River Basin Management Cycle Training Series

08 - Solutions through Exchange, Information Flow and Cooperation

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NAMAMI GANGE

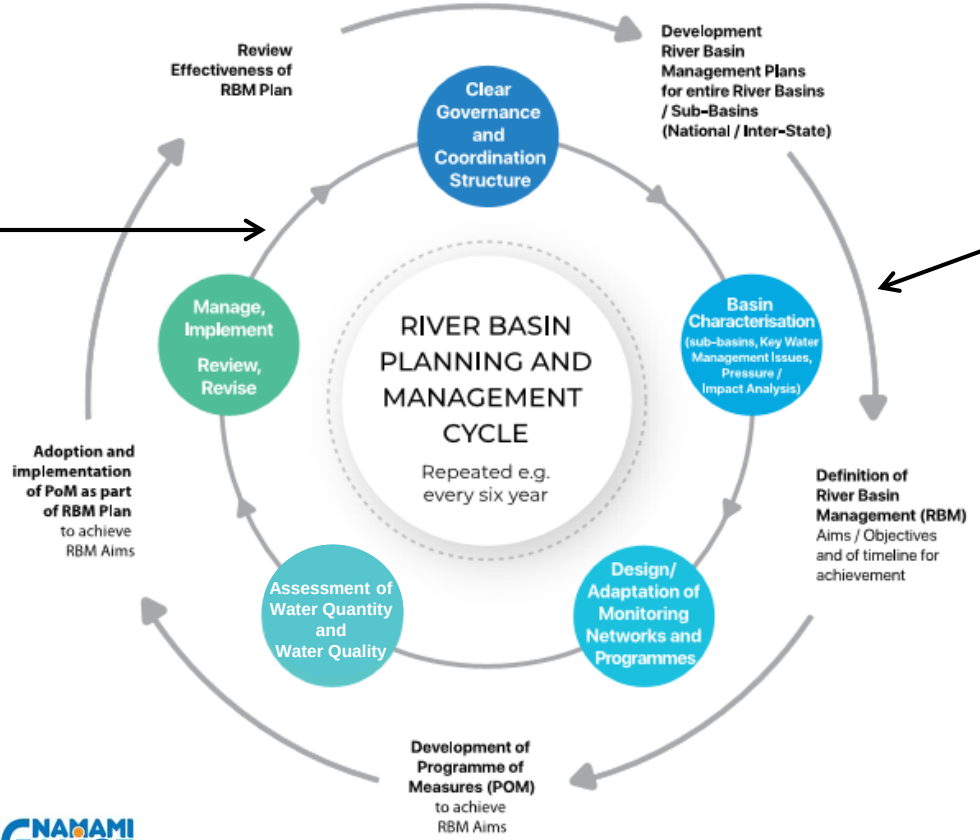
INDIA-EU WATER PARTNERSHIP

Outline

Unit	Topic
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 and Programme of Measures (PoM), Financing and 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

8 Solutions through exchange, information flow and cooperation

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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
  - Institutionalised workflows / processes for RBM

Institutions and RBO(s) in Ganga basin

- **Stakeholder engagement (TM 2/3)**
  - Various institutions responsible for water management
  - The “public”, the private sector, NGOs

Stakeholders in sub-basins

- **Information flow, raising awareness**
  - Information on RBM, access to monitoring and assessments
  - Raising awareness – events, specific communication

Information and communication

What information is needed for basin management?

