

River Basin Management Cycle Training Series

01 - Introduction to River Basin Management



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giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

GNANAMI GANGE



Introduction and Context of the Training Programme

- GIZ launched **Support to Ganga Rejuvenation (SGR)**
- SGR in conjunction with the India-EU Water Partnership (IEWP) cooperates with the Namami Ganga Programme to:
 - Enable stakeholders at national and state levels to apply integrated approaches for River Basin Management (RBM), whilst benefiting from EU approaches and experiences (the Water Framework Directive)
 - Allow the transfer of technical, scientific and administrative experience from German and European river-cleaning programmes to the Ganga
- A consortium consisting of **AHT GROUP AG** and **TERI** has thus been contracted to → Develop and implement a participatory training programme to introduce the RBM Cycle as a steering and management instrument + Training of Trainers (ToT)

Objectives and Components of the Training Programme

Objective

Experts from the various target groups of the Indian government at national and state level understand the RBM Cycle, and are able to apply it in the context of the Ganga basin and other (sub)basins in India.

Components

- Training modules delivered in India (New Delhi, Dehradun, Lucknow and Pune)
- An e-learning platform
- Training of Trainers (ToT)

Schedule of Training Modules

Training Module	Date
Training Module 1: Understanding the RBM Cycle and its Steps	
Training Module 2: Skills and Expertise for Technical Development and Implementation of RBM Plans	
Training Module 3: Solutions through Exchange, Information Flow and Cooperation	

Course Outline

Unit	Topic
1	Introduction to River Basin Management
2	Clear Governance and Coordination Structure
	<i>Governance (legal aspects and framework)</i>
	<i>Basin Coordination Structures (basin institutions and stakeholder engagement)</i>
3	Basin Characterisation
	<i>DPSIR Assessment</i>
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
	<i>River Basin Plans and Programme of Measures (PoM), Financing and Review of PoM</i>

The e-Learning Platform

Access directly via <http://78.46.247.119>

or AHT's homepage www.aht-group.com

Projects → Asia → India → SGR

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INDIA-EU WATER PARTNERSHIP

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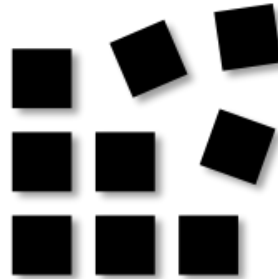
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Presentation of Participants



Your Expectations



1 Introduction to River Basin Management



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Water Resources Management Principles

Dublin Statement 1994, International Conference on Water and the Environment:

- **Principle 1:** Fresh water is a *finite and vulnerable* resource essential to sustain development and the environment
- **Principle 2:** Water development and management should be based on a *participatory approach* involving users, planners and policy makers at *all* levels
- **Principle 3:** *Women* play a central part in provision, management and safeguarding water.
- **Principle 4:** Water has *an economic value* in all its competing uses and should be organised as an economic good as well as as social good

Water Resources Management in the Context of the SDGs and WFD

Sustainable Development Goals SDG 6.5 Target → *“By 2030, implement integrated water resources management at all levels, including through transboundary cooperation.”*

European Water Framework Directive (WFD) (Directive 2000/60EC) → *“Water is not a commercial product like any other, but rather a heritage which must be protected, defended and treated as such.”*

Water Resources Management Principles

“(Integrated) water resources management is a process which promotes the *coordinated* development and management of water, land and related resources, in order to *maximise* the resultant economic and social welfare in an *equitable* manner *without compromising the sustainability* of vital ecosystems.“

Modified from Integrated Water Resources Management in Action, DHI Water Policy, UNEP DHI Centre for Water and Environment 2009

Water Resources Management for Conflict Mitigation

Many sectors use water; the most important are:

- Drinking water (health, municipal water supply)
- Food (irrigation water, but also fish/ aquaculture)
- Energy (hydropower)
- Transport (shipping)
- Industry (cooling, mining, other industries)
- Tourism and recreation (ships and ecology)
- Ecosystems (maintaining other indirect uses/ E-flows)

Water Resources Management for Conflict Mitigation (cont.)

