River Basin Management Cycle Training Series

Webinars – Solutions through Exchange, Information Flow and Cooperation

August/September 2020

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

INDIA-EU WATER PARTNERSHIP

NAMAMI GANGE

8. Solutions through Exchange, Information Flow and Cooperation

River Basin Management Cycle, Training Module 3, all target groups

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

INDIA-EU WATER PARTNERSHIP

NAMAMI GANGE

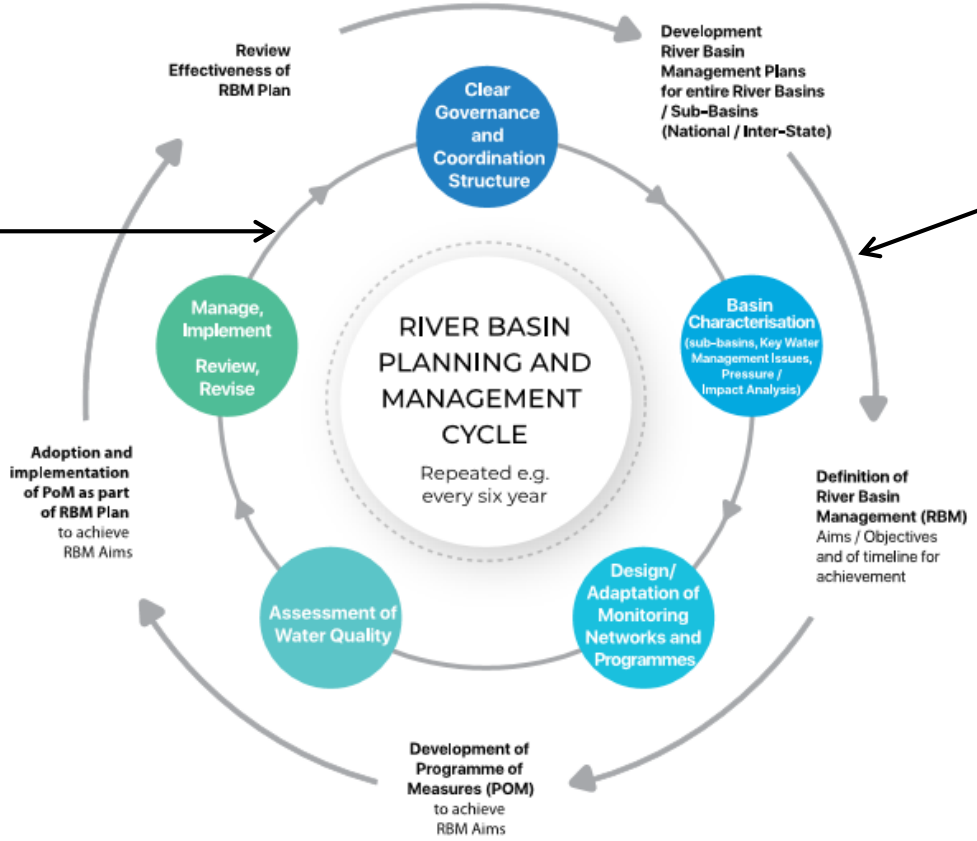
Course Outline

Dark grey: Explained in detail. **Light grey**: Briefly introduced, **very light grey**: not necessarily covered

Unit	Topic	TG I	TG II	TG III
1	**Introduction to River Basin Management**			
2	**Clear Governance and Coordination Structure**			
	Governance (legal aspects and framework)			
	Basin Coordination Structures (basin institutions and stakeholder engagement)			
3	**Basin Characterisation**			
	DPSIR Assessment			
4	**Determining Basin Vision and Objectives**			
5	**Design/ Adaptation of Monitoring Networks and Programmes**			
6	**Assessment of Water Quality and Quantity**			
7	**Implementation of RBM**			
	River Basin Plans & Programme of Measures (PoM), Financing & Review of PoM			
8	**Solutions through Exchange, Information Flow and Cooperation**			

The River Basin Planning and Management Cycle

„Inner cycle“
Technical/
operational level“



„Outer cycle“
Planning and
decision making
level

Exchange, Information Flow and Cooperation in River Basins

Forms of exchange and cooperation

- **Institutional cooperation (TM 2/3)**
  - Basin organisations at different levels: sub-basin, basin, international basin
  - Institutionalized work flows / processes for RBM
- **Stakeholder engagement (TM 2/3)**
  - Various institutions responsible for water management
  - The “public”, the private sector, NGOs
- **Information flow, raising awareness (TM 3)**
  - Information on RBM, access to monitoring and assessments
  - Raising awareness – events, specific communication

Institutions and RBO(s) in Ganga basin

Stakeholders in sub-basins

Information and communication

8.1 Institutional Cooperation

- Basin organisations and institutions concerned with RBM

Governance: River Basin Organisations and Institutions Concerned with RBM

RBM needs **clear responsibilities and assigned institutions**.

- In Europe/ Germany: Water /Environment Ministries at state and federal level, water authorities
- In India: NMCG, SMCGs, CWC, CGWB, UDD, PCBs, ULBs and Water Supply Departments, ...

→ Input and discussion during TM2: Is NMCG an RBO?

RBM also needs a **clear legal framework**.

→ Discussion during TM2. Is the legal framework adequate for RBO in India?

- In Europe/ Germany: Water framework directive, national water code, water codes at federal level plus regulations

Recapture of TM2 Discussions

Legal framework in India for RBM

- State RBM Bill 2018 is a sound basis for IWRM, assigning states a major role for RBM authorities
- Legal framework is necessary but not sufficient for successful RBM
- Cooperation and involvement of states is crucial for RBM
- RBOs foreseen to be created for major Indian River Basins
- Mid-level officials are important bridge between decision-makers and local implementation

Is NMCG a River Basin Organisation?

- NMCG acts as coordinator and institutional memory – but cannot tackle everything alone.
- Multi-level approaches are required.
- Expert groups could be an approach to work on the multifold issues in the Ganga River Basin.
- Support from different (state) entities as well as financing mechanisms are required for RBM.

8.2 Stakeholder Engagement for RBM

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

INDIA-EU WATER PARTNERSHIP

NAMAMI GANGE

Why is Stakeholder Engagement Important for Basin Management?

Water resources management and basin management affect many different individuals, user groups, sectors and other groups, e.g.

- Every person requiring drinking water and water for other human uses
- Farmers and their interests in irrigation
- Cities in charge of water supply and wastewater management
- Electricity companies generating electricity through hydropower
- Industrial sectors for production purposes
- Navigation sector and shipping industry
- Tourism sector relying on water bodies for recreational purposes

All these interests are affected by basin management decisions, but also affect basin management themselves.

Moreover, often these interests are not compatible or have potentially adverse impacts on each other.

Coordination Structures: Stakeholder Analysis

- To understand involved institutions and organisations together with their roles and responsibilities, it can be helpful to do a **stakeholder analysis**

*"Stakeholder management is **critical to** the **success of every project** in every organisation I have ever worked with. By **engaging the right people in the right way** in your project, you can make a big difference to its success... and to your career."*

– Rachel Thompson, Mind Tools.