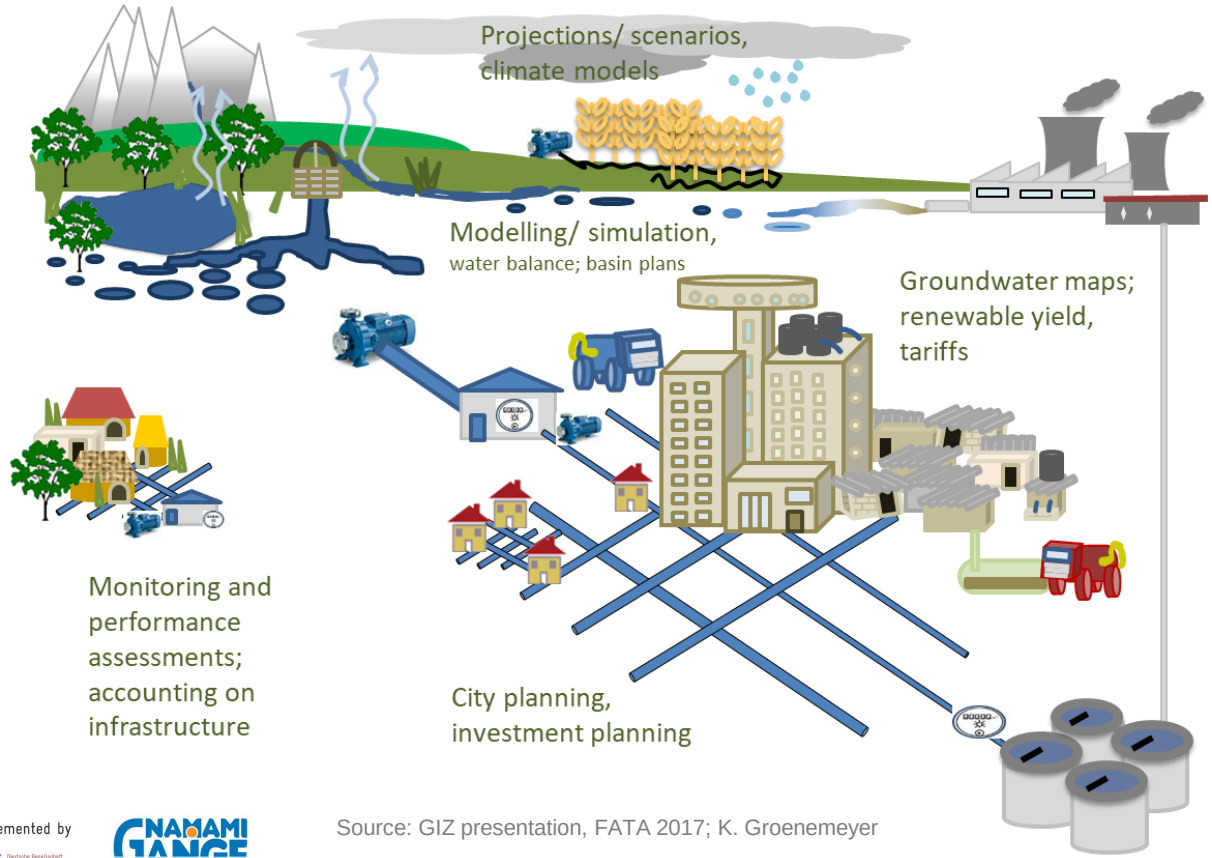
Water information systems are the knowledge base to measure impacts on water resources. This “water information” is the basis for water allocation and for decisions regarding pollution policies. Also, the information is required to plan and implement measures in this basin.

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



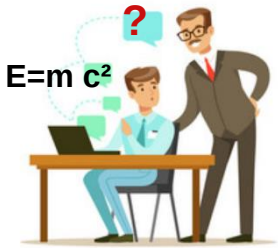
Source: GIZ presentation, FATA 2017; K. Groenemeyer

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 analysed
- Data and information is not being shared between relevant stakeholders
- Data and information is not “translated” in policy guidance (“science-policy-link”)