- Conflicts are the rule not the exception when discussing water use
- Integration means that all sectors need to *consult* with each other over their water needs
- Consultation avoids misguided investments → Needs to be problem-based so that processes are not unnecessarily slowed down
- Consultation through RBM processes mitigates conflicts and identifies solutions

Elements of Water Management at Different Levels



National Level

- National water strategies and laws
- Harmonisation of investment planning
- Water sector reform including regulation



Basin Level

- Support of basin organisations
- **Data and information management, Decision-support Systems (DSS)**
- **Development of water management plans**
- **Multi-stakeholder agreements on Water Resources Management**



Local Level

- Participative management structures e.g. water user associations
- Wastewater treatment, water reuse
- Water storage, flood and rainwater management
- Water efficiency, energy efficiency

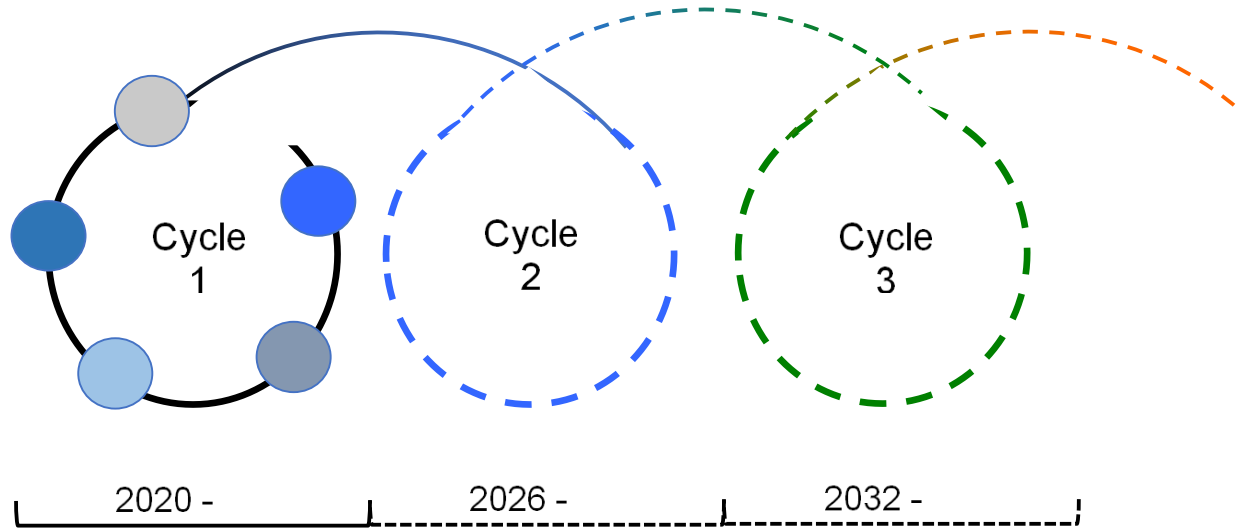
The River Basin Planning and Management Cycle

„Inner cycle“
Technical/
operational level“



„Outer cycle“
Planning and
decision making
level

The River Basin Planning and Management Cycle



- RBM process requires planning over several years and implementation cycles that are to be repeated in a certain frequency (e.g. 6 years).
- Each Cycle is a revision to adjust to new conditions in the basin and to addresses new challenges.

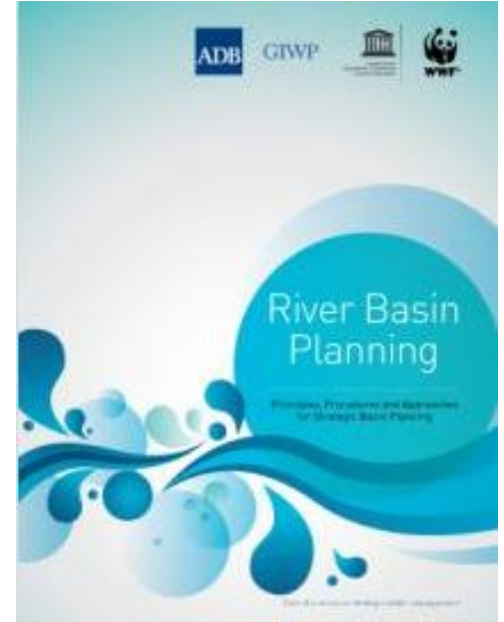
River Basin Management Principles

- River Basin Management (RBM) is a **practical** approach which includes **measures** necessary to achieve set goals and objectives
- In 2000, the European Union (EU) adopted the **Water Framework Directive (WFD)**
 - Examples for best practice benchmarks from Europe could be found at the corresponding River Basin Commissions e.g. Danube, Rhine, Elbe, Odra
- From the requirements of the WFD, and the principles and needs of water resources management, a **River Basin Planning and Management Cycle** was developed
- The structure, the processes and steps of this scheme are subject of this seminar we present today

