Welcome to the IWRM Action Hub

Learn, explore and connect on designing and implementing Integrated Water Resources Management (IWRM) action towards a water secure world.

Learn
Master the art of IWRM by browsing our handpicked resources and tools, pulled together by practitioners and professionals from all over the world.

Explore
Discover what IWRM means in practice with empirical case studies from all around the world. Match what you want to do with practical solutions by using our tailored curator and explore...
Learn
Master the art of IWRM by browsing our handpicked resources and tools, pulled together by practitioners and professionals from all over the world.

Study...
- Tools
- Resources
- Learning opportunities

Explore
Discover what IWRM means in practice with empirical case studies from all around the world. Match what you want to do with practical solutions by using our tailored curator and explore our IWRM Survey.

Discover...
- Case studies
- Country profiles

Connect
Connect with the network and communities of water professionals, innovators, practitioners, and policy makers who are passionate about working towards a water secure world.

Engage in...
- Communities
- Discussions and
Learn

Master the art of IWRM by browsing our handpicked resources and tools, pulled together by practitioners and professionals from all over the world.

IWRM Tools
The GWP IWRM Tools is for anyone interested in adopting better practices for the management of water or learning more about how to improve water management at a local, national, regional or global level.

Resource Library
Find resources to enhance your IWRM knowledge and construct solutions to your water resources management challenges.

Learning opportunities
Browse the upcoming events and learning opportunities!
IWRM Tools

Master the art of IWRM by browsing our handpicked resources and tools, pulled together by practitioners and professionals from all over the world.

A. Enabling Environment: Policies, legislation, and plans that constitute the "rules of the game" and facilitate all stakeholders to play their respective roles in the sustainable development and management of water resources.

B. Institutions and Participation: The range and roles of political, social, economic, and administrative institutions and other stakeholder groups that help support IWRM implementation.

C. Management Instruments: The tools that enable decision makers and users to investigate socio-hydrological challenges and make rational and informed choices that are adapted to their context.

D. Finance: The budgeting and financing instruments and principles made available and used for water resources development and management from various sources.
Tool - D2.03

Generating Basic Revenues for Water

SUMMARY

Providing water services involves great capital and operation and maintenance costs. Achieving full cost recovery is often easier said than done as water services is a highly contentious and politicised topic. This Tool defines the basics related to cost recovery, explores the 3Ts funding mechanisms for water resources (tariffs, taxes, and transfers), highlights new innovative instruments built around water and climate adaptation, and introduces some contested issues on revenue generation in water service delivery provision.
Resource Library

Find resources to enhance your IWRM knowledge and obtain solutions to your water resources management challenges. Use the filter options to browse through our technical references, academic papers, legal documents, GWP Publications, GWP Case Studies.
Case studies

Find stories that illustrate practical experiences gathered in the implementation of IWRM. Case studies are submitted by practitioners and professionals from all over the world and reviewed by the GWP knowledge management team.

Submit your case study

3 case studies in comparison list

Search by keyword

Theme  Select Region  Select Country

Select IWRM Tools

A → Z

Case study

Albania and Montenegro: Creating an Integrated Water Resources Plan for the...

Case study

Argentina: Drinking water supply system for rural population of Eastern Tucuman

Case study

Argentina: Rural planning and sustainable water resources use in PitaHuinco basin

Case study

Armenia: Local solutions for waste water management in Parakar village
Explore › Case studies › India: Conservation and management of Bhoj Wetlands

India: Conservation and management of Bhoj Wetlands
Due to substantial population growth putting increased pressure on the water resources, their quality has started to deteriorate. This is perceived as a serious issue since water is inseparably linked with the socio, economical and cultural aspects of livelihoods. Action was taken through an integrated lake conservation programme, aiming to improve water quality. The most important lesson learnt is that awareness raising, education and stakeholder participation are essential.

BACKGROUND
Bhopal city, the capital of the state of Madhya Pradesh, is endowed with several man-made lakes created through the centuries. The Upper and Lower Lakes of Bhopal, together called the Bhoj Wetlands. The Upper Lake and Lower Lake are the most important. The Upper Lake has special significance since it has been a source of piped water supply to the city of Bhopal for over 75 years. Even now, the lake accounts for some 40% of the city’s water supply.