Data Processing



Optional Action Learning Exercise

IT´S YOUR TURN

i) Communication across various stakeholders

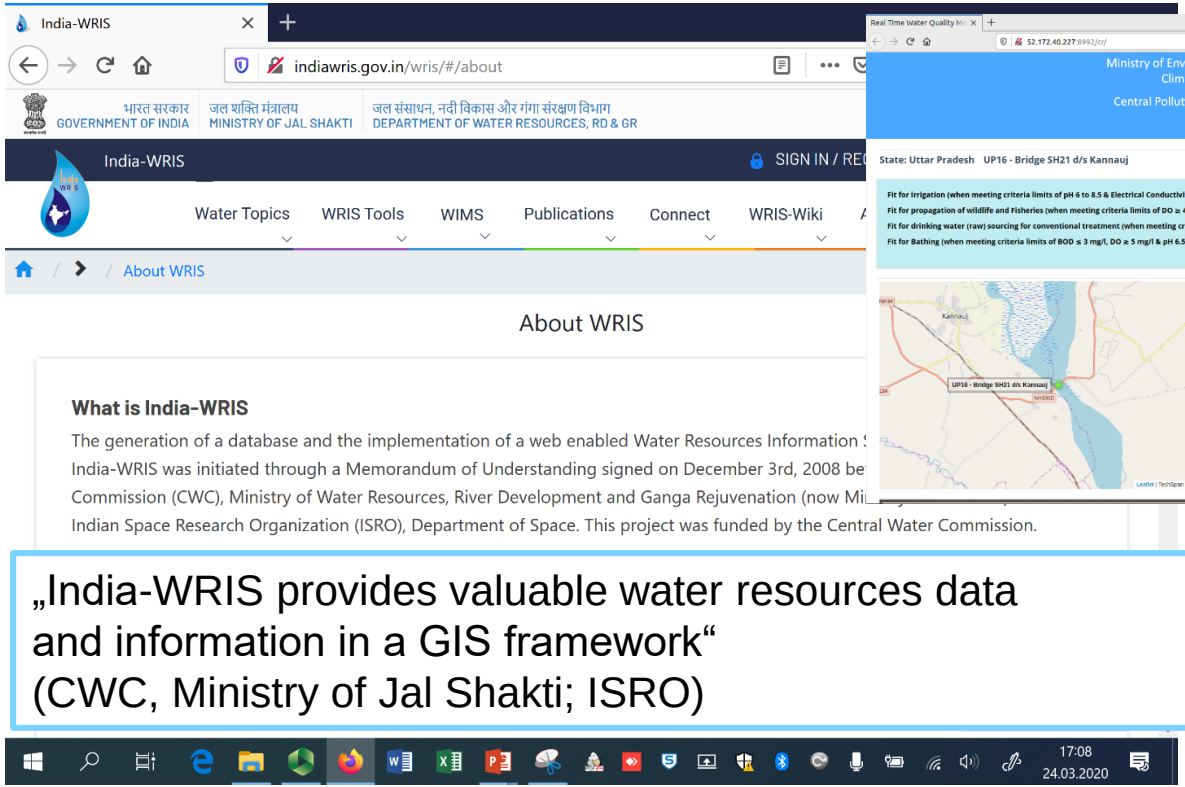
- Conceptual drawings

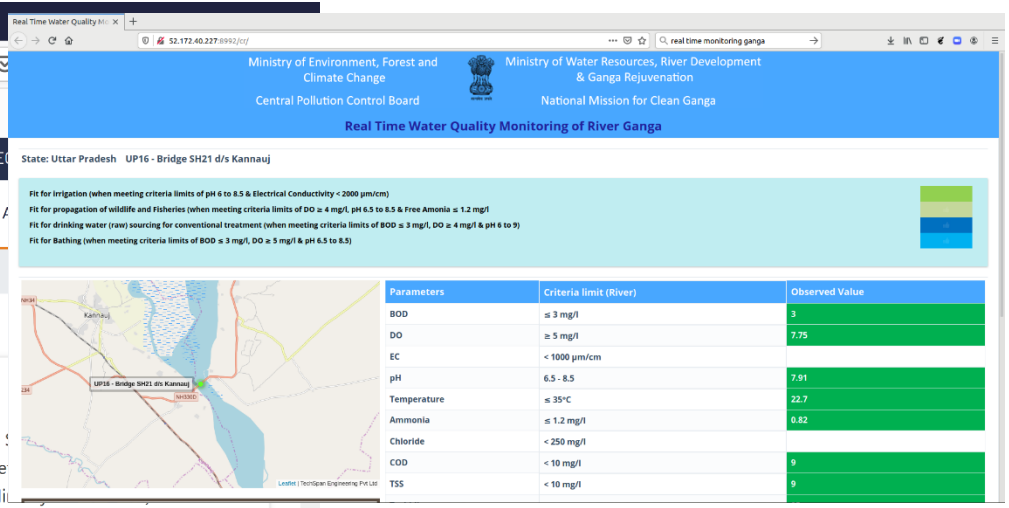
ii) Cooperation to achieve a joint objective

- Avalanche (Hula Hoop)

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)

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Information and communication in the Ganga Basin

National Mission for Clean Ganga (NMCG)

(nmcg.nic.in)