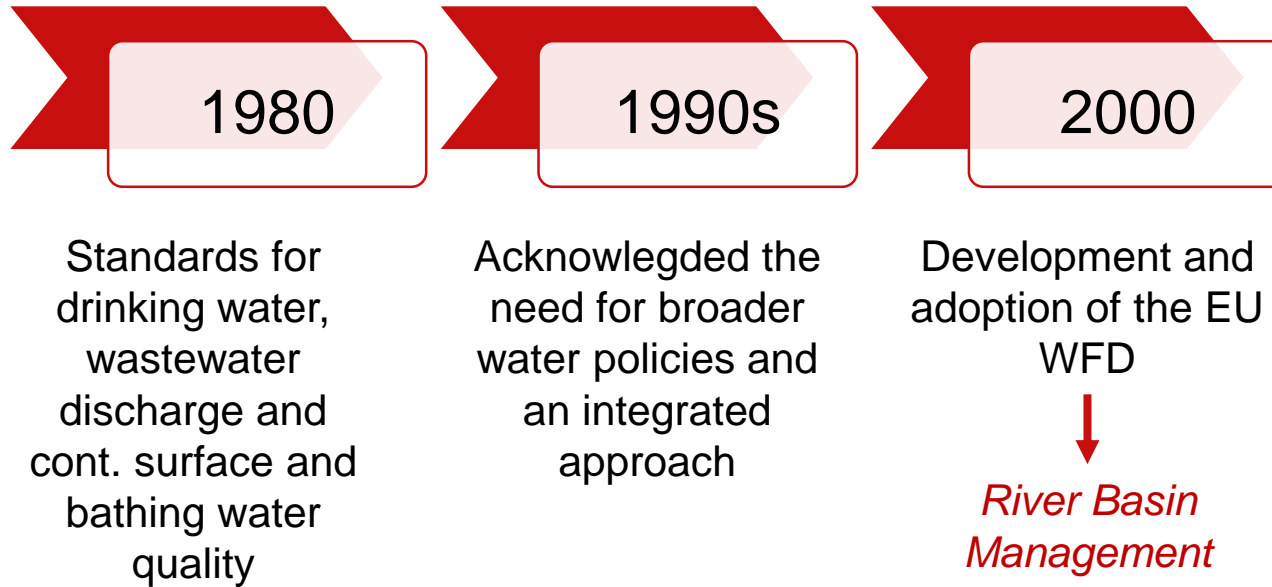
River Basin Management to Solve Water Problems

- “It is precisely because **water resources** provide so many functions that **planning** for their use is so **complex**
- The **demands on rivers increasingly exceed their natural capabilities**, resulting in over-abstraction, pollution, alien infestation, floodplain alteration and habitat destruction
- These **failures** are usually the consequence of poor decision-making, inadequate management and **inappropriate planning**
- **Effective basin planning** is the starting point for **sustainable management of river basins.**”

Pegram et al. (2013): Basin Management. Principles, Procedures and Approaches for Strategic Basin Planning. UNESCO, Paris.



