

### Water Innovation Hubs and Smart Water Monitoring to promote Indo-German cooperation

Project presentation M.Sc. Marc Beckett, Dr. Marius Mohr 09.03.2021



based on a decision of the German Bundestag

# Overview |

### AQUA-Hub

Water Innovation Hubs and Smart Water Monitoring for fostered Indo-German cooperation

### Duration

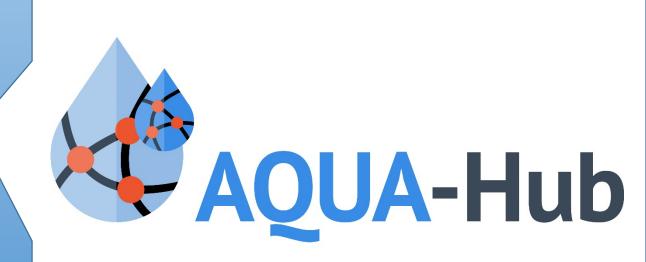
10/2020 - 09/2022

- Project Reference 16EXI4021A
- Funding:

294.093 € (Total cost: 321.213 €)

### • Programme

Export Initiative for Environmental Technologies by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety



Supported by:

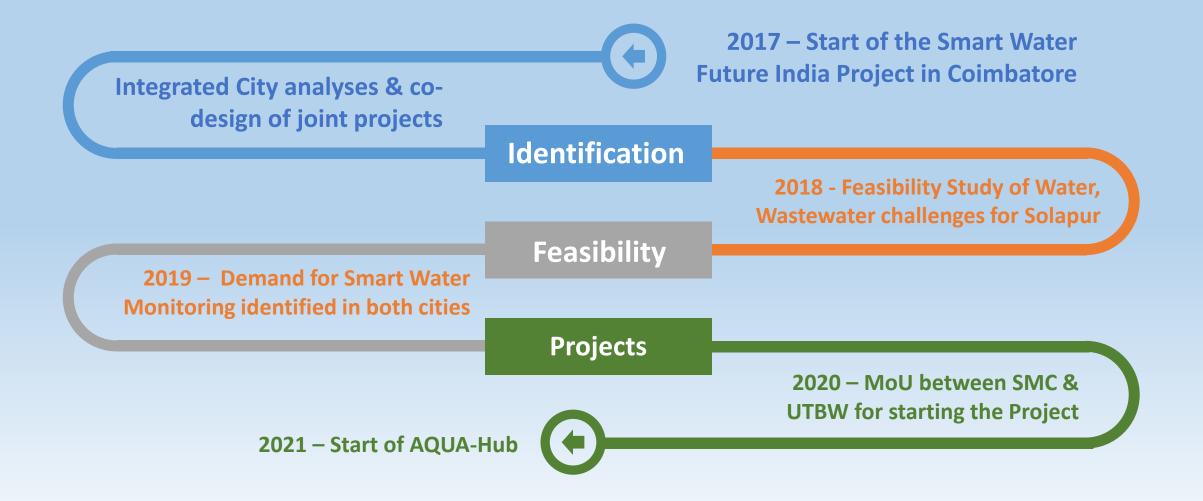


Federal Ministry for the Environment, Nature Conservation and Nuclear Safety



based on a decision of the German Bundestag

## Background



## Smart Water Future India

- Coimbatore selected as Smart City by central government
- One of three smart cities supported by Germany
- Greatest challenges identified in fields of mobility and water infrastructure
- Germany: many solutions in water management, but not always fitting for situation in India
- New approach: integrated solutions, not focusing on only one sector (e.g. nexus water, energy, food)



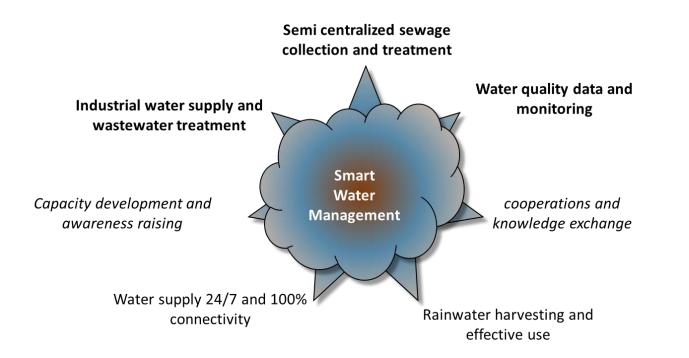
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Federal Ministry for the Environment, Nature Conservation and Nuclear Safety



