



SCHOOL OF WATER AND WASTE

AAETI

**NAMAMI
GANGE**

LAUNCH EVENT CUM WEBINAR

MAKING GANGA BASIN CITIES WATER SENSITIVE



Date **27th July, 2021**

Time **11:00 AM - 1:00 PM IST**

Venue **Online**

Language **English**

Overview of CSE – NMCG Capacity Building Initiative



SCHOOL OF WATER AND WASTE

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“Making Ganga Basin Cities Water Sensitive”

About the Event & Webinar

Aim

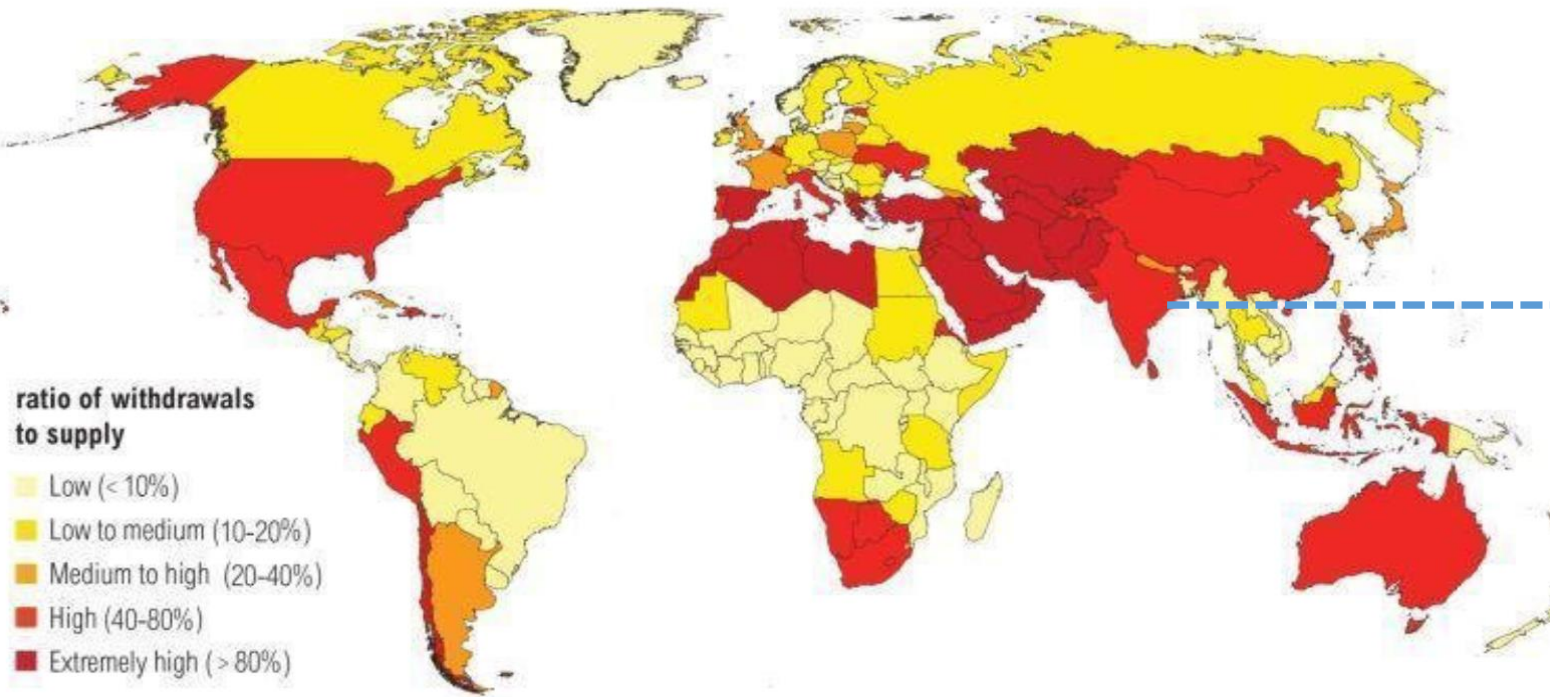
Capacity building and action research for promoting sustainable urban water management in Ganga basin cities for improved river health/flows.