- Since stakeholder management is crucial to project success, a stakeholder analysis is an important part of strategy development

Stakeholder Analysis

Aims at defining:

- **What stakeholders** are involved in a certain basin and the respective management activities in the basin
- What **their interests** in the use, the development and/or the protection in the basin's water resources are
- Whether and to what extent these **different interests** are **compatible** (or even mutually beneficial)
- What the origins and root **causes of** incompatible or **conflictive interests** are
- How **strong each interest group's**/stakeholder's **position** is with regard to finding a compromise

Different Ways of Doing Stakeholder Analysis

Most important is that an analysis is done, and that the approach used meets the needs for whom the analysis is done

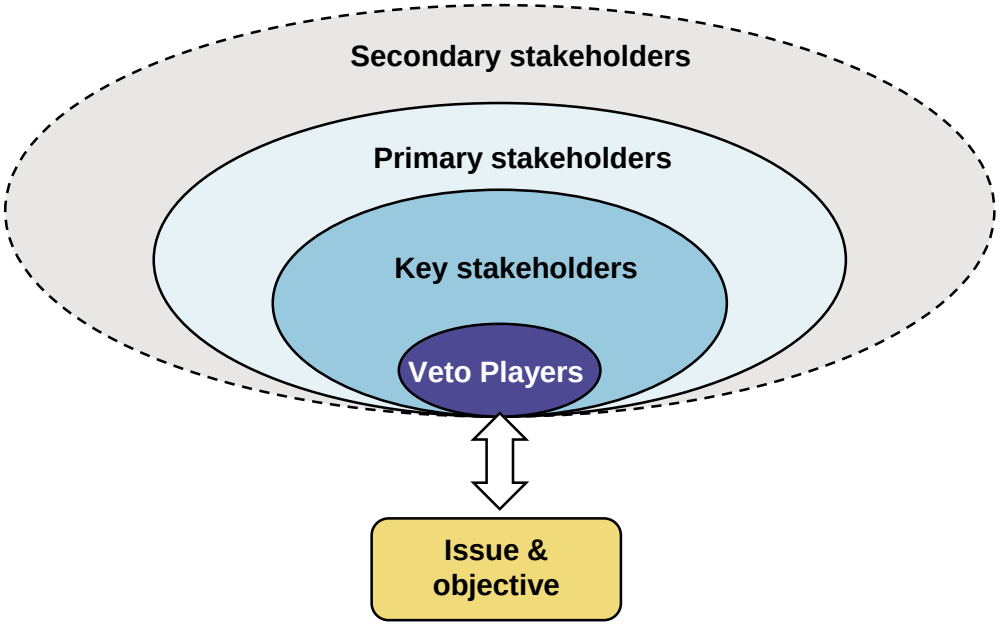
Can be:

- Very general and broad, providing an overall snapshot of the situation only
- Very in-depth, providing detailed insights into each stakeholder's interests and position
- Focus on specific pre-defined stakeholders only (for political or strategic reasons)
- Can focus on stakeholders' interests in water use
- Can focus on strategic position of stakeholders via-à-vis basin plan

Steps of a Stakeholder Analysis

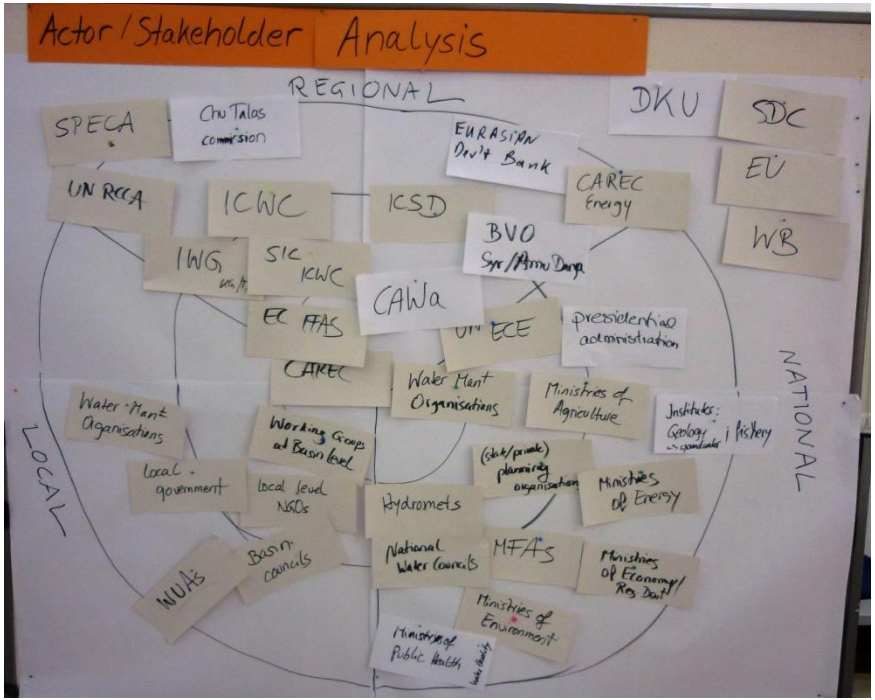
1. Formulate the key question
2. Identify the stakeholders
3. Choose the form of graphic depiction (onion; rainbow)
4. Visualise the stakeholders
5. Visualise the relations between stakeholders
6. Evaluate the results
   - Is the picture showing the reality?
   - Are all relevant stakeholders included?
   - What do we notice? What is the impact of the picture?
   - What are consequences for the strategy/ plan/ project?

Forms of Stakeholder Analysis (1)



Stakeholder	Ally	Neutral	Opponent
Stakeholder 1			
Stakeholder 2			
Stakeholder 3			
Stakeholder 4			
Stakeholder 5			
Stakeholder 6			
Stakeholder 7			
Stakeholder 8			
Stakeholder 9			
Stakeholder 10			

Forms of Stakeholder Analysis (2)

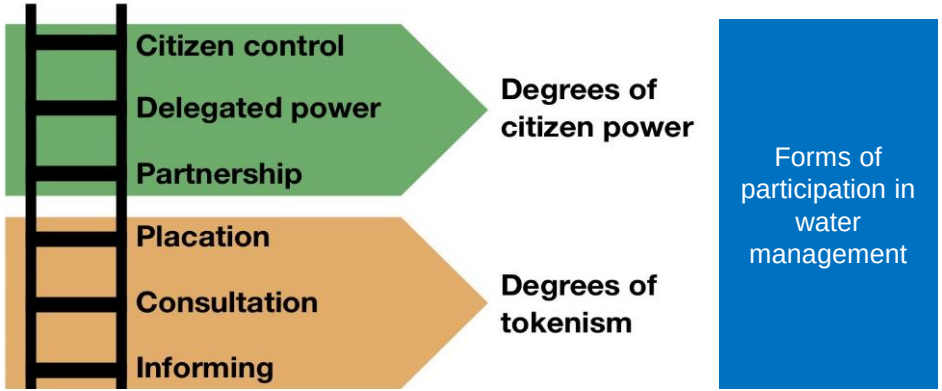


	Low interest	High interest
High power	Ministry of Water Resources Ministry of Emergency	Ministry of Energy Ministry of Nature Protection Chamber of Commerce & Industry
Low power	Livestock Recreation	Urban Local Body WUA Fishers Health centres

Example of a group exercise implemented with stakeholders in Uzbekistan

Participation Forms: The Ladder of Citizen Participation

- From the perspective of **more effective water management**, information, consultation and placation can lead to relevant results
- The objective is normally not empowerment, but to better reach sectoral goals, e.g. water efficiency
- In this regard, participation is an instrument chosen purposefully to respond to particular challenges



Source: Adapted from Arnstein, S.R. (1969) A ladder of citizen participation. p217.

Approaches for Stakeholder Engagement in Basin Management

Stakeholders can be involved in basin management all along the basin management cycle and through different approaches, depending on

- Stage of the management cycle
- Legal and political framework for water resources management and stakeholder engagement
- Technical, human and financial capacities of concerned actors

The involvement of stakeholders can consist of

- Information sharing
- Consultation
- Participation in meetings
- Participation in decision-making
- Establishment of partnerships
- Involvement in scientific processes and the link between science and policy

Approaches for Stakeholder Engagement in Basin Management

Information sharing and awareness raising

- Regular publication of key documents (e.g. on websites such as MRC Data Portal)
- Engagement with local media (e.g. NBI engagement with Nile media through media award, etc.)

