (Vietnam), a flow assessment made clear how changes in river flow affect both economic returns and ecosystem health. Basin authorities were able to determine which flow options

accommodate economic goals while protecting downstream ecosystems and their services. As a result of the increasing awareness and capacity created by the flow assessment, environmental flows have been incorporated into planning for the Huong Basin by the provincial People's Committee and, at national level, the government has included environmental flows in the natural resources strategy and in water sharing plans.

Implementation of the 2002 Tanzanian National Water Policy was piloted in the Pangani Basin (Tanzania) through the assessment of flows needed for all sectors including the environment. Stakeholders are gaining understanding of social, economic and environmental trade-offs for different water allocations. Alongside the ongoing creation of new stakeholder forums beginning to coordinate water management from community to basin levels, the Pangani Basin Water Office is now planning its water future with a view to making the Pangani and its people more resilient to the growing threat of water scarcity. IUCN is helping other basins in Tanzania to follow suit.

WANI has supported learning on environmental flows in Asia, Africa and Latin America. This has catalysed the incorporation of environmental flows into river basin projects supported by the Global Environment Facility (GEF), as well as adoption into legal frameworks, including the draft water law of Costa Rica. Globally, IUCN and partners are mobilising learning, knowledge sharing and adaptation of environmental flows approaches to the regional context through the Global Environmental Flows Network (www.eflownet.org).

Environmental flows uses negotiation among stakeholders to improve river basin sustainability, by integrating ecosystem needs with priorities for poverty reduction and economic development. Strengthening support for application of environmental flows in policy and law drives development of the knowledge, capacities and institutions needed to implement IWRM.

STORY FROM THE FIELD

Traditional knowledge and science meet to restore river flows in Nigeria

A lifetime spent fishing made Alhaji M. Ibrahim Chedi wise to his river. He recalled when "the river was in the hands of God, water remained in all the channels for about 100-140 days, yielding big catches throughout the rainy season." But today that catch is small, scarce and unhealthy: a reflection of the altered river flow. "Now the rivers depend on dams and man has taken over the control from God. Access to water is less than 50% what it use to be." Starved of food and habitat, fish can't reproduce. Some might dismiss his illiterate traditional knowledge as 'amateurish.' But given a voice, his views squared with science. Fisheries specialists and peer-reviewed papers backed him up. Economists agreed that fish loss threatened the economy. As they absorbed his perspective, a basin water audit gained traction. Dialogues yielded results. Officials with river authority spoke on how and when to restore the flow back to its original patterns. Chedi grew overwhelmed by joy and could not sleep for dreams of a day when the fish return with the river.



Demonstrating Results

Climate Change Adaptation

IUCN helped governments, communities and river basin authorities adapt to climate change. Ecosystems are maintained as infrastructure that reduces vulnerability to floods, droughts and storms under water governance that empowers water users in decision making.

In the Pangani Basin (Tanzania), climate change is making water scarcity worse. To adapt, authorities will enlist representatives of competing water users – farmers, hydropower, fishers, residents and ecosystems alike – to help decide how to allocate water. Combining a local sense of who needs what, when and where with scientific data on how much water is available now and might be available under climate change scenarios, the collaborators are piloting a new, and flexible, approach to informed decision-making. They are learning to allocate water within the limits of the river’s flow, including to ecosystems in the basin that store water, regulate flows and support livelihoods. Through the support of WANI and others, better water governance and best practices will reduce pressure on ecosystems and start to make communities and the economy in the Pangani less vulnerable to climate change.

In the Tacaná watersheds (Guatemala, Mexico), degradation and climate change are raising the risk of devastating flash floods. Disaster propelled communities to take action. With support from WANI, they built micro-watershed councils to lead watershed restoration and development that met their priorities. Empowerment of community-owned institutions is making watersheds more secure and livelihoods less vulnerable.

Climate change causes widespread vulnerabilities and significant impacts on water resources. It is a high priority to implement sustainable water management along with empowerment of stakeholders in water governance for climate change adaptation. Planning for adaptation cannot rely solely on conventional engineered infrastructure, but should incorporate restoration and management of the natural infrastructure provided by ecosystems.