based on a decision of the German Bundestag



## Background

### > Joint project identification

### Water Innovation Hubs

Project Approach and Concept Water quality data and monitoring	SMART WATER FUTURE
Perdamin to be addressed: In Million of Inten, Nappel view and grownloadin is an unput problem. I laron katch is indeepend by polluted weter resources. Data an water gaining and quarks in sense that the intendring and incurses of Muncharing is interessery as a basis for demonstrating the effectuences of messure Muncharing is interessery as a basis.	problems. am
Approach: implementation of a smoot monitoring and data management system for water ou	ulity and quantity
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transported Babben of Jenning and Ken of Gancha Grans     (and Section Se	
SWF INDIA RESEARCH TEAM DRSSCA S Faunholer Constant Constant Constant Drssca Drssca Constant Drssca Dr	1996

Project Approach Semi-Centralized Water Manageme	SMAR WATE FUTUR
Problems to be addressed  Insufficient watewater collection and treatment	Technical components
infrastructure	<ul> <li>anaerobic dispector</li> </ul>
<ul> <li>Pollution of water bodies (lakes, Filver Noyya), and groundwater)</li> </ul>	<ul> <li>On Turbine</li> </ul>
<ul> <li>Health problems, odor emissions, water scarcity</li> </ul>	<ul> <li>combustion engine or C</li> </ul>
<ul> <li>Centralized concepts not flexible and complicated to</li> </ul>	or trigeneration plant
implement (obstruction of streets during construction etc.)	· pumps and mixing device
<ul> <li>New facilities currently under construction, but still parts of the growing city without wartewater collection</li> </ul>	<ul> <li>bioreactor filtration membranes</li> </ul>
and treatment	· blowers, pipes and tank
<ul> <li>Municipal solid waste separation systems in Combatore insufficient, leading to waste of organic resources</li> </ul>	· gearboxes for valves
	<ul> <li>aeration elements</li> </ul>
Concept  Semi-Controlised Water Management integrates	<ul> <li>valves and electronic control devices for aerat</li> </ul>
different technologies, combining benefits of large, contralized infractinuctures and smaller systems.	<ul> <li>measuring and analysis tacheology</li> </ul>
<ul> <li>The system treats wastewater and organic waste.</li> <li>At the same time, it produces treated water for non-</li> </ul>	<ul> <li>chamber filter press.</li> </ul>
drinking uses, as well as energy and fertilizer from.	<ul> <li>waste shredders</li> </ul>
organs; waste and sludge.	· dewatering and
<ul> <li>A plant of 1 ha area serves ca. 12,000 inhabitants</li> </ul>	pelletization machine
troughly one average urban ward).	<ul> <li>pellet packaging facility</li> </ul>
<ul> <li>A pilot project in a mixed-use urben district in Qingdeo, china has been very successful.</li> </ul>	
A pilot project in a mixed-use urban district in Qingdeo, China has been very successful.  SWF INDIA RESEARCH TEAM: Context	ingenie fa
A pilot project in a mixed-use urban district in Qingdeo, China has been very successful	Franklin Frankline Antonio Antonio I

Concept draft		SMAR
Water Innovation	Hub	FUTUR
		INDIA
The Water Innovation basis for a long-term		
cooperation in the v		
Form	for network partners soo accelerating	knowledge
enter	ge between revenue, private and put	
Forum	Starting paint to	r project advisory and
	Think coordination >>	getting projects on the ting local institutions in
		processes (setting
Water	problem id	ojects in the fields of water intification and diagnosis
Innovation	Lab soo defaut	ing clarity on the focal inter-
Hub		
		planners) according
	making in local commentary	efficiently bringing
	demand and suppl	
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### Smart Water Monitoring Project