Consultation

- Consultations for river basin management plans (e.g. public consultations for Orange Management Plan)
- Consultation processes for specific projects (e.g. consultations in context of MRC‘s PNPCA process)

Meeting participation

- Participation of NGOs in governance meetings (e.g. NGO participation in LVFO‘s Executive Committee)
- Pre-governance meeting consultations with stakeholders (e.g. Elbe annual NGO meetings)

Approaches for Stakeholder Engagement in Basin Management

Direct inclusion in the decision-making process

- Granting of observer status to NGOs and other institutions (e.g. observers in ICPDR governance structure)
- Hearing of stakeholder inputs/opinions in decision-making on specific matters (e.g. Lake Constance AWBR)

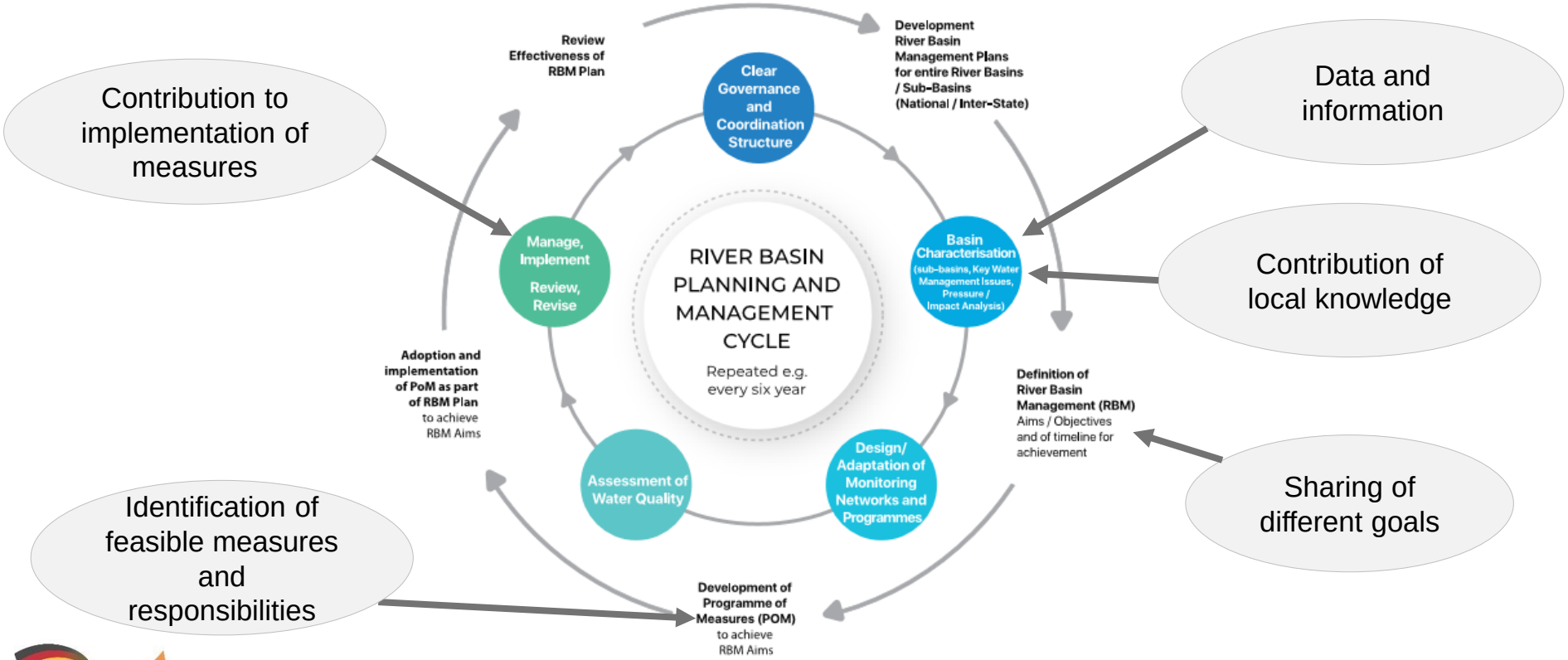
Establishment of partnerships

- MoUs with specific institutions, associations, etc. (e.g. MoU between ICPR and CHR and CCNR)
- Partnerships with private businesses for joint activities (e.g. Danube partnership with Coca Cola)

Establishment of science-policy linkages

- Involvement of epistemic community in analyses of the basin (e.g. involvement of CHR in Rhine climate study)
- Formalisation of scientific input (e.g. MoUs between LVBC and IUCN, WWF, etc.)

Stakeholder Involvement at Different Stages of Basin Management



german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by giz

INDIA-EU WATER PARTNERSHIP

NAMAMI GANGE

Stakeholder Engagement under the EU WFD

Legal requirement for water management authorities to involve the public in water resources management and planning

- Art 14 EUWFD
- Art 9, 10 EFD

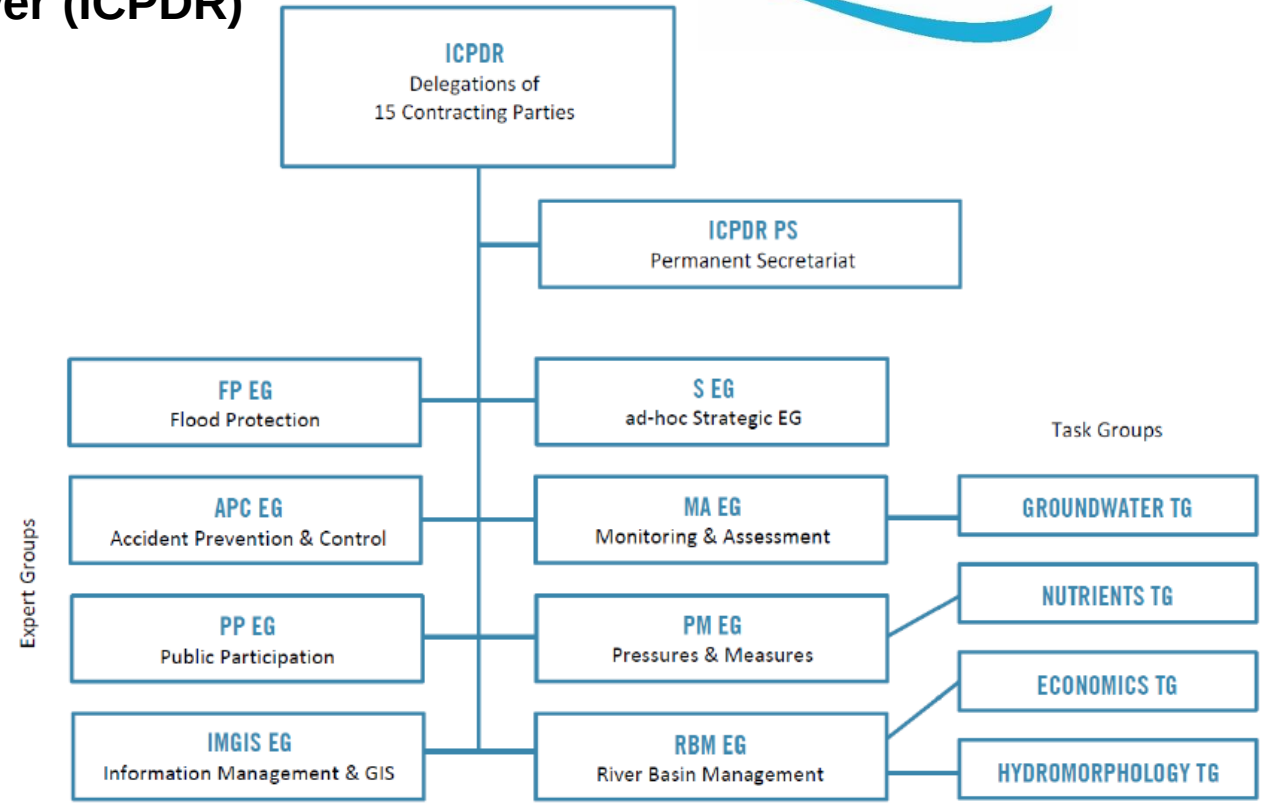
Public must be given opportunity to raise its concerns during 3 different stages of planning process