Until 1947 the water quality of Upper Lake was so good that it required no treatment before being supplied to the public. However, tremendous population growth of the city (about 70,000 in 1951 to about 1.4 million in 2001) and rapid urban development around Lower Lake and on the eastern and northern fringes of Upper Lake subjected both the lakes to various environmental problems resulting in deterioration of their water quality mainly due to inflow of untreated sewage.

The Bhoj Wetlands of Bhopal comprises of the Upper Lake and the Lower Lake. These lakes are of immense importance since they are inseparably linked with the socio, economical and cultural aspects of the people of Bhopal and are referred as lifelines of the city.

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ORGANISATION
Road Transport Corporation, Mantralaya

YEAR
2013

COUNTRY
India

GWP REGION
South Asia

OTHER TAGS
Pollution Urban/WASH Lake Bhopal

THEMATIC TAGGING
Urban Water services
# Case studies comparison

<table>
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<th>TITLE</th>
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<tr>
<td>India: A tale of rehabilitation of people</td>
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<td>displaced due to dam construction</td>
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<td>India: Diversion of household sewage for</td>
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<td>improving urban lake water quality</td>
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<td>India: Community watershed management</td>
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<td>societies in rural India</td>
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<th>SUMMARY</th>
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<tr>
<td>Poor management and planning during the construction of the Bangla Dam created severe</td>
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<td>social issues. The affected people took action by coming together forming a Union,</td>
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<td>demanding fishing rights and protesting against the complete filling up of the dam which</td>
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<td>eventually met. This case illustrates the need for proper dialogue and participation with</td>
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<td>the affected people during the plan stage of any development projects to prevent problems</td>
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<td>during execution.</td>
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<td>The city of Bhopal in Madhya Pradesh is mainly receiving its water from Upper Lake.</td>
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<td>However, in the past decades, water quality has steadily been deteriorating. This has</td>
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<td>led the government to take action and implement an integrated lake conservation program.</td>
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<td>The case demonstrates that all the stakeholders, especially, Urban Local Bodies and the</td>
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<td>public representatives should be involved in the decision making from the very beginning</td>
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<td>of such projects.</td>
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<td>Initial success resulted in the joint forest management strategy in Suhkamajri being</td>
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<td>expanded. Unfortunately the successes of the original project were not replicated and the</td>
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<td>scaling-up efforts ended in rapid failure. This has led to a discussion of possible IWRM</td>
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<td>implementation in the area. The key lesson learnt from this case is the importance of</td>
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<td>community involvement for successful community activity implementation.</td>
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Explore

Discover what IWRM means in practice with empirical case studies from all around the world. Match what you want to do with practical solutions by using our tailored curator and explore our IWRM Survey.

IWRM Curator

The Curator allows you to find tailored IWRM tools based on the practical actions needed to advance good water governance.

Try the IWRM Curator

IWRM Survey

Explore the status of IWRM implementation and obtain country-specific resources and case studies through our Country Profiles.

Take the IWRM Survey
IWRM by country

Explore the status of IWRM by country based on the latest available data for SDG indicator 6.5.1. Browse through the country profiles to obtain country-specific case studies and knowledge resources (pulled from the IWRM Data Portal).
India has a score of 45 for the 2020-21 round of data collection for SDG 6.5.1 Indicator, meaning it has a medium-low status of IWRM Implementation. In terms of Enabling Environment, the level of implementation is medium-low. Regarding Institutional Arrangements and Participation, the country scores medium-low. For Management Instruments, the status of implementation is medium-high. Paying attention to the Finance component, the score is medium-low.

IWRM SCORE (SDG 6.5.1)

**6.5.1 Final Score**

Enabling Environment: 45
6.5.1 Final Score

Enabling Environment
- 45

Institutions and Participation
- 39

Management Instruments
- 63

Financing
- 37

STATUS OF IMPLEMENTATION

- Very high (91 to 100)
- High (71 to 90)
- Medium-high (51 to 70)
- Medium-low (31 to 50)
- Low (11 to 30)
- Very low (0 to 10)

Below you will be able to find a tailored selection of resources and case studies that relate to India. We also encourage you to connect with our members of our network of IWRM practitioners that have specific country expertise and interest for India.