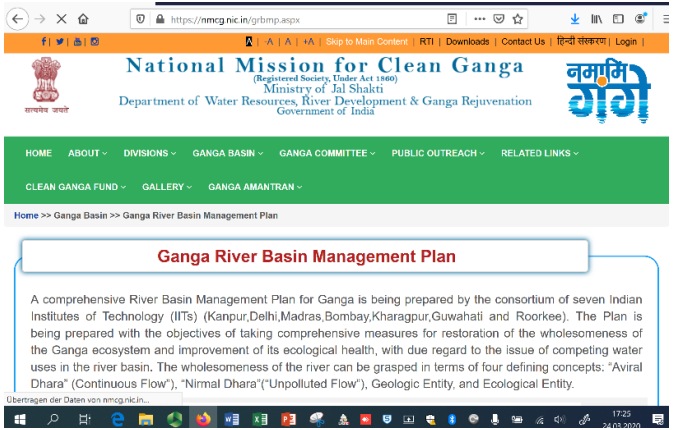
- Ganga River Basin Management Plan

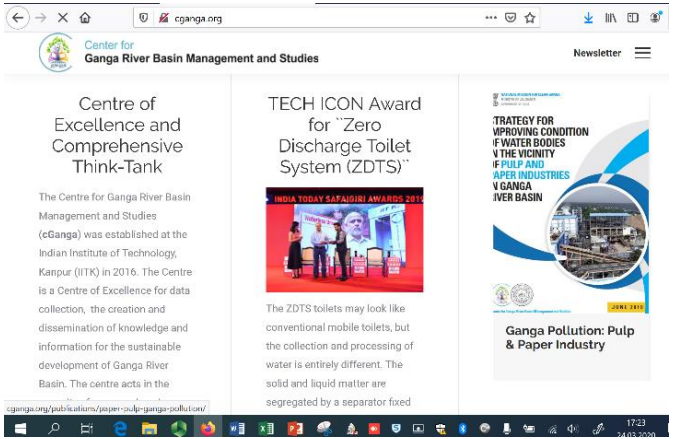
→ Information about State and District Ganga Committees

→ 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

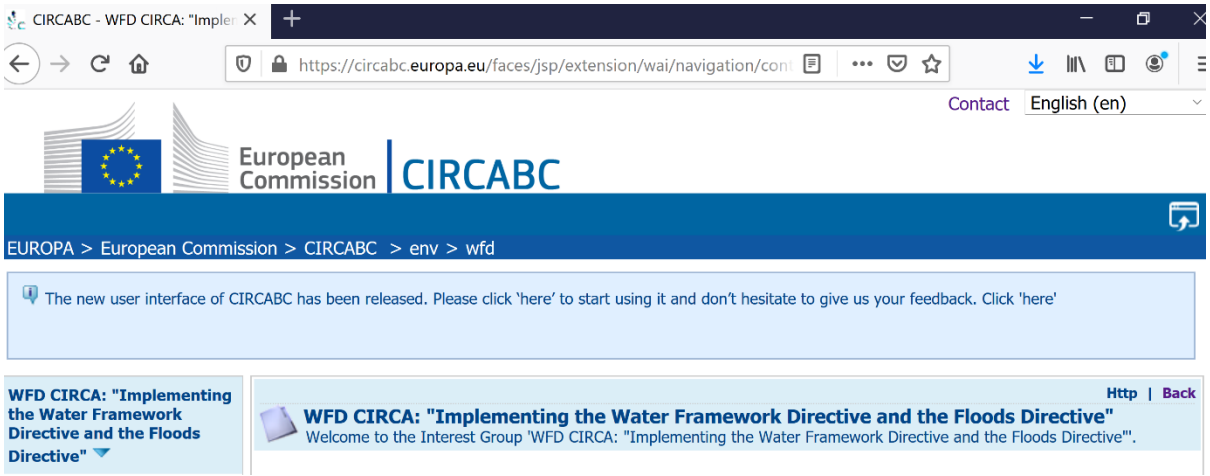
http://water.europa.eu/

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

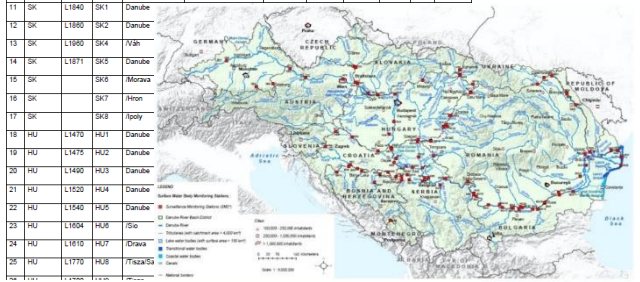
In the Danube River Basin, data acquisition and analysis includes