Objective

- Develop understanding of the **concept and approach** of Water Sensitive Urban Design and Planning (**WSUDP**)
- Discuss potential and opportunities for **connecting water, urban planning/development** in the Ganga basin cities.
- **Case studies** of successfully implemented WSUDP projects.
- Provide overview activities under the **CSE – NMCG initiative during 3 years (2021-24)**
- Present the **Calendar of Activities in Year 1 (2021-22)**.

Background

Water Stress by Country: 2040

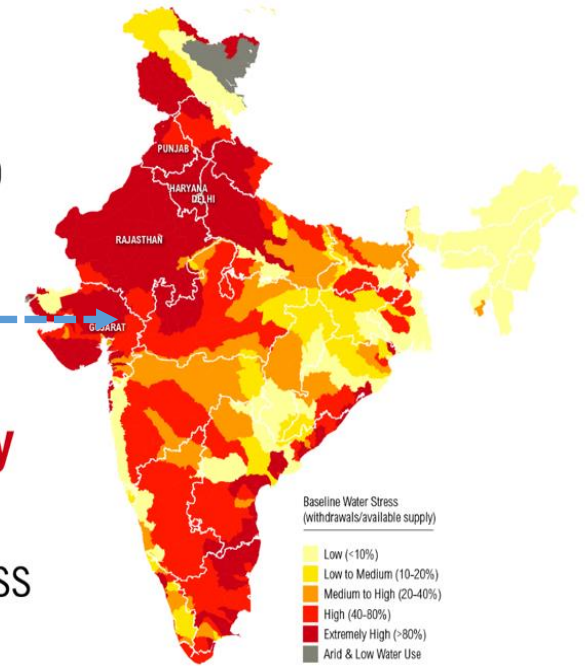


NOTE: Projections are based on a business-as-usual scenario using SSP2 and RCP8.5.

For more: ow.ly/RiWop

 WORLD RESOURCES INSTITUTE

54%
of India
Faces
**High to
Extremely
High**
Water Stress



www.indiawatertool.in

 WORLD RESOURCES INSTITUTE

- 3 Indian cities greater than 10 million,
53 cities more than 1 million
- 377 million live in about 8000 urban centres.

River Ganga Basin Cities - Key Issues & Challenges

Ganga basin has 2,009 statutory towns, with an urban population of 165.2 million, as per Census of India 2011 includes **100 + Class I cities**, and at least **6 metropolitan cities** including **National Capital Territory of Delhi**, state capitals Lucknow, Patna, Dehradun.

