

Project Approach and Concept

Water quality data and monitoring

**SMART
WATER
FUTURE
INDIA**

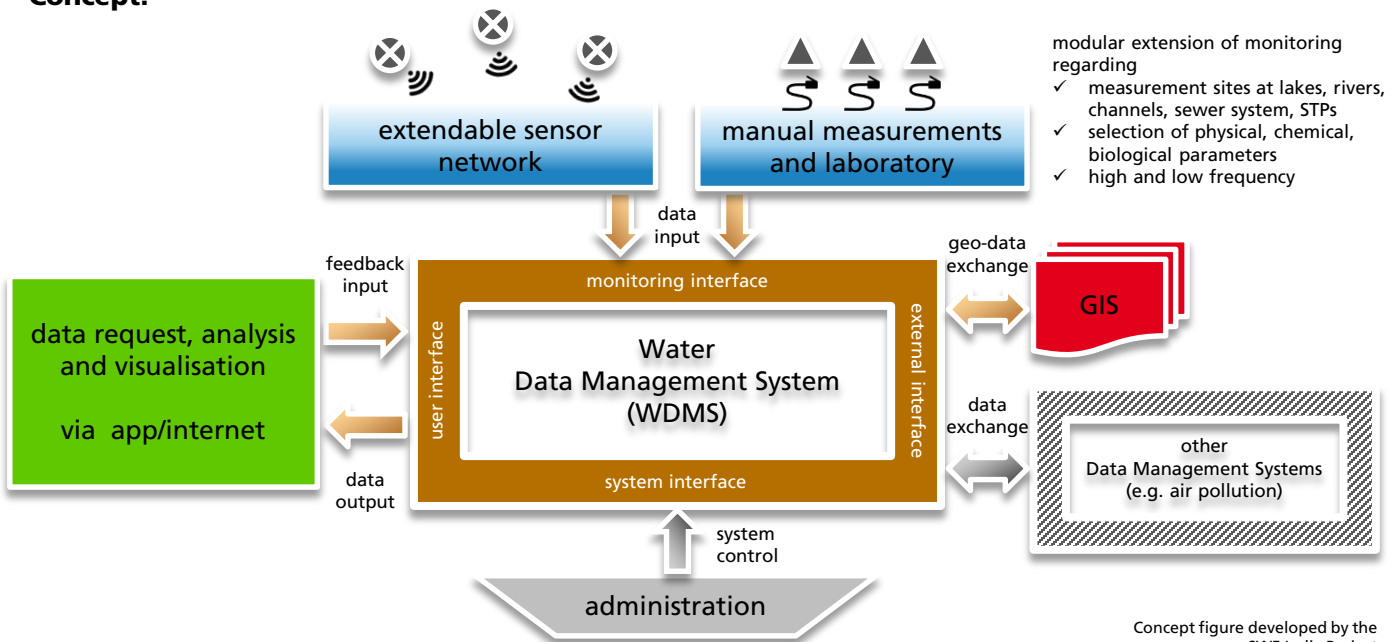
Problems to be addressed:

- Pollution of lakes, Noyyal river and groundwater is an urgent problem.
- Human health is endangered by polluted water resources.
- Data on water quality and quantity is important for identifying and locating of problems.
- Monitoring is necessary as a basis for demonstrating the effectiveness of measures.

Approach:

Implementation of a smart monitoring and data management system for water quality and quantity

Concept:



Concept figure developed by the SWF India Project

Details of the concept:

- Monitoring from source to tap, from use to environment
- Integrated database of water quality and quantity data
- Up-to-date data management with open data availability
- User-friendly online access via app
- Smart online monitoring and metering with remote sensors
- Sensor technology as part of plant engineering
- Data merging from sensors and laboratories
- Integration of the monitoring of water reservoirs and sewers
- Modular system, extendable for future extensions of the measurement network and interfaces



SWF INDIA RESEARCH TEAM:

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Supported by:

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Benefits and potentials:

- Establishment of a Coimbatore smart data infrastructure
- Combination of water monitoring with air pollution and general environmental monitoring
- Allows a dynamic and sustainable water management
- Evaluation of the progress of projects and smart city development with respect to water
- Supports compliance with standards for organic farming
- Linkage to health sector for detecting the causes of diseases
- Pushing forward the engineering competence and IT industry of Coimbatore
- Increasing visibility and cooperation potentials
- Promising field of Indo-German cooperation

Roles for implementation:

- Ownership / responsibility of the system
- Administration and coordination of the system
- Software development and maintenance
- Hardware setup and operation
- Sensor network operation
- Laboratory services

Next Steps:

- Clarification of institutional ownership and responsibilities
- Commitment of partners for respective roles
- Identification of hot spots for site selection of monitoring
- Preparation of a cost estimate
- Identification of financing options and models
- Implementation of a basic system as a starting point



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