RBM in Europe: A Long Journey with the EU Water Framework Directive

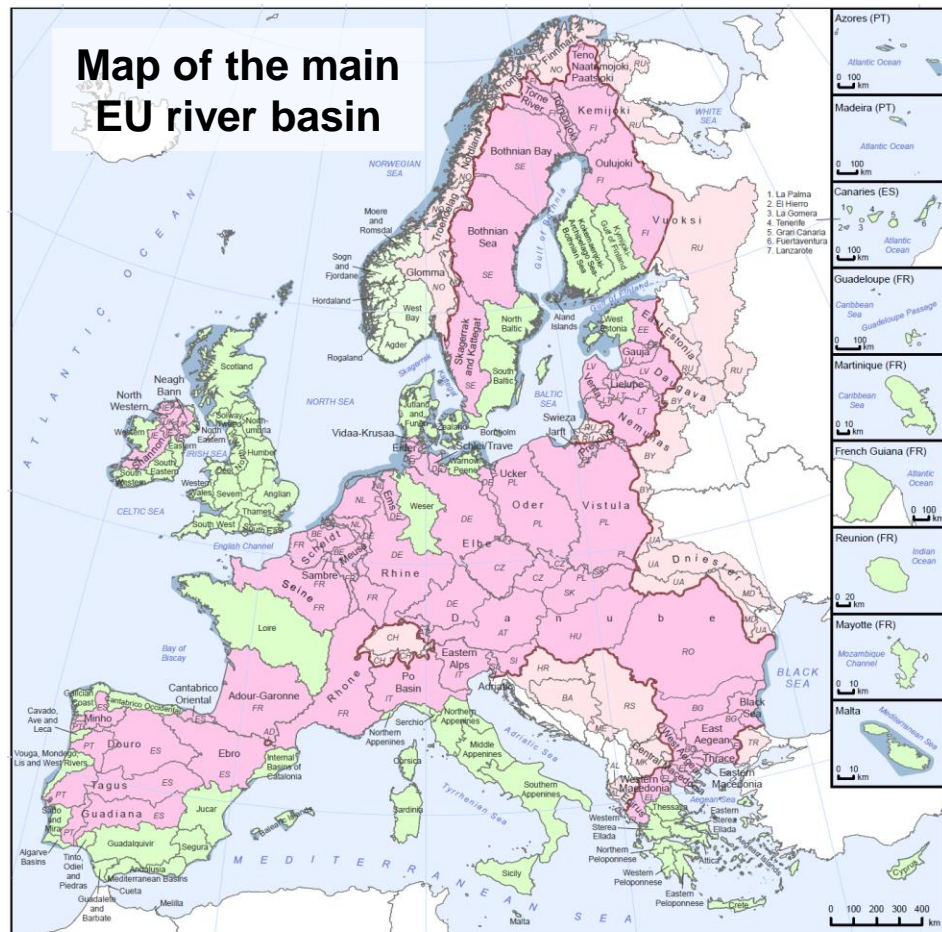


RBM in Europe: A Long Journey with the EU Water Framework Directive

- River Basin Management was acknowledged to be the best model i.e. **water management by natural geographical and hydrological units** instead of according to administrative or political boundaries
- The overall goal is to achieve **cleaner rivers and lakes** and groundwater, i.e. a “**good status**” of all water bodies in the EU
- Positive examples were the rivers **Maas, Schelde or Rhine** river basins, with their cooperation and joint objective-setting across Member State borders, or in the case of the Rhine even beyond the EU territory

EU Water Framework Directive

- Commitment: achieve a **“good status”** for **all waters** by 2015
- EU member states are obliged to:
 - Regularly assess the state of the water bodies and **develop monitoring programmes**
 - **Develop plans of measures** to achieve the required good status
 - Develop **RBM plans** (40 river basins) including basin-wide management plans for transboundary rivers
- By 2015, approx. **53%** had achieved good ecological status



Source: http://ec.europa.eu/environment/water/water-framework/facts_figures/pdf/River%20Basin%20Districts-2012.pdf

RBM Plans in Europe

A number of **International River Basin** Districts have published River Basin Management Plans:

- Danube
- Rhine
- Elbe
- Ems
- Finnish-Norwegian International River Basin District
- Meuse
- Scheldt / l'Escaut
- Odra
- Sava Commission (ISRBC)

Exercise: Application of Basin Management in India

Discuss in a small groups the following questions:

- According to your experience, is basin management applied in India (according to the cycle)?
 - In which (sub-)basins?
 - Which steps of the cycle?
- Which elements are you particularly interested in?