Concerns all governance levels (with different mechanisms being used for engagement)

- Basin-wide/roof level
- National level
- Local level

Stakeholder engagement and institutional cooperation, Danube River (ICPDR)

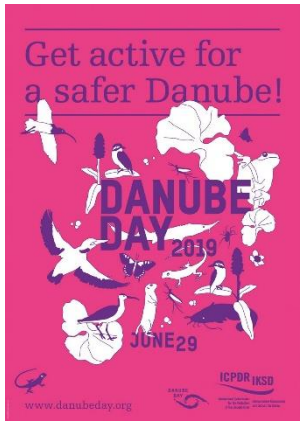
- Delegations of **15 Contracting Parties**
- Technical Work is organised in **Expert Groups and Task Groups**
- Bi-annual meetings of **ICPDR Head of Delegations**
- 23 **observer** organisations
- **ICPDR Secretariat** (9 staff members) based in Vienna



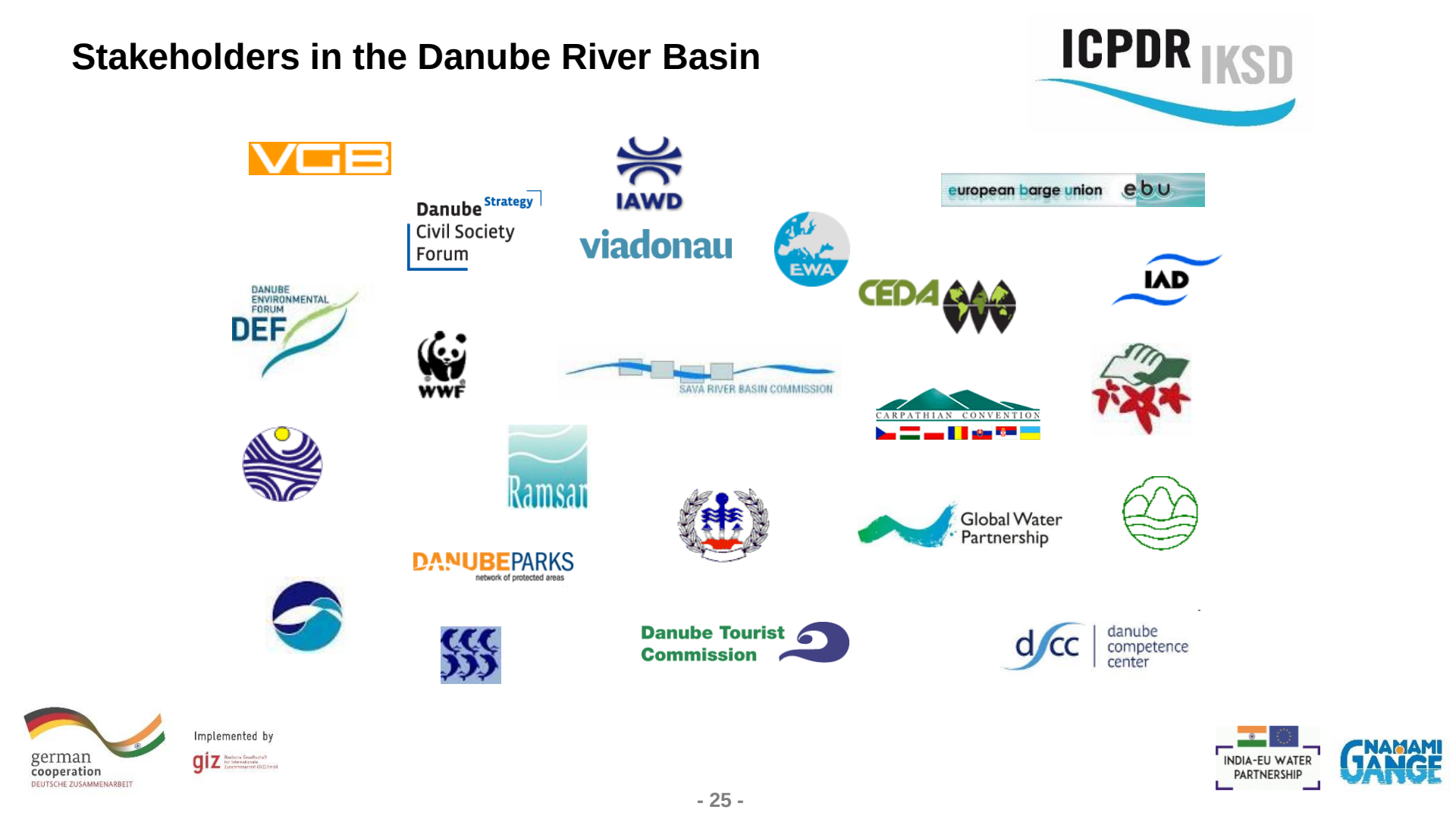
Stakeholder Engagement in the Danube River Basin (ICPDR)

ICPDR supports the active engagement of stakeholders (including civil society and NGOs, private sector, business interest groups, scientific institutions, other regional/international organisations, etc.) through

- official observer status/involvement in decision-making and implementation
- formal MoUs establishing specific cooperation (e.g. with the BSC)
- formalised consultation processes on specific issues (e.g. basin management plan)
- public awareness events (e.g. Danube Day, Danube Art Master)
- collaboration on education (e.g. Danube Box)
- partnerships on specific issues (e.g. with Borealis, VERBUND, Coca Cola)



Stakeholders in the Danube River Basin



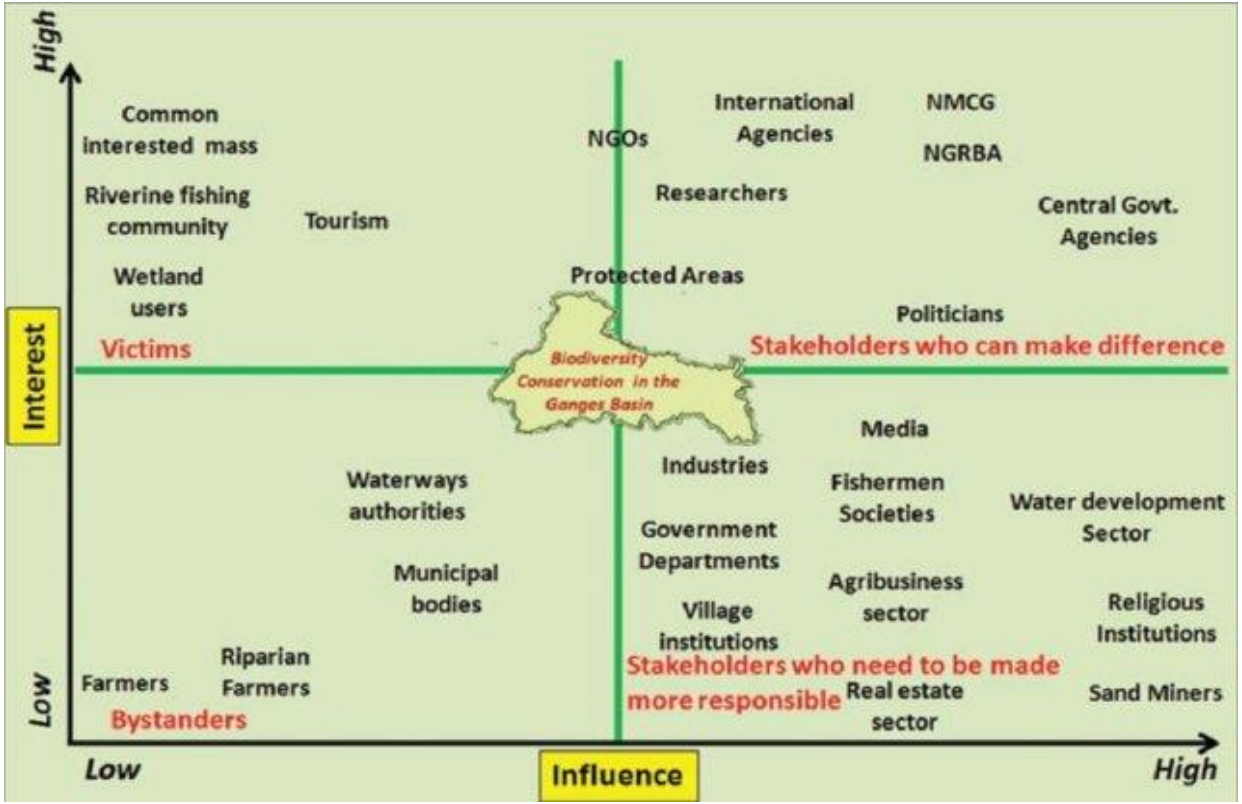
german cooperation DEUTSCHE ZUSAMMENARBEIT