STORY FROM THE FIELD

Cooperation in the Pangani Basin adapts to a changing climate

It didn’t take scientists to announce that climate in the basin was changing. Fast. Everyone could see it. For the length of the Pangani River’s 500 km course, no one could recall a time with less water. Past currents flowed high and strong and guaranteed two growing seasons even in dry years. Now flows had decreased, and people were blaming each other. Subsistence farmers blamed dry river beds on the growing number of large commercial plantations. The commercial farmers accused thirsty towns of waste. Towns complained that hydropower dams lost 70% of power production capacity to upstream withdrawals. Farmers warned salty tides were invading upstream. These initial conflicts among users were not necessarily bad. Friction created energy. The Pangani Basin Water Office and IUCN harnessed that friction to spark more light than heat. They worked with water users and technical experts to seek data about current and future water use scenarios for the basin. From there, people could better understand the choices they faced among different water allocations and then work towards consensus based on priority needs and transparency. By sitting down together, they could find solutions. With better knowledge and forums for negotiation, they can rebuild the health of their river basin to get ready for climate change.

Demonstrating Results

Good Governance & Stakeholder Participation

IUCN supported reform of water governance needed for equitable water resources development that integrates ecosystem services and drives implementation of IWRM. At community, basin, national and transboundary level alike, multi-stakeholder platforms empower stakeholders to agree on rights, roles and responsibilities and to negotiate effective water policies, laws and institutions.

Transformation of water policy and management comes from consensus building in multi-stakeholder platforms. In El Salvador, micro-watershed councils negotiated management plans that resulted in coordination of local priorities for social and economic development with watershed management for the first time. In Botswana, the Okavango Delta Management Plan used stakeholder participation to build consensus among groups who would otherwise compete for control of the Delta’s resources. Widespread ownership by stakeholders led to adoption of the management plan into national economic planning and created a precedent for the entire Okavango River.

In the Mekong, region-wide and national dialogues were convened to help build multi-stakeholder participation in water decisions. In a region used to centralised decision making over water, civil society, governments, the Mekong River Commission and multi-lateral development banks joined to review strategies for hydropower and water resources development. The process built understanding of rights and responsibilities and increased stakeholder consultation.

In the Volta River Basin, new, multi-stakeholder institutions formed to coordinate transboundary IWRM at sub-basin, national and basin-wide scales. Transboundary community forums led to resolution of local water conflicts across the Ghana-Burkina Faso border and resulted in the negotiation of a transboundary Code of Conduct. IUCN supported agreement by all six Volta-basin states of a Water Charter to guide the newly-formed Volta Basin Authority. These successes were mirrored in the Komadugu Yobe River (Nigeria) in the Lake Chad Basin, where a Water Charter was negotiated among water users. Additionally, IUCN supported formation and

operationalisation of the Lake Tanganyika Management Authority amongst Burundi, DR Congo, Tanzania, and Zambia.

Water policies and laws should enable transparent definition of rights, roles and responsibilities, including sufficient allocation of water to sustain healthy ecosystems. Multi-stakeholder platforms help to build consensus and to coordinate water resources development and ecosystem management, encouraging benefit sharing at local, basin, national and transboundary levels.



STORY FROM THE FIELD

Initiating dialogue to decide the future of the Mekong

These are critical times for Mekong River currents. Upstream: China, Laos, Myanmar and Vietnam plan massive hydropower dams. Downstream: Thailand and Cambodia consider major irrigation diversion projects. Urban thirst is unprecedented. Millions depend on Mekong waters. But few had a say over its future, until now. Unless river development was representative, it could not be sustainable. Decision-making could only improve at every scale if it tapped the knowledge, wisdom and ideas of competent and legitimate stakeholders. Based on that approach, 160 officials, academics, businesses, communities and NGOs met on the river banks in Vientiane. They shared and discussed the challenges facing the river basin’s population. Thus began the Mekong Region Waters Dialogue. The Dialogues offered rare exposure to open debate, deliberative approaches, and “a fantastic opportunity to learn about others,” said Olivier Cogels, the Mekong River Commission’s former chief executive officer. “All actors need to learn about each other and share their views.”

Demonstrating Results

Economic Incentives & Sustainable Finance

IUCN helped to build the economic case for investment in ecosystem services and for sustainable financing of IWRM. Application of economic tools enables development of the value proposition for investment in river basin management that is the basis for mobilising financing and incentives needed over the long term.