RESOURCES

- ACADEMIC RESOURCE
  WASH and gender in health care facilities: The uncharted territory
  2017

- ACADEMIC RESOURCE
  GIS-based Morphometric Analysis of Two Reservoir Catchments of Arkavati River, Ramanagaram District, Karnataka
  2015

- ACADEMIC RESOURCE
  Industrial Water Audit
  2017
IWRM Survey

The IWRM Survey is a simple assessment and diagnostic instrument for users to identify key IWRM challenges in their country and get a list of recommended solutions based on these needs. The IWRM Survey is the official instrument used for the global monitoring and reporting on Sustainable Development Goal (SDG) indicator 6.5.1: "Degree of integrated water resources management implementation (0 - 100)". It measures implementation in incremental steps, which allows to identify barriers and enablers to furthering IWRM at country level. After filling in the Survey, users will be able to see their tabulated scores against the official SDG 6.5.1. data and get access a list of tailored IWRM Tools, case studies, and resources corresponding to the main challenges identified.

Respondent Information
1.1 What is the status of policies, laws and plans to support Integrated Water Resources Management (IWRM) at the national level?

1.1.a National water resources policy, or similar

- 60 - medium-high
  - Being used by the majority of relevant authorities to guide work.

- Add Justification  □ Not applicable

1.1.b National water resources law(s).

- 40 - medium-low
  - Based on IWRM, approved by government and starting to be applied by authorities.

- Add Justification  □ Not applicable

1.1.c National integrated water resources management (IWRM) plans, or similar.

- 80 - high
  - Policy objectives consistently achieved.
Key IWRM Challenges:

4.2.4 Subnational or basin budgets for IWRM elements (investment and recurrent costs).

You scored: 20

Allocations made for some of the elements and implementation at an early stage.

Tools to Improve:

- **Tool**: Evaluating Water Investments
  - D1.01
- **Tool**: Water and Climate Finance
  - D2.06
- **Tool**: Blended Finance
  - D2.09
- **Tool**: Integrated National Financing Frameworks
  - D2.01
Explore the network and communities of water governance professionals, innovators, practitioners and policy makers who are passionate about working towards a water secure world.

Connect with the Network!
IWRM Action Network

Explore the network of water governance professionals, innovators, practitioners and policy makers who are passionate about advancing the governance and management of water resources for sustainable and equitable development.
Laurent-Charles Tremblay-Levesque

**JOB TITLE**
IWRM Specialist

**ORGANISATION**
GWPO

**STAKEHOLDER TYPE**
Government Official

**AREAS OF EXPERTISE**
- IWRM
- Transboundary Cooperation
- WASH

**SHORT BIO**
Laurent-Charles is a young water and development professional with field and research experience in water, sanitation and hygiene (WASH) and in integrated water resources management (IWRM).

**CONTACT DETAILS**
in Linkedin
Communities

Communities provide professionals an engaging way to learn, exchange and build their skills in different areas of interest. Building on the collective knowledge of the members and ensuring a continuous flow of learning, communities are becoming crucial to bridge knowledge into action.

Whether you want to keep up with recent developments, discuss novel ideas, work with others on problems or team up for an upcoming opportunity, communities will provide you with the right space to do that.

You are welcome to join any of them and contribute your ideas, experiences, and content as well as take part in online discussions.
Welcome to the Youth for Water and Climate (YWC) Community!

The Youth for Water and Climate Programme, is an 8-month capacity-building program for young professionals in the water and climate sector, young people will be able to gain some of the necessary skills needed to develop their career in the water and climate field.

The programme is led by the International Secretariat for Water, Solidarity Water Europe, cewas, Global Water Partnership, Global Water Partnership Hungary, Global Water Partnership Slovakia, and Good Planet Belgium and, financed by Erasmus+.

The Programme targets youth aged 18-30, currently based in Hungary, France, Sweden, Belgium, and Slovakia, who wish to develop bankable projects in their communities or wish to pursue a career within an existing organization in the water and climate sector.

This community will facilitate information, experience, and resource sharing between the participants, in order to improve resource and knowledge sharing at the global, regional, national, and sub-national levels. This space will also facilitate the active engagement of and interaction between practitioners and youth advocates working to advance the implementation of water and climate activities.

The objectives for this community of practice are:

- Be a safe place for collaborated and coordinated actions for youth on Water and Climate
- To build leadership and intergenerational knowledge sharing and networking between youth and senior experts