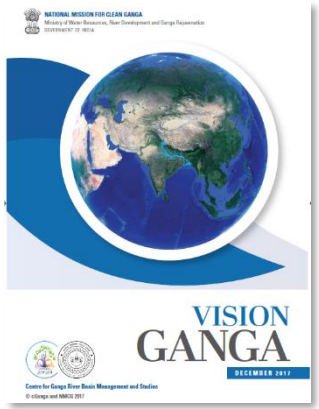
Implemented by giz

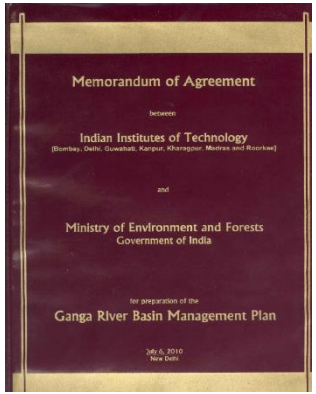
INDIA-EU WATER PARTNERSHIP

NAMAMI GANGE

Stakeholder Engagement in the Ganga River Basin







Source: Sinha (2014) Rivers for Life. Proceedings of the International Symposium on River Biodiversity: Ganges-Brahmaputra-Meghna River System. pp 56-68

8.3 Information Flows and Raising Awareness

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

INDIA-EU WATER PARTNERSHIP

NAMAMI GANGE

What Information is Needed for Basin Management?

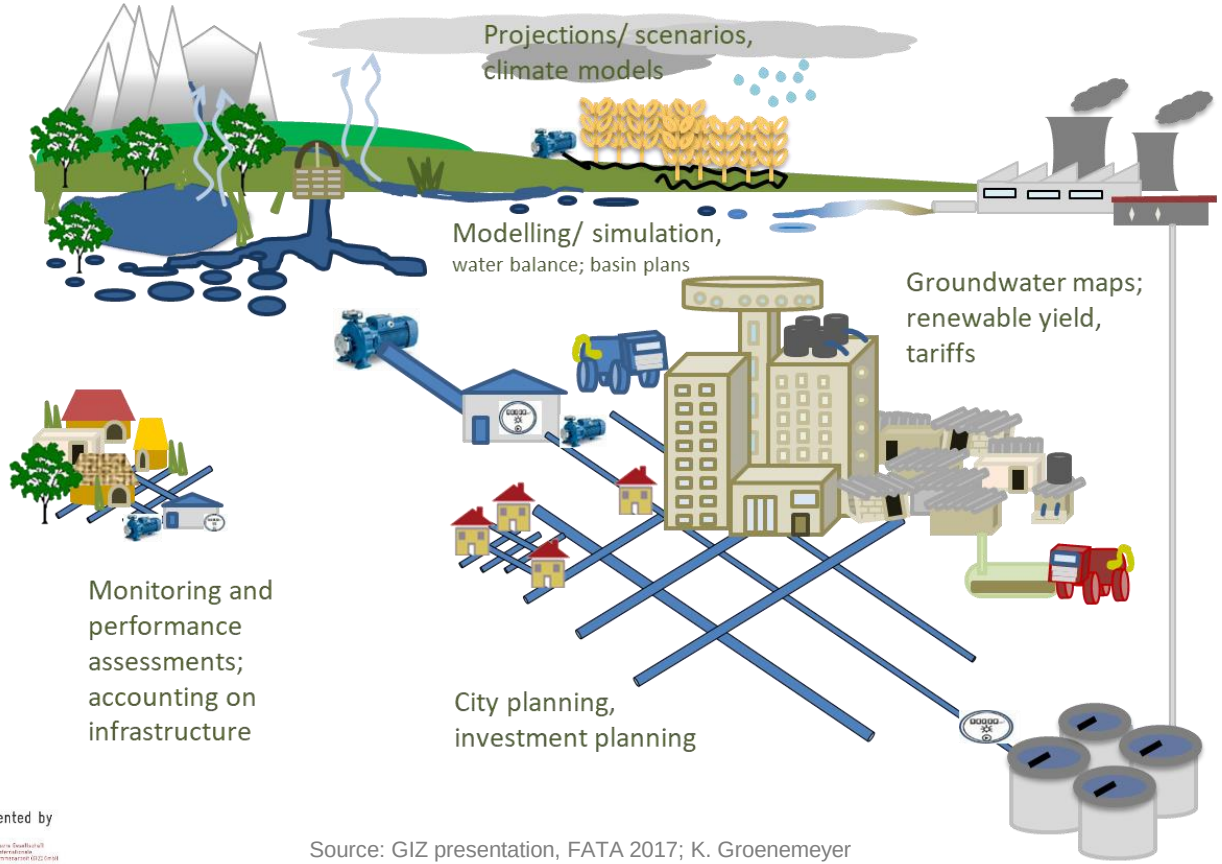
Water information systems are the knowledge base to measure impacts on water resources. This “water information” is the basis for water allocation and for decisions regarding pollution policies. Also, the information is required to plan and implement measures in this basin.

Without a functional water information system, regulation of water resources and implementation of measures cannot be effective.