The WANI toolkit VALUE showed basin managers, government planners and economic analysts how to account for the economic values of ecosystems and make a business case for using

ecosystem services in IWRM. This value proposition for the Okavango Delta showed that ecosystem services from the Delta accounted for 2.6% of national GNP, convincing economic planners of the priority needed for conservation.

In the Tacaná and El Imposible – Barra de Santiago watersheds in Central America, IUCN provided training to micro-watershed councils and small enterprise operators to build skills and support mechanisms needed for projects to become self-financing. In the Komadugu Yobe Basin (Nigeria), reform of water governance in

the basin and consensus on priorities for basin management convinced the federal and state governments to launch a \$125 million trust fund for long-term implementation of IWRM.

The WANI toolkit PAY showed how market-based incentives are part of sustainable financing for IWRM. In Ecuador, the Quito Water Fund (FONAG) had built an investment prospectus to attract contributions from the public and private sectors to a long-term trust fund that aims to secure the quantity and quality of water supplied to the City of Quito from the Guayllabamba River Basin. IUCN worked with FONAG and partners to pilot the use of the fund to provide payments for protecting and maintaining ecosystem services as incentives for best practice water management in the basin.

Dividends from investing in watershed services need to account for the benefits of ecosystems and water security for livelihoods and economic development. Economic planning should use environmental accounting to guide sustainable financing of IWRM and incentive schemes that reward those managing watershed services sustainably.



STORY FROM THE FIELD

Young Guatemalan entrepreneurs who squeezed crops from drops

A few years ago a small Guatemalan group called Jóvenes en la Misión (JEM) heard of a grant for promising grassroots projects. The group answered the call. It had 25 members. The \$1,000 award money wasn't promising, but recognition was. JEM's proposal was "Drip Irrigation in Greenhouses to Produce Flowers with Teenagers." Against odds of 156 entries from 34 countries, it won. The provincial government took notice. Mayors took notice. Soon they scaled up. With help from WANI to guide through the ways of business, JEM won a US\$75,000 loan from a leading producer of irrigation tube systems. They built 19 greenhouses with drip irrigation to produce flowers and vegetables like tomatoes, peppers and cucumbers. By strategically squeezing profits from every carefully-used drop of water, JEM is creating jobs while training people to manage water wisely. Now with 2,500 members throughout northern Guatemala, JEM is giving people the skills they need to run their own businesses and building a viable and sustainable future for young people in poor communities.

Demonstrating Results

Learning & Leadership

IUCN supported learning and innovation in IWRM based on best practice around the world and lessons from WANI demonstration basins. Sharing knowledge and experience builds capacities that empower stakeholders to scale-up and adapt what works to national policy needs and local development priorities, and to then lead implementation of IWRM.

The WANI toolkit series brings together key water management, governance and economic tools for IWRM as a resource for learning and professional updating. Each uses case studies to demonstrate how mainstreaming ecosystem services strengthens outcomes from IWRM (see overleaf of the WANI toolkit series). The toolkits are widely and freely distributed and are used in training courses for water professionals, including intensive learning support for GEF river basin projects.

The FLOW toolkit was translated into 10 languages, including Spanish, French, Portuguese, Vietnamese, Khmer and Chinese, using a multi-stakeholder process to build national constituencies for environmental flows. New dialogue and partnerships emerged, notably in China

where the Ministry of Water Resources (MWR) translated FLOW and worked with the Yellow River Conservancy Commission and IUCN to promote use of environmental flows at senior levels in government and to engage in new pilot activities.

Learning is a means of empowerment in WANI. In the Senegal Basin, learning built capacities enabling participation in consultations on basin development by formerly excluded grassroots stakeholders. In the Mekong region, grassroots learning has been mobilized by Tai Baan, a process of villager-led research. With locally-owned knowledge, communities are empowered

to act as their own advocates in otherwise expert-driven decision processes. In the Mekong River Basin, this led to suspension of development poised to destroy fishing livelihoods. WANI helped to network Tai Baan and supported the uptake by new communities in the Mekong Basin.

Capacity building that empowers stakeholders at all levels to integrate ecosystem management and water resources development supports changes in policy and practice needed to improve river basin sustainability. Learning should support innovation and adaptive management needed to scale-up best practice and enable change leadership that will accelerate implementation of IWRM.