IT'S YOUR TURN

Didactical Approach



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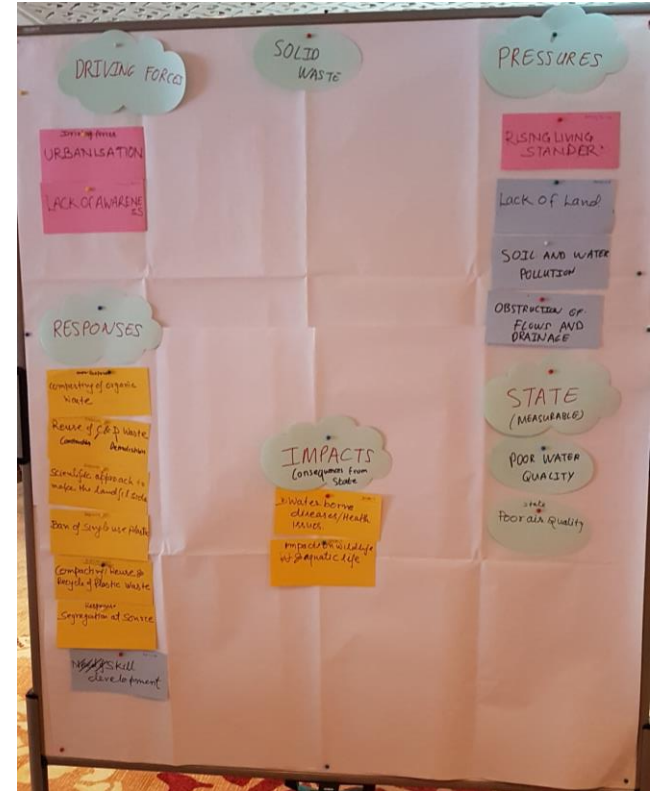
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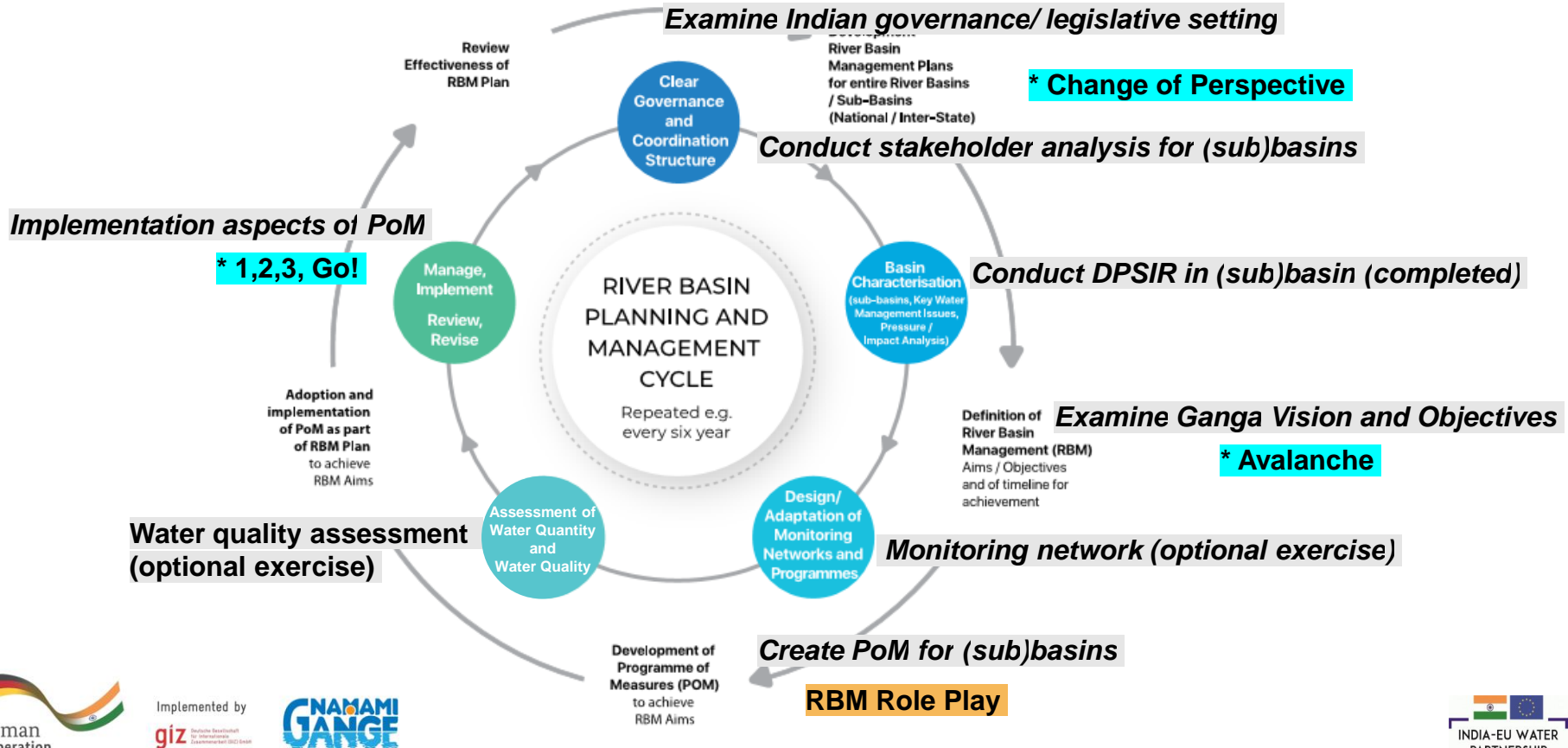
Didactical Approach: Problem-oriented Learning

To achieve the objective of this training programme:

- Working groups of up to 5 people will be established
- Each working group chooses one (sub)basin in India to work on throughout the training programme
- Trainers will assist the working groups in implementing steps of the RBM Cycle and in case of questions → *Trainers will present comparable examples from the EU*



Incorporating the Didactical Approach into the RBM Cycle



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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