Information includes:

- Hydrological conditions
- Climate regime and impacts of climate change
- Environmental characteristics and biodiversity
- Population characteristics and dynamics
- Economic and social situation in basin
- Water uses and water use interests
- Planned water uses/proposed projects
- Political situation in basin and riparian communities, states, countries

Analysis and Use of Water Information



Source: GIZ presentation, FATA 2017; K. Groenemeyer

Challenges around Data and Information for RBM

There are a number of challenges related to data and information management in the context of basin management

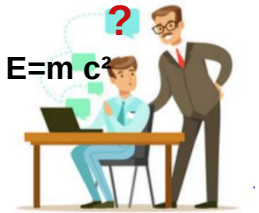
- Data and information is not available at all

- Data cannot be processed or analyzed

Data Processing

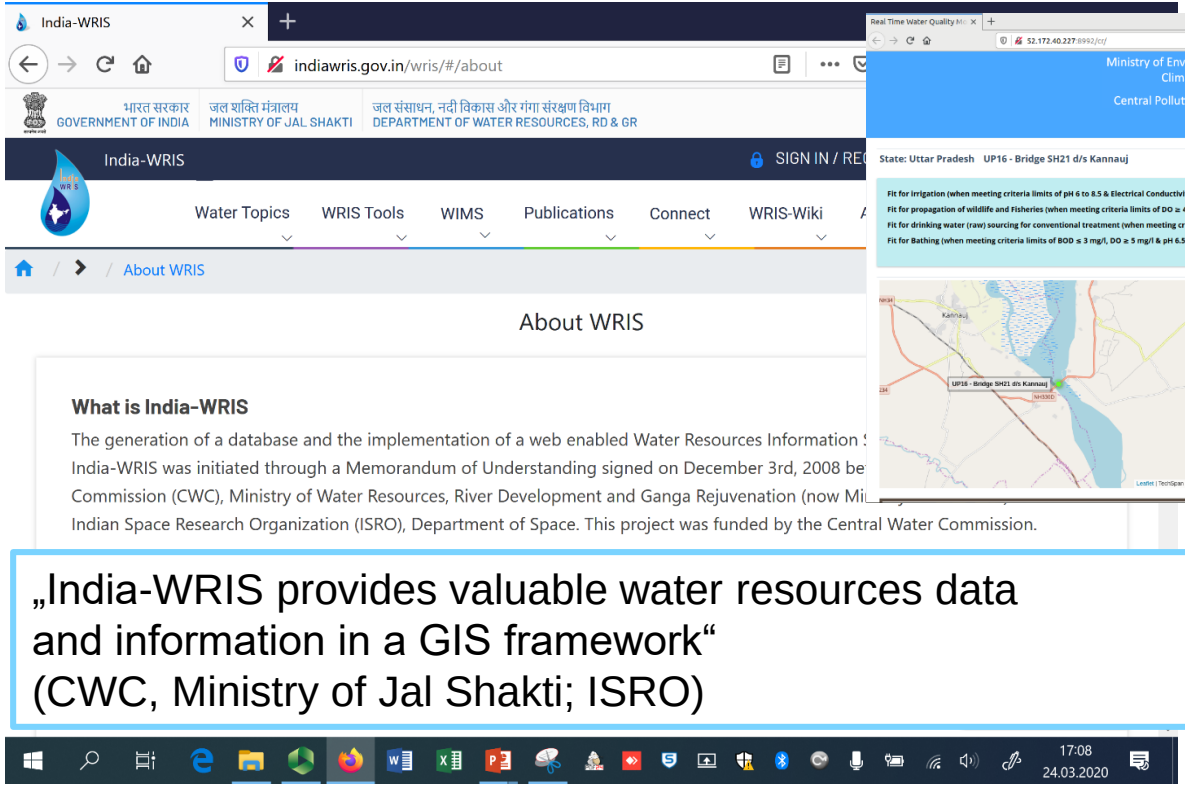
- Data and information is not being shared between relevant stakeholders

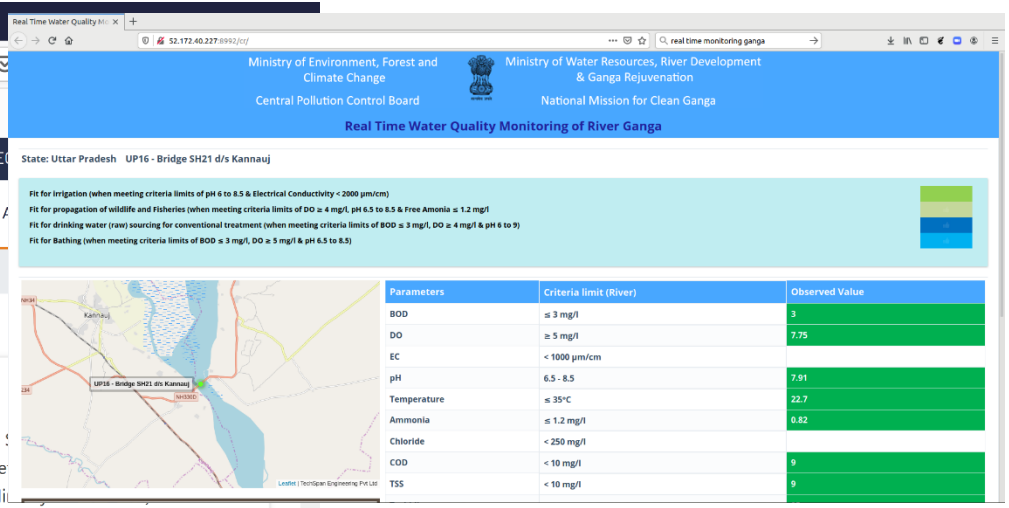
- Data and information is not “translated” in policy guidance (“science-policy-link”)



India's Water Resources Information System

Indiawris.gov.in/wris/#/about





„India-WRIS provides valuable water resources data and information in a GIS framework"
(CWC, Ministry of Jal Shakti; ISRO)

Real time Water Quality Monitoring of River Ganga provides valuable data (MoEFCC-MoJS)

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by giz

INDIA-EU WATER PARTNERSHIP

NAMAMI GANGE

Information and communication in the Ganga Basin

National Mission for Clean Ganga (NMCG)

(nmcg.nic.in)

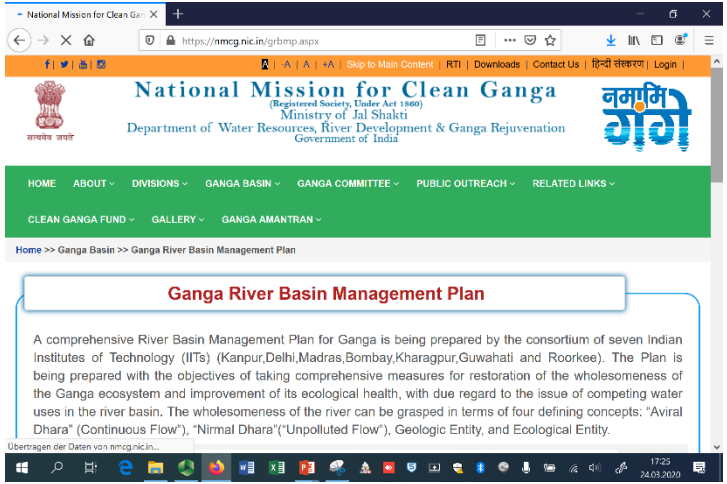
Ganga River Basin Management Plan

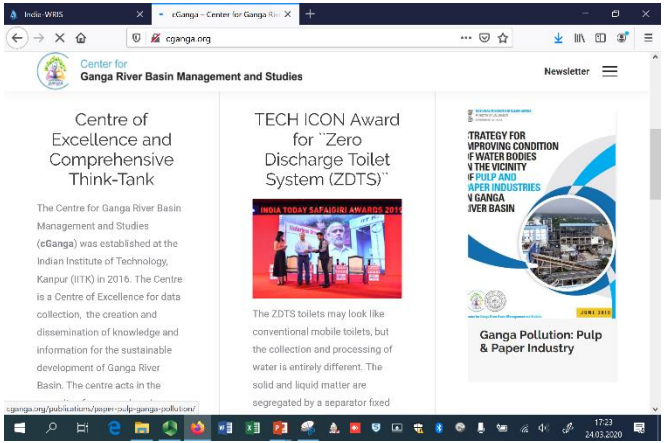
→ Information about State and District Ganga Committees

→ Information about the status of Ganga, links to projects and to other institutions

Centre for Ganga River Basin Management and Studies (cganga.org, since 2016)

Centre of excellence and comprehensive Think-Tank





WISE: Water Information Systems for Europe

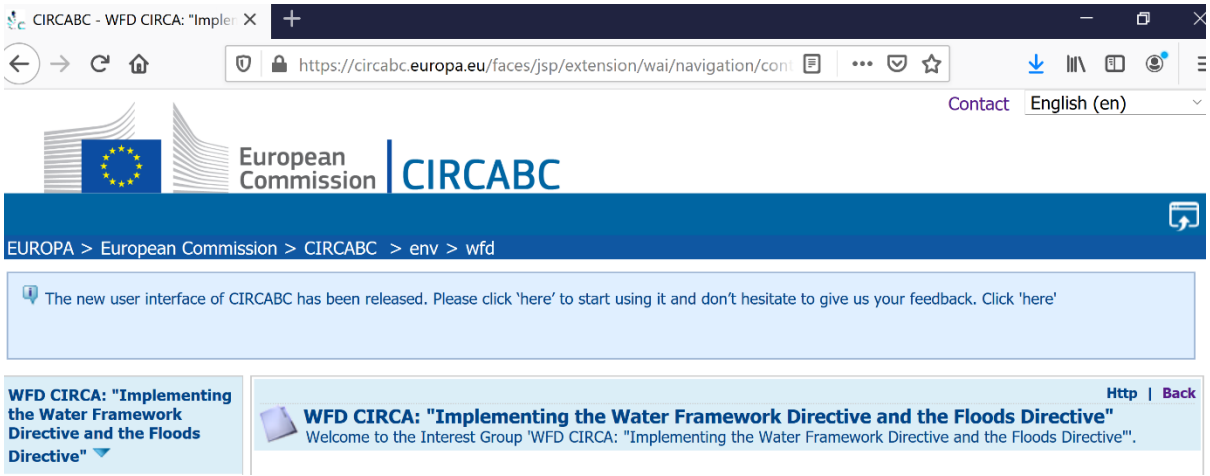
http://water.europa.eu/

Information Platform for Implementing the EU WFD

EC CIRCABC on the EU WFD, includes library with all Working Group Documents „Implementing the Water Framework Directive and the Floods Directive“

CIRCABC → European Commission → Environment → under Public access, go to WFD CIRCA

https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp



CIRCABC: Communication and Information Resource Centre for Administrations, Businesses and Citizens.

Data and Information Management in the Danube River Basin

In the Danube River Basin, data acquisition and analysis includes

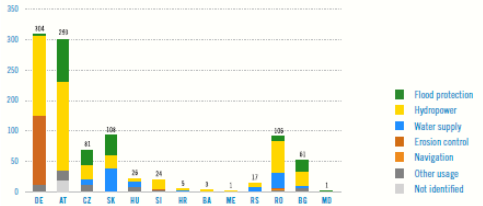
- Danube Basin Analysis (state of the basin, human activities, impacts, economic water use)
- identification of pressures in DRBMP – basis for identification of specific monitoring needs
- Trans-National Monitoring Network (TNMN) with specific parameters
- specific monitoring efforts (Joint Danube Survey)
- mechanisms for sharing data between ICPDR member countries (DANUBIS)
- mechanisms for sharing analyses results with other actors and the general public

→ **data and analyses are the basis for science-based and informed decision-making**

Table 1: List of monitoring sites

No.	Country code	DEFF Code	New TNMN code	River	Name of site	Locations	x- coord.	y-coord.	River-km	Altitude	Catchment
1	DE	L2130	DE2	Danube	Jochenstein	M	13.703	48.520	2 204	290	77 086
2	DE		DE5	Danube	Dillingen	L	10.499	48.568	2 538	420	11 315
3	DE	L2150	DE3	Inn	Kirchdorf	M	12.128	47.782	195	452	9 905
4	DE	L2160	DE4	Inn/Salzach	Laufen	L	12.933	47.940	47	390	6 113
5	AT	L2220	AT1	Danube	Jochenstein	M	13.703	48.521	2 204	290	77 086
6	AT		AT5	Danube	Enghagen	R	14.512	48.240	2 113	241	84 869
7	AT	L2180	AT3	Danube	Wien-Nussdorf	R	16.371	48.262	1 935	159	101 700
8	AT		AT6	Danube	Hainburg	R	16.993	48.164	1 879	136	130 759
9	CZ	L2100	CZ1	Morava	Lanzhot	M	16.989	48.687	79	160	9 725
10	CZ	L2120	CZ2	Morava/Dyje	Pohansko	M	16.885	48.723	17	155	12 540
11	SK	L1840	SK1	Danube	Bratislava	LMR	17.107	48.138	1 869	128	131 329
12	SK	L1860	SK2	Danube							
13	SK	L1960	SK4	Váh							
14	SK	L1871	SK5	Danube							
15	SK		SK6	Morava							
16	SK		SK7	Hron							
17	SK		SK8	Ipoly							
18	HU	L1470	HU1	Danube							
19	HU	L1475	HU2	Danube							
20	HU	L1490	HU3	Danube							
21	HU	L1520	HU4	Danube							
22	HU	L1540	HU5	Danube							
23	HU	L1604	HU6	Sio							
24	HU	L1610	HU7	Drava							
25	HU	L1770	HU8	Tisza/Sz							
26	HU	L1700	HU9	Tisza							

Number of barriers and associated main uses FIGURE 25



german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by giz

INDIA-EU WATER PARTNERSHIP

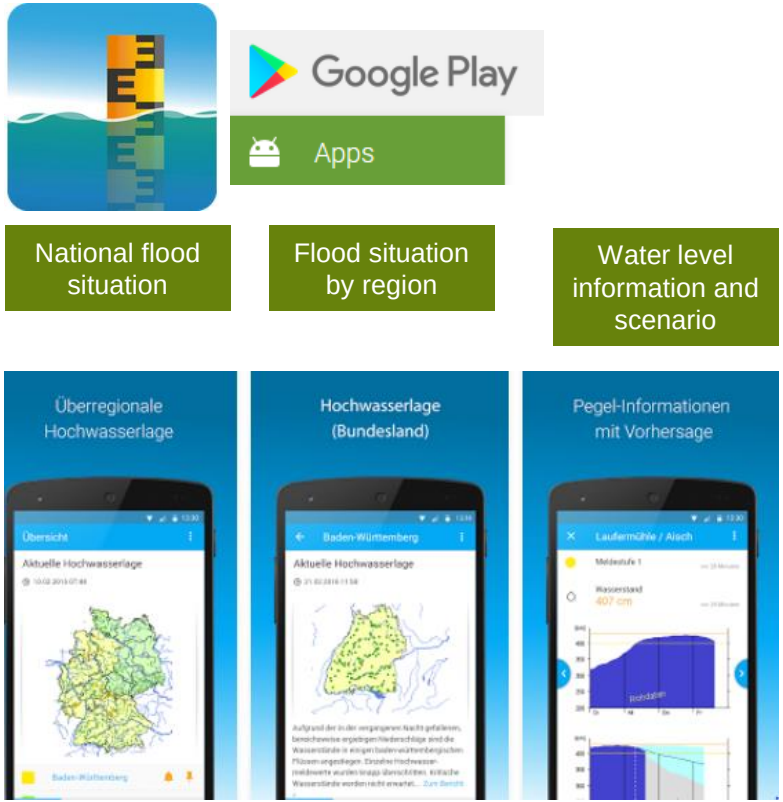
NAMAMI GANGE

Water Information on River Water Tables

Various websites contain information on water related to rivers.

In Germany, the water tables at gauges are published daily for important measuring points. This is particularly important for ships.

The App “MeinePegel” shows water tables in rivers including projections into the future.



Conclusion on Water Information Systems

- Water information systems are often very complex.
- Water information systems require resources for their maintenance. They need to be linked to the tasks of institutions.
- Water information systems are there to support management processes, not to replace or automate them. Therefore, the processes need to be clear before an information system can be designed.
- It is not practicable to unite all systems into one system.
- Web Portals and Apps can be solutions to improve access of the public and of planners to available information.

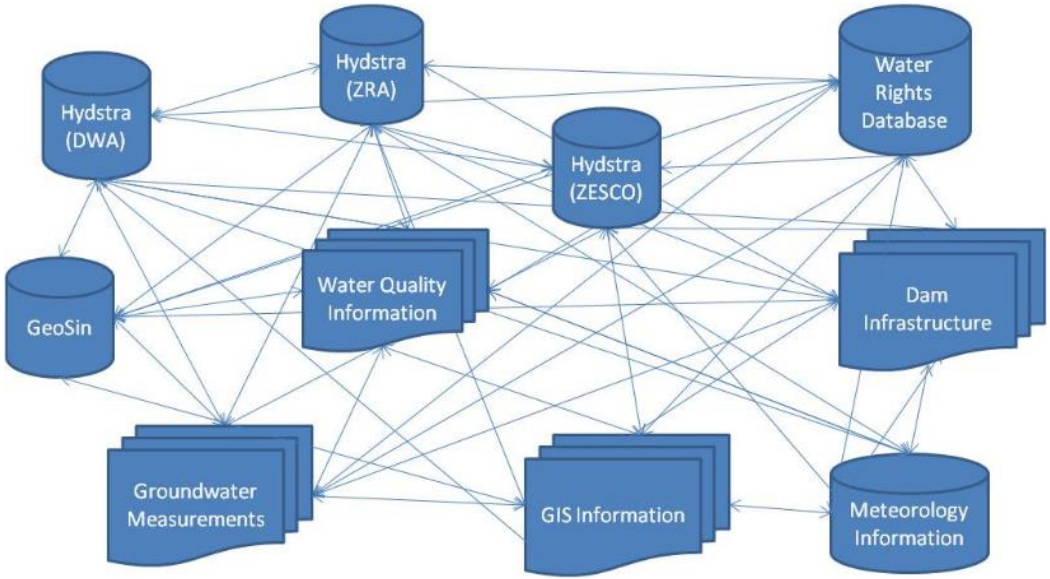


Image Source: GIZ (2014) Water information systems, Zambia

Raising Awareness among the Public

Priority of all top ministers: Ganga clean-up

- Namami Gange Programme, 2014
  Prime minister Modi declares Ganga clean-up and rejuvenation a national priority
- Holy Ganga: Religious importance and festivals along the Ganga
- Fasting for cleaning up and preserving the Ganga
  (Dr. Agrawal died in 2018 aged 86)
- Celebration of World Water Day (22 March)
- Celebration of National Ganga Day (4 November proposed in 2019)
- Prime Minister Modi Chaired the first meeting of the National Ganga Council on 14 December 2019

Modi's priority is clean Ganga: Gadkari

NEW DELHI, DECEMBER 05, 2018

YouTube - Jun 9, 2014

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by giz

INDIA-EU WATER PARTNERSHIP

NAMAMI GANGE

Reinforcement of Ganga Basin Identity by Celebration

Objective: Celebration involving the entire Ganga Basin

Ganga Quest
Annual quiz competition on Ganga

‘**Ganga Utsav**’ - Ganga Festival
Opportunities for outreach for attitudinal and behaviour change in school children in a festive environment

‘**Bal Ganga Mela**’
Childrens’ fair

‘**Ek shaam Ganga ke naam’**
An evening dedicated to the Ganga

Declaration of Ganga as a National River

2020	**Basin wide celebration** involving all stakeholders
2020	**National online quiz:** Bilingual (Hindi and English) awareness raising initiative
2019	**Festival:** Over 3000 people directly + 500+ via street-plays and 2000+ more across the basin
2018	**Children´s fair:** Over 500 children, over 500 adults
2017	**A cultural evening with a small number of people** in Delhi
2008	

Raising Awareness: The Danube Day, Danube box

The **Danube Day on 29 June** is celebrated every year along the river. Celebrated since 2004;
→ highlights why it's important to look after Danube rivers;
→ shows successes what can be achieved;
→ looks to the future to face upcoming challenges; → mobilises people to take action for the Danube.

The **Danube box** is an educational toolkit that can be ordered for example by school teachers.

www.danubebox.org

"The Danube Box - an education toolkit available in several languages and country versions - assist teachers in bringing the Danube closer to the minds of future generations."

The material can also be downloaded in several languages at the website.

Ganga Box – interactive educational material for schools

- Learning modules to motivate children to inculcate responsible behaviours including participatory activities, games and interactive tools to educate and inculcate responsible behaviour and attitudes in children.
- Box for schools in Uttarakhand and Uttar Pradesh: pilot version under review in 2020; final version by spring 2021.
- Ganga Box Teachers' trainings –

"City Sanitation Planning" is a citywide planning document for the entire sanitation sector to achieve improved service delivery and selection of suitable projects

Ganga Box training

Module 1. Teacher's training participatory and use of innovative tools

Module 2. School roll-out handholding support for implementation in schools

Module 3. Advanced training to create a state resource pool of Trainers

Module 4. Dissemination workshop involving all stakeholders

Module 5. Remote Coaching support to teachers

Summary of Training Module 3
Solutions through Exchange, Information Flow and Cooperation

- Basins require a continuous management – which can be implemented based on the RBM cycle steps.
- Water management is a cross-cutting issue- both across water uses as well as across boundaries. Therefore, RBM requires information flow and cooperation between many stakeholders and institutions.
- Stakeholder analyses can clarify which stakeholders are involved in which roles.
- Communication and information mechanisms are important- both in the RBM cycle process and by informing other organisations and the public. India has a good basis with its WIS.
- Awareness raising keeps up the public interest and thus political support for basin management. The Ganga river is of national priority, a momentum that should not be lost.

THANK YOU FOR YOUR ACTIVE PARTICIPATION!

Good Luck with River Basin Management at the Ganga River!

Continued engagement pre and post webinar

For queries and related engagements contact GIZ colleagues:

Delhi Office: Dr. Sumit Gautam (sumit.gautam@giz.de) **and Ms. Chhavi Sharda** (chhavi.sharda@giz.de)

Uttarakhand (Dehradun) Office: Mr. Merajuddin Ahmad (merajuddin.ahmad@giz.de)

The e-Learning platform: http://78.46.247.119/ (temporarily hosted on AHT servers and will be transferred to the servers of training institutes)

For technical/ content support related to the e-learning platform, contact AHT team in Germany:

Ms. Rania Taha (taha@aht-group.com), **Mr. Andreas Havemann** (havemann@aht-group.com) or **Ms. Rebecca Roblick** (roblick@aht-group.com)

As a federally owned enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development.

Published by:
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices
Bonn and Eschborn

India office:

GIZ Office New Delhi
46 Paschimi Marg, Vasant Vihar
New Delhi 110057

Postal address:

Support to Ganga Rejuvenation
B-5/2, Safdarjung Enclave
New Delhi 110 029
India
E: martina.burkard@giz.de/
chhavi.sharda@giz.de/
sumit.gautam@giz.de

Author/Responsible/Editor, etc.:
AHT Group AG Management & Engineering

Design/layout, etc.: GIZ

Photo credits/sources: N.A.

URL links:
Responsibility for the content of external websites linked in this publication always lies with their respective publishers. GIZ expressly dissociates itself from such content.

On behalf of
German Federal Ministry for Economic Cooperation and Development (BMZ)
Support to Ganga Rejuvenation, Competence in Motion,
New Delhi, GIZ India

GIZ is responsible for the content of this publication.
In cooperation with:

AHT GROUP AG
Management & Engineering

teri

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by
giz

INDIA-EU WATER PARTNERSHIP

NAMAMI GANGE