STORY FROM THE FIELD

Where villagers import river authority and export fishery health

In late April and May, Thailand's Songkhram River, a tributary of the Mekong, used to flood the surrounding forests. Fish gorged on rotting vegetation and insects. As the waters receded in September, fishermen scooped up the fleeing fish to make pla dek, a pungent, fermented fish paste. Nowadays, though, local pla dek makers must import fish. The forest had been stripped, converted into rice paddies. Aquatic life plummeted. "We felt powerless," recalled a lifelong fisherman from the village of Ban Tha Bor. Not for long. To document vanishing flora and fauna, villagers took to tai baan (villager-led) research. Soon, 250 villagers catalogued their loss, converting photographs of specimens into an illustrated, widely distributed catalogue. Tai baan set out to rebuild local expertise and articulate nature's value to authorities. But the process sparked a conservation movement. It honed skills to protect resources from unwanted development and their own overexploitation. It invested villagers with the will, conviction, knowledge and authority to establish fish conservation zones and rules on how much to take from the forest.

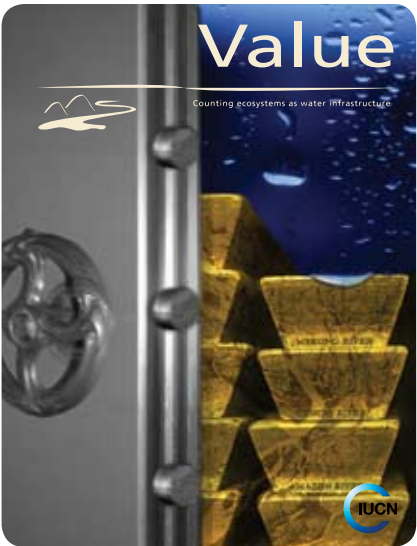
The WANI toolkit series



The development of toolkits forms a key element to supporting the establishment of legal, economic or outreach instruments. They are at the centre of the learning process, combining various learning strategies such as telling stories, teaching, testing new ideas, staff exchange and apprenticeships. Increasingly, learning is used to assist practitioner networks and support professional updating.

- FLOW – The Essentials of environmental flows
- PAY – Establishing payments for watershed services
- VALUE – Counting ecosystems as water infrastructure
- CHANGE – Adaptation of water resources management to climate change
- RULE – Reforming water resource governance
- SHARE – Managing waters across boundaries
- NEGOTIATE – Reaching agreements over water

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<http://www.iucn.org/resources/publications>



IUCN Water Programme 2009-2012: Building Impacts

The IUCN Water Programme delivers outcomes for people and nature from implementation of sustainable river basin management. With global networks of demonstration sites and partnerships in place, the Water Programme is able to rapidly and extensively integrate experience and lessons from the field with learning and policy.

IUCN is assisting countries to implement IWRM, develop governance reforms and establish financing strategies for water resources that address ecosystem needs and development priorities. With IUCN members and partners, the Water Programme is catalysing wider uptake of field-tested applications of the ecosystem approach, to encourage sustainable use of water resources and to build water security. As application spreads, communities and governments are better able to protect ecosystems, reduce poverty by strengthening water and food security, adapt to climate change and generate new economic opportunities.

The Water Programme is supporting the 2009-2012 programme of IUCN through contributions to the Core Programme Area of Conserving Biodiversity and the four Thematic Programme Areas of Changing the Climate Forecast, Naturally Energising the Future, Managing Ecosystems for Human Well-Being and Greening the World Economy.

The Water Programme delivers results through close collaboration with IUCN regional programmes and by working with IUCN members, Commissions and diverse partners in the public and private sectors and in civil society. The Programme is active in coalitions and strategic partnerships needed to scale-up impacts, including:

- The Global Water Initiative – a consortium of seven development and environmental NGOs working in Central America, West Africa and East Africa to improve water services and water resources management for the poor in rural communities

- Water for Schools – a coalition aiming to support the Millennium Development Goals by providing environmental education and safe water supplies and sanitation in schools
- The Ramsar Convention – the multi-lateral agreement on the conservation and wise-use of wetlands
- The World Water Forum – participation in a global multi-stakeholder forum on water policy convened by the World Water Council that brings together governments, civil society and the private sector
- NeWater and Xerochore – a consortium of organisations working on adaptive water management in the face of climate change and assisting with the development of a drought policy for the European Union

A key platform for building impacts in 2009-2012 is the second phase of the IUCN Water & Nature Initiative.