- Danube Basin Analysis (state of the basin, human activities, impacts, economic water use)
- Identification of pressures in DRBMP – basis for identificiation 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

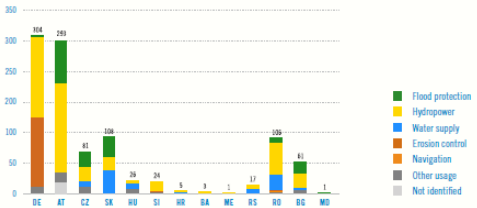
→ **data and analyses are the basis for science-based and informed decision-making**

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	12.126	47.782	195	462	9 905
4	DE	L2160	DE4	/Inn/Salzach	Laufen	L	12.933	47.940	47	390	8 113
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	150	9 725
10	CZ	L2120	CZ2	/Morava/Dyje	Pohansko	M	16.885	48.723	17	155	12 540
11	SK	L1840	SK1	Danube							
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/Sa							



Number of barriers and associated main uses FIGURE 25



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.

Google Play

Apps

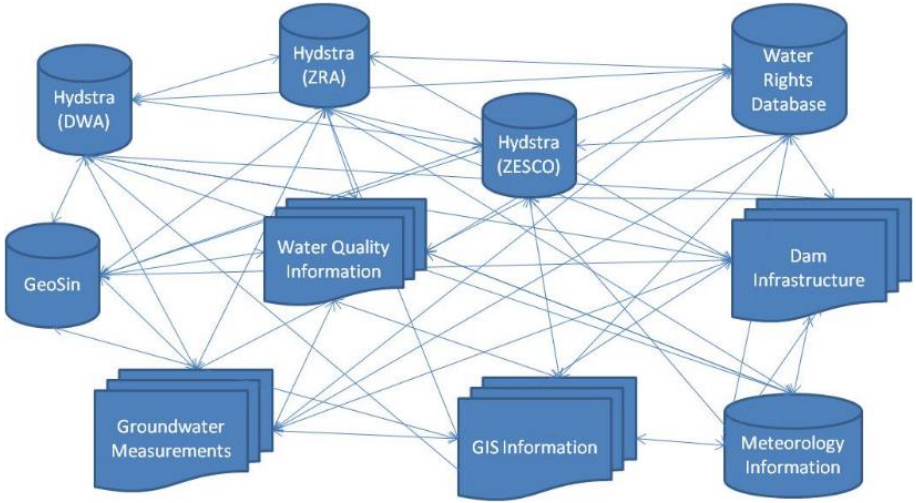
National flood situation

Flood situation by region

Water level information and scenario

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.



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

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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

Discussion: Exchange, information flow and cooperation

IT´S YOUR TURN

Discuss in a small group the following questions and assess

What is good 👍 ?
What should be further developed and how 🔬 ?

- available **information** for River Basin Management (in Ganga basin/ in your sub-basin) required for RBM plans, programmes of measures and their implementation
- **cooperation of institutions** for RBM in the Ganga Basin/ sub-basin
- **awareness of stakeholders including the public** with regard to the challenges of Ganga RBM

Discussion: Exchange, information flow and cooperation

IT´S YOUR TURN

	GOOD 👍	(HOW) TO BE DEVELOPED ☝
Available information		
Cooperation of institutions		
Awareness of stakeholders		

Coming to the end of the training

- Review of your group work results (separate presentation)
- Evaluation (forms to be distributed)
- Feed-back round

THANK YOU FOR YOUR ACTIVE PARTICIPATION!

Good Luck with River Basin Management at the Ganga River!

Continued engagement pre and post webinar

1. For queries and related engagements contact GIZ colleagues:

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2. E-Learning platform - http://78.46.247.119/

(Temporarily hosted on AHT servers and will be transferred to the servers of training institutes.)

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