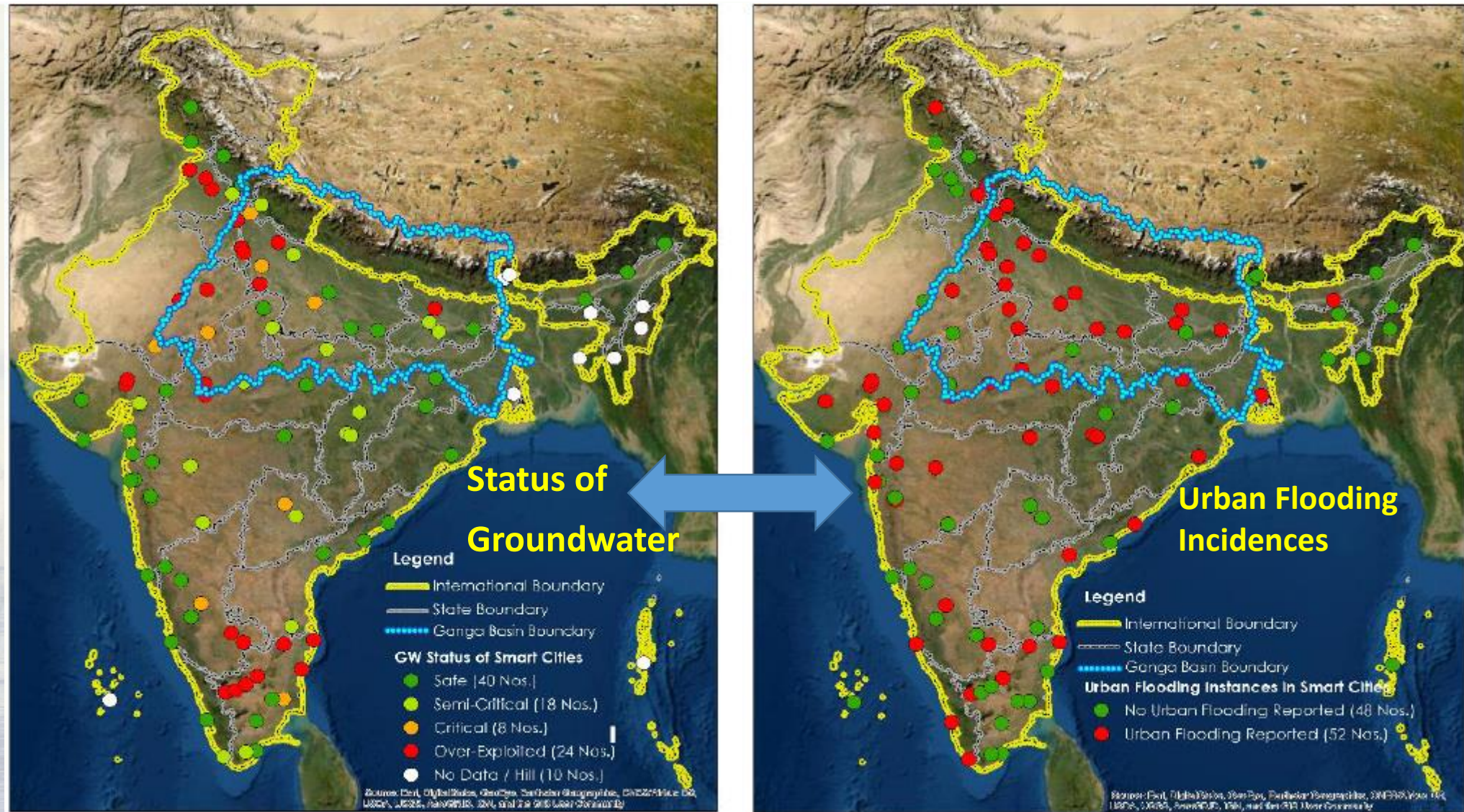
Urban built-up area has increased approximately 44% from 10,512 sq. km. in 2005-06 to 15,138 sq. km.

Widening water demand – supply across different sectors resulting **several river stretches in river Ganga with non existent flow** as well as **overexploited aquifers**.

Urban Lakes and ponds are deteriorating and being encroached resulting alarming, impacting both quality and quantity of water in drains and rivers, and the incapability to manage moderate and extreme rainfall events.

Inadequate sewage treatment (incl. conveyance) and reuse of treated wastewater

Co- existence of Overexploited Groundwater & Urban Flooding



Urban Water Management in Smart Cities in India

Co-existence of Water Shortage & Abundance :



Water Scenario



Heavy rain causes waterlogging at Ring Road near Sarita Vihar in Delhi. (TOI photo)

Drainage Scenario

Ganga Basin Cities – under various National / State Programme



Map highlighting NMCG Main Stem States
Uttarakhand, Uttar Pradesh, Bihar, Jharkhand & West Bengal

All Urban & Rural areas under Swachh Bharat Mission,
Jal Jeewan Mission & Jal Shakti Mission
And