WANI-2: Expanding Uptake

The second phase of the IUCN Water and Nature Initiative (WANI-2) is scaling-up implementation of IWRM from demonstration projects to country-wide initiatives. Scaling-up is enabled by IUCN using its networks of members and partners, its engagement with governments and policy processes and its ability to build bridges between practice and policy across scales.

The goal of WANI-2 is the ‘mainstreaming of ecosystem services into water management, planning and policies, to support sustainable use of water resources for poverty reduction, economic growth and protection of the environment.’

Outcomes targeted by WANI-2 are summarised below. Outcomes are delivered through a demand-driven project portfolio that has been designed and developed through extensive consultation with partners and IUCN members. The portfolio is aligned to national and regional priorities and strategies for environment, economic development and poverty reduction.

WANI-2 will work in 8 regions worldwide: South America, Meso-America, West & Central Africa, Eastern & Southern Africa, the Middle East, Asia and Oceania.



WANI-2 in Latin America

WANI developed three demonstration projects in Latin America in the first phase. These were in the Tacaná watersheds (Guatemala-Mexico), the Barra de Santiago – El Impossible watersheds (El Salvador) and the Guayllabamba River Basin (Ecuador).

In Tacaná and El Impossible, WANI worked intensively with micro-watershed councils to integrate sustainable livelihoods, small-scale enterprise development and water resources management. Experience there and from an environmental flows pilot in Costa Rica was the basis for WANI support to regional-level dialogues on IWRM and climate change adaptation. In the Guayllabamba River Basin, IUCN supported an assessment of the feasibility of using payments for ecosystem services.

The payments are to be used as incentives for sustainable management of the high-altitude paramo ecosystems that supply drinking water to the City of Quito.

Under WANI-2, IUCN is building on experience and lessons from these demonstrations to:

- scale-up application of micro-watershed governance for water resources nationally and support bi-national coordination of watershed management (Guatemala, Mexico).
- build local coalitions and coordination of climate change adaptation in transboundary river basins (Guatemala, Honduras, El Salvador).
- demonstrate ridge to reef implementation of IWRM in watersheds of the

Mesoamerican Barrier Reef System (Guatemala, Honduras, Belize, Mexico).

- strengthen agreements on water resources management in transboundary river basins (Meso-America).
- demonstrate payments for ecosystem services and build a regional capacity building network (Meso-America).
- scale-up payment schemes for watershed services in the tropical Andes (Ecuador, Peru).
- demonstrate implementation of environmental flows (Chile).
- adapt water management practices to climate change in glacier-fed rivers (Peru).
- support implementation of a regional IWRM strategy for the Andean Community (Andes countries).



WANI-2 in Africa

In the first phase of WANI in eastern and southern Africa, IUCN and its partners guided the assessment of environmental flows and reform of water governance in the Pangani River Basin (Tanzania). Additionally, IUCN assisted the four riparian states (Burundi, Tanzania Zambia and the Democratic Republic of Congo) in establishing the Lake Tanganyika Authority (LTA). IUCN worked closely with the Government of Botswana and multiple stakeholders to facilitate development of the Okavango Delta Management Plan (Okavango). In the Limpopo River Basin, WANI delivered training on environmental flows to water managers from all South African Development Community (SADC) countries, demonstrated environmental flows assessments and built a regional environmental flow network.

In West Africa from 2001-2007, WANI facilitated public participation in dialogues on water resource development in the Senegal River Basin (Mali, Mauritania,

Senegal). In the Volta River Basin (Burkina Faso, Ghana), IUCN and partners supported development of new institutions for coordinating transboundary water management at community, national and basin levels. In the Lake Chad Basin, WANI worked with partners in governments and NGOs to reform water governance for the Komadugu Yobe River (Nigeria), agree to a Catchment Management Plan and mobilise investment in a trust fund for restoration of the basin.