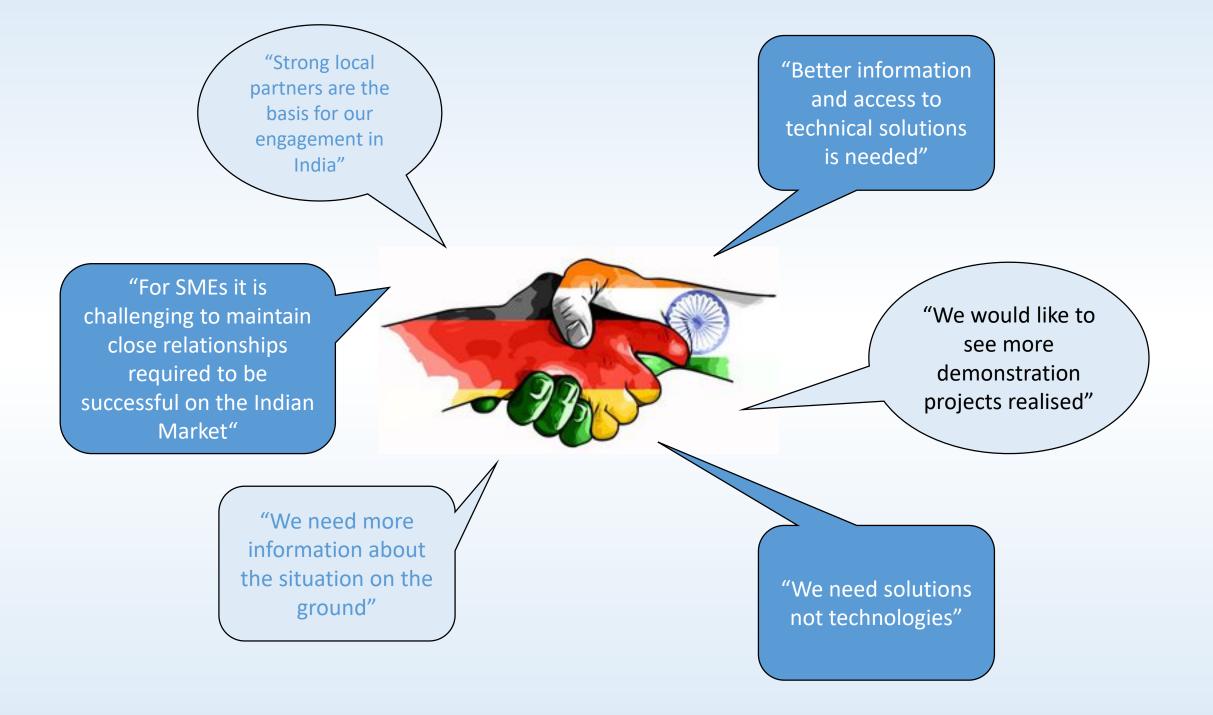
# Solapur|

- Feasibility study funded by UTBW & Baden Württemberg
- City Analysis Conducted in 2018
  - □ Visit of infrastructure sites
  - Data collection & evaluation
- Stakeholder Workshops in 2019
   Co-Design of projects
   Trepresentatives from public & private sector

Conclusion: Smart Water Monitoring Project

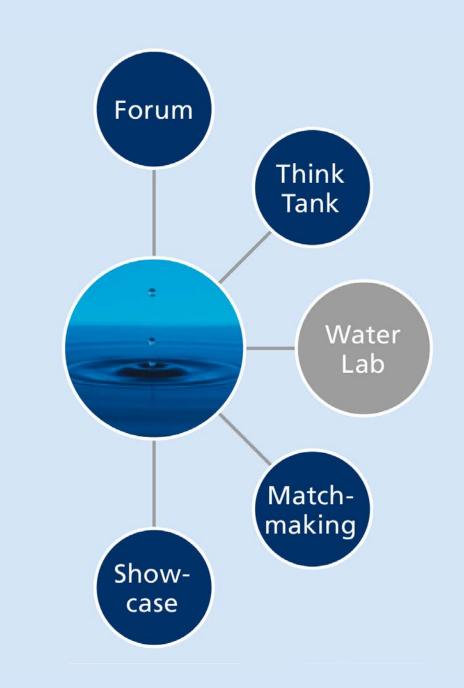






## Objectives |

- > Establishment of Water Innovation Hubs in CMB & SOL
- Increase cooperation & exchange between Indian & German stakeholders
- Increase Access to Water Technologies "Made in Germany"
- Promote innovation & adaptation of technologies to become solutions
- > Develop a sustainable business model for the Water Innovation Hubs

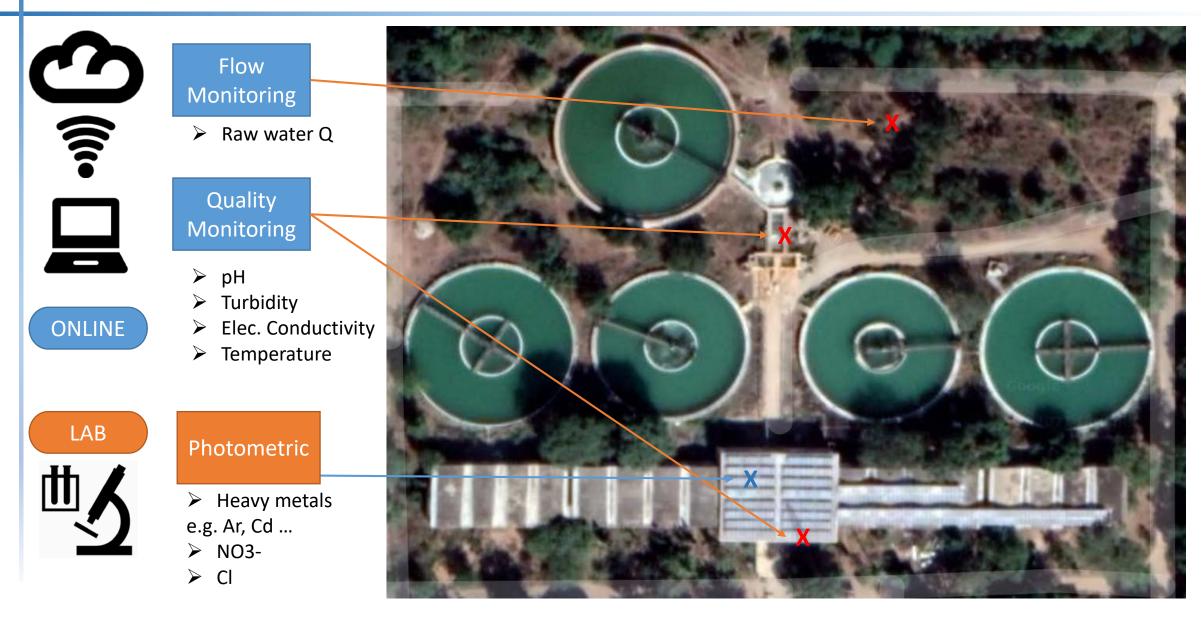


## Approach |

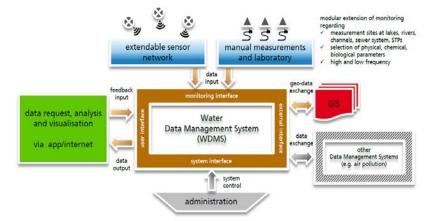
- Establish presence on the ground with Local HubManagers
- Network with local stakeholders to identify current trends and demands
- Present potential solutions from Germany to the local stakeholders
- Matchmaking and Business Opportunities
- Accelerate communication via Website, Newsletter, Social media and (online) events

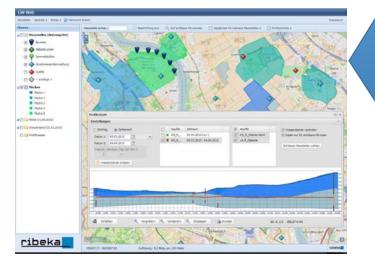


## Smart Water Monitoring Project | Solapur





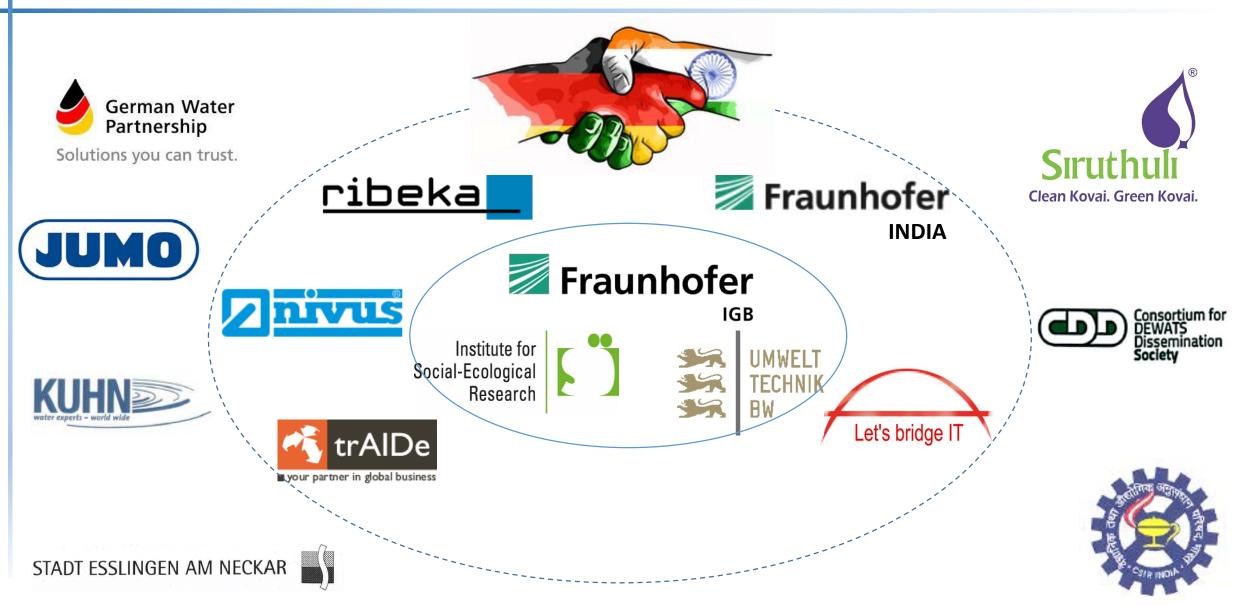




## CMB|Smart Monitoring

- Objective: Increase data availability for strategic planning and communication
- Close collaboration with the respective agencies
- Establish Online Water Monitoring at Local Lakes
- > Collect Data in Cloud as input for water management software
- Monitor water quality and quantity over time and develop measures to improve water quality

## Partners & Network







## | Further Initiatives

### Morgenstadt Global Smart Cities

- International Climate Initiative by BMU
- Climate smart urban development in Kochi, Piura (Peru) and Saltillo (Mexico)

#### ShowCasePlant India

Feasibility study for transforming a Wastewater Treatment plant into a showcase plant for demonstration and training

## Get involved |

- Join a growing Indo-German network of water professionals
- Find partners for your activities

Share your experiences and develop project ideas with network members

Collaborate on implementation projects



## Connect with us!

#### Website AQUA-Hub Home News About + Solapur Hub Coimbatore Hub Projects + Resources Get in Toucht **AQUA-Hub** Water Innovation Hubs for fostered Indo-German cooperation AQUA-Hub Home News About + Solapor Hub Colmbatore Hub Projects + Resources Get in Toucht As network and project centres, Water In contribute to the sustainable development and in the water sector and demons transfer using the example of smart water m as focal points, a continuous dia ons is established. Water I usiness, administration and civil soci About AQUA-Hub AOUA-Hub Home News About - Solapor Hub Coimbatore Hub Projects - Resources Cet in Youdd Water Innovation Hubs for increased Indo-German cooperation Think Tank India's cities ace complicated tasks to meet the infrastructure needs of rapidly growing areas. Water scarcity, inadequate technological solutions pose major challenges for India's water sector. At the same time, many German actors have knowledge nd specialised technologies that can contribute to solutions lowever, the often specialised and decentralised actors find it difficult to gain a Foothold in the Indian market. In AQUA-Hub Water Innovation Hubs are being implemented in the two gy for water quality monitoring. AQUA-Hub add

www.aqua-hub.de

## Linked in

#### in Q Search AQUA-Hub Water Innovation Hubs for fostered Indo-German cooperation Environmental Services · Stuttgart · 1 follower Visit website 🖉 ) ( More + Follow About Posts Jobs People Home Overview Page posts As network and project centres, Water Innovation Hubs in Coimbatore and Sola development and consolidation of Indo-German cooperation in the water sector technology transfer using the example of smart water monitoring. With the hel continuous dialogue on new developments and technological solutions is estal AOUA-Hub stakeholders from business, administration and civil society with the goal to ide sustainable water management. Water quality monitoring, technologies "Made manner and serve on the one hand as reference projects and on the other hand the two smart cities Solapur and Coimbatore.

Website	http://www.aqua-hub.de	
Industry	Environmental Services	
Company size	2-10 employees	
Туре	Partnership	
Founded	2021	

#aquahub



AQUA-Hub is on the road! Find out more on the Indo-German collaboration in the water sector, our current activites and how Water Innovation ... see more

...

## Contact

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