



## Tool 6: Water planning

Case and region	Issue	Type of tool	Description	Economic impacts	Benefits for the environment	Social /poverty alleviation impacts	Governance issues	Scaling up and relevance for developing/ transition countries	Constraints
<p><b>(1)</b> Water planning for IWRM in Lao PDR</p> <p><b>South-east Asia</b></p> <p><i>Source: Zaragoza conference case study paper</i></p>	Watershed	Water planning	<p>Water planning within the framework of IWRM is a key instrument for tackling pressures on water resources (industrial pollution, urbanization, fertilizers, deforestation etc.)</p> <p>Focus on participatory planning</p> <p>Cooperation between riparian countries for management of the Mekong River Basin</p>	<p>Rapid growth with increased demands of water services.</p> <p>Diversification of crops, and opening opportunities for rural development.</p> <p>Significant improvements in health conditions and education.</p> <p>Coordination of actions to share the benefits of river conservation along the different countries in the river basin.</p>	<p>Guarantee of maintenance and recovery of water quality through better enforcement of regulations.</p> <p>Maintenance of the water quality and quantity flowing to the Mekong delta.</p> <p>Reduction in floods risks.</p>	<p>Security over the attainment of MDG and continuous effort to provide development options for rural people.</p>	<p>Construction of an institutional set up to reinforce cooperation instead of competition among the countries sharing the Mekong river basin.</p> <p>Development of institutional capabilities to deal with complex water management issues at a national and local scale.</p> <p>Improvements in transparency, involvement of local actors and stakeholders.</p>	<p>Coordinated response to increasing demands and water management conflicts as the economy speeds up.</p>	<p>Financial resources required to invest in water.</p> <p>Increased costs of reaching scattered rural populations.</p> <p>Lack of water management skills and need to develop institutional strengths.</p>
<p><b>(2)</b> The Four Major Rivers Restoration Project, Korea</p> <p><b>Asia</b></p> <p><i>Source: Zaragoza conference case study paper</i></p>	Watersheds	Water planning	<p>A program intended to the restoration of the Four Major Rivers of South Korea in order to provide water security, flood control and ecosystem vitality.</p> <p>The project will also prevent natural disasters such as floods and droughts, protect the environment and promote historical and cultural tourism.</p>	<p>Securing the water resources for continuous economic growth. Increased security in the case of extreme events and climate change.</p> <p>In addition, Korean government is expecting that there are more new jobs will be created in leisure, tourism, cultural industries, etc by this project.</p>	<p>Recovery of basic ecological functions of the rivers due to improvements in quality, insurance of ecological flows, and bank restoration.</p> <p>Enhanced biological potential of river ecosystems.</p> <p>Substitution of artificial river banks by improved river beds as the main elements to provide flood control.</p>	<p>Securing of previous growth gains and insurance of water provision services in the long term.</p> <p>Significant gains in terms of avoided extreme events damages.</p>	<p>Reinforce of river oriented community developments.</p> <p>Promotion of innovative technologies and information systems to support water management effectiveness and transparency.</p>	<p>Example of a long term anticipatory planned response to tackle with current and prospective water scarcity and increased drought and flood risks due to climate change.</p>	<p>Some potential for conflict with particular local stakeholders and persistent political opposition that was overcome by extended communication and social participation.</p>
<p><b>(4)</b> The Ebro River Water Plan and the green economy, Spain</p> <p><b>Europe</b></p>	Watershed	Water Planning	<p>The Ebro Water Plan is an opportunity to build an ethical, efficient and sustainable water management system for the Ebro River Basin</p> <p>Plan developed under IWRM</p>	<p>Contributes to sustainable growth, strengthening the agro-food complex in the Ebro valley</p> <p>Strengthens role of</p>	<p>Recovery of the good ecological status of more than 80% of the surface and ground water bodies (only two of them being in fair</p>	<p>56% of investments considered in the Ebro Water Plan are for improving the environmental status of water</p>	<p>Public participation and stakeholder involvement in the whole decision process and in the following of the IWRM Plan.</p>		



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<i>Source: Zaragoza conference case study paper</i>			<p>principles</p> <p>Includes commitments to reduce pollution and increase water efficiency</p> <p>Modernization of irrigation key to reducing diffuse pollution, increasing water efficiency, increasing productivity and ensuring a better water footprint balance in Spain</p>	<p>water as a renewable energy source</p> <p>Encourages the inclusion of new water uses such as for recreation</p> <p>Reducing pollution from point sources implies creation of green jobs.</p> <p>Multiplied effects over the economy and significant direct, indirect and induced effects on employment.</p>	<p>condition after 2015).</p> <p>Notable increases in water flows and chemical quality of water, insurance of ecological flows, and river restoration.</p>	<p>Ambitious environmental objectives, with at least 85.3% of river water bodies to achieve good status by 2015.</p> <p>Opportunities for local and rural development based on the potential of improved water ecosystems for rural tourism, angling, and other recreational services.</p>	<p>Improvements in communication and transparency of water policy decisions</p>		
<b>(5) Development of a IWRM plan in Namibia</b> <b>Africa</b>	Watersheds	Water planning	<p>A National Water Resources Development Strategy and Action Plan; better understanding of water use and allocation, water demand management options;</p> <p>A framework for integrated water and land resources; development of institutional capacity and human resources;</p> <p>A provision for funding mechanisms for implementation;</p>	<p>The Plan is expected to improve economic efficiency in the country in the long term, with benefits to the agricultural sector from improved land and water management, reduced risk of floods and droughts, as well as from insured coverage of urban water demands. Especially to the industrial centers.</p>	<p>Significant benefits expected from improved sanitation and effluent control.</p> <p>Important contributions to the recovery of the rivers as water sources are optimized for water supply.</p>	<p>Project expected to contribute towards social equity in the long term, improving health and sanitary condition of communities, enhancing water-related livelihoods in particular in arid southern areas.</p>	<p>Advances in international cooperation and coordination of national policies in the Okavango and the Zambezi river basins.</p> <p>Need to develop local and regional abilities for water management in order to decentralize water policy decisions and facilitate public participation.</p> <p>Lack of information, monitoring and enforcement capabilities.</p>		<p>Finance constraints and still low entrepreneurial capacity to take advantage of development opportunities.</p>
<b>(6) Preparation of an IWRM action plan for Niger</b> <b>Africa</b>	Watersheds	Water planning	<p>Project, launched in November 2010, will develop and implement a national IWRM action plan for long-term development of and investment in the water sector, with informed collaboration with stakeholders, and support from financial partners</p>	<p>Expected coordination of national plans towards the development of the Niger basin's resources notably in the fields of energy, water resources, agriculture,</p>	<p>Cooperation among the countries in the Niger River Basin to share the benefits of conserving the Niger River.</p> <p>Basic agreement of</p>	<p>Assurance of the MDG in the long term is expected as well as significant contributions for food security, and energy production.</p>	<p>Need to reinforce regulation capabilities at a local and national scale, as well as information technology and monitoring and enforcement capabilities of the</p>	<p>Coordination of national development plans in order to avoid race to the bottom strategies and to preserve the water resources.</p>	<p>Lack of financial funds at a national level.</p> <p>Involvement of national authorities but not enough of local actors and stakeholders.</p>



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			Activities to include: study of water resources situation; development of IWRM action plan and investment program; development of financing strategy; stakeholder and beneficiary awareness raising	forestry, exploitation, transport and communication, industry.	water flows, quality standards and decision procedures of water development projects.		public authority	Development of interbasin cooperative institutions to agree on policy priorities and water development projects.	No tradition of participation y public decision processes.  High perceived financial risks from potential lenders.
<b>(7)</b> Implementation of the IWRM action plan in Senegal  <b>Africa</b>	Watersheds	Water planning	Project aims to strengthen the capacity of the Water Resources Directorate (DGPRE) to implement the national IWRM plan, including systematic water resources licensing, planning and integration of national IWRM into Senegal's transboundary water management activities  Activities include: improving water information and knowledge; strengthening investment planning for IWRM; strengthening DGPRE's institutional capacity, regulatory operations and economic recovery; awareness raising of stakeholders and decision-makers	The expected stabilization of the economy by the decoupling of income and production from the wide variations of water flows along time.  Significant reductions in drought and flood vulnerability and improved prospect for investments in agriculture and hydropower development.	Recovery of basic ecosystems services resulting from restoration of river banks and improved quality as a consequence of controlling anthropic pollution.	Project will contribute to the Government's poverty reduction strategy give momentum to the achievement of the MDGs and the Africa Water Vision for 2025.  Significant reduction is expected in exposure of the poor to water pollution in particular in crowded and marginal areas on the main cities.	Need to reinforce public water management skills and institutions strength to manage water during the economic transition.  Need to develop basic information Systems.	Example of water planning at a river scale as a mean to mak water an integral part od the development strategy.	Lack of expertise and basic information about the water resources.  Weak implication of users and stakeholders in policy decision taking processes.  Reduced ability to mobilize financial resources.  Lack of campaigns and education strategies about the importance of using and preserving water.  Lack of coordination of water with other development policies.
<b>(12)</b> Green growth policies in the food and agriculture sector, Korea  <b>Asia</b>	Agriculture	Water planning	Korea has been a pioneer in implementing green growth policies and has established a regular policy review process through Five Year Plans on Environment-Friendly Agricultural Industry  Initiatives include: reduction in use of chemical fertilizers, energy savings, promotion of organic agriculture, expansion of financial investment in agricultural green technology  Since 2010, the Government has been managing 27 regional environmentally-friendly agricultural	Many jobs to be created (about 5% of total employment in agriculture and food) through significant investments (US\$1,04 billion) promoting green growth in agriculture and fisheries	Reduction in fertilizer use of 8.8% in 2009-2010 through better use of bulk blending fertilizers matched to soil characteristics  Significant energy savings (and GHG emissions reductions) planned by increasing geothermal heating in greenhouses		A division dedicated to environmentally friendly agriculture was created in the Ministry of Agriculture and Forestry in 1994		



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			enterprises of 1000 ha in rural areas						
<b>(13)</b> City-wide sustainability plan: PlaNYC in United States of America  <b>North America</b>	Cities	Water planning	<p>On Earth Day, April 22, 2007, New York City released PlaNYC, its far-reaching sustainability plan including 127 policy initiatives to achieve ten overarching goals to improve the infrastructure, environment, and quality of life in the city.</p> <p>The plan aims to double the number of green jobs in 10 years, improve access to education, information, and coordination needed by workers and businesses to facilitate growth in the green economy, promote skill development to ensure New Yorkers meet requirements for green jobs, and increase demand for green products and services.</p> <p>Various portions of the plan involve cleaning up brownfields (heavily polluted former industrial sites), encouraging public transportation, ferries and bicycling; creating more parks and playgrounds; planting one million trees within the five boroughs; reducing emissions in public buildings; and retrofitting or replacing diesel trucks.</p> <p>Additionally, the plan also calls for enhancement of public transportation and water infrastructure security. Since the release of the plan, the City has made great strides towards implementing the plan – passing groundbreaking green buildings legislation, creating miles of bike lanes, opening acres of open space, cleaning the air, and reducing greenhouse gas emissions.</p>	<p>Education and skills training for green jobs.</p> <p>Increased market opportunities for green industries.</p>	<p>Project improvements in outdoor and indoor air quality and associated human health benefits.</p> <p>Expected reductions in greenhouse gas emissions from reduced vehicle traffic, support for biking and walking paths, improved buildings emissions standards, and creation of more green space.</p>		<p>Adjustments to city planning and zoning codes.</p> <p>Establishment of congestion pricing</p> <p>Establishment of efficiency standards for buildings</p>		