In WANI-2, IUCN is using the experience and networks of partnerships from these demonstrations to:

- replicate experience from the Komadugu Yobe River in river basin management (Nigeria).
- multiply local benefits from improved water management in the Volta River Basin (Ghana, Burkina Faso).
- implement IWRM in the Ruvu River Basin to secure water supply and a healthy

- river basin for Dar es Salaam (Tanzania).
- demonstrate restoration of floodplain productivity in the Moyen-Vallée of the Senegal River (Mali, Mauritania, Senegal).
 - demonstrate adaptation of river basin management to climate change in the Pangani River Basin (Tanzania).
 - facilitate dialogues on dams and development (West Africa).
 - facilitate regional and national dialogues on water and climate change adaptation (Southern Africa).
 - support application of economic valuation of wetlands in decision making on river basin management (Southern Africa).
 - build capacity for implementation of IWRM and scale up integration of ecosystem services in water resources development (Tanzania, Kenya, Uganda).



WANI-2 in Asia & Middle East

In Asia, in the first phase of WANI, IUCN demonstrated environmental flows and carried out environmental flows assessments in the Huong River Basin (Vietnam) and the Songkhram River Basin in the Mekong Region (Thailand). WANI demonstrated integration of wetland management and fisheries to strengthen food security (Lao PDR, Cambodia). Additionally, WANI

supported empowerment of community stakeholders through replication of Tai Baan villager-led research in many communities (Mekong River Basin). IUCN and partners convened the Mekong Water Dialogues to open constructive engagement in water resource development planning among state and non-state actors. In the Himal-Hindu Kush, WANI supported shar-

ing of experience of environmental flows and payments for ecosystem services among countries of the region.

In the Middle East, IUCN built engagement in the water sector in the region and facilitated consultations on restoration of the Zarqa River (Jordan), leading to agreement of a plan of action among stakeholders.

Under WANI-2, IUCN is using these activities as a platform to:

- promote participatory management of groundwater to strengthen sustainable livelihoods (Palestine).
- facilitate national dialogue and strategic planning for groundwater allocation (Jordan).
- support improved IWRM planning using economic analysis (Egypt).
- demonstrate river restoration in the Zarqa River Basin as a platform for economic growth (Jordan).
- build local leadership and empowerment of women and the poor in local IWRM (Jordan, Egypt, Palestine).
- demonstrate implementation of IWRM and management of trade-offs in the Sekong, Sesan and Srepok River Basins to support sustainable livelihoods and economic growth (Cambodia, Lao PDR).
- demonstrate adaptation to climate change at the source of Asian rivers (China).
- facilitate consensus building among stakeholders on water and energy futures in the Mekong Basin (Mekong region).
- support training and capacity building in payments for watershed services (Nepal, Pakistan, India, Bhutan).



WANI-2 in Oceania

The establishment of the IUCN Regional Office for Oceania in 2006 enabled development of new networks linking WANI to IUCN members, governments and development and conservation NGOs in the region. Extensive consultations with stakeholders on priorities for water resource management, at the level of both IWRM implementation and national policy, has led to coordination among partners of new demonstration projects. These bring together communities implementing Local Management of Marine Areas (LMMA) and national and regional LMMA networks to integrate management of coastal zones and watersheds with support from WANI. The projects use integration of water governance from ridge to reef to build benefits for livelihoods while supporting scaling up through uptake of lessons into LMMA networks and national water policy.

The WANI-2 project portfolio in Oceania under WANI-2 is designed to:

- demonstrate livelihoods benefits in island river basins from ridge-to-reef implementation of IWRM (Fiji, Samoa).
- strengthen basin, island and national level water governance and coordination mechanisms (Pacific Islands)
- support local adaptation of water management to climate change in small islands (Pacific Islands).

International Union for Conservation of Nature - IUCN

IUCN is the world's oldest and largest global environmental network - a democratic membership union with more than 1,000 government and NGO member organizations, and almost 11,000 volunteer scientists in more than 160 countries. IUCN's work is supported by over 1,000 professional staff in 60 offices and hundreds of partners in public, NGO and private sectors around the world. The Union's headquarters are located in Gland, near Geneva, in Switzerland. Our mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.



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Water & Nature Initiative - WANI

WANI is an action based programme that has worked with more than 80 partners in more than 30 countries to mainstream environmental and social issues into water resources planning and management. The Initiative uses ecosystem management as a strategy for integrated management of land, water, biodiversity and communities. WANI helps to solve the dilemma between fulfilling development options and conserving aquatic resources by resolving water conflicts, reviving rivers and spurring local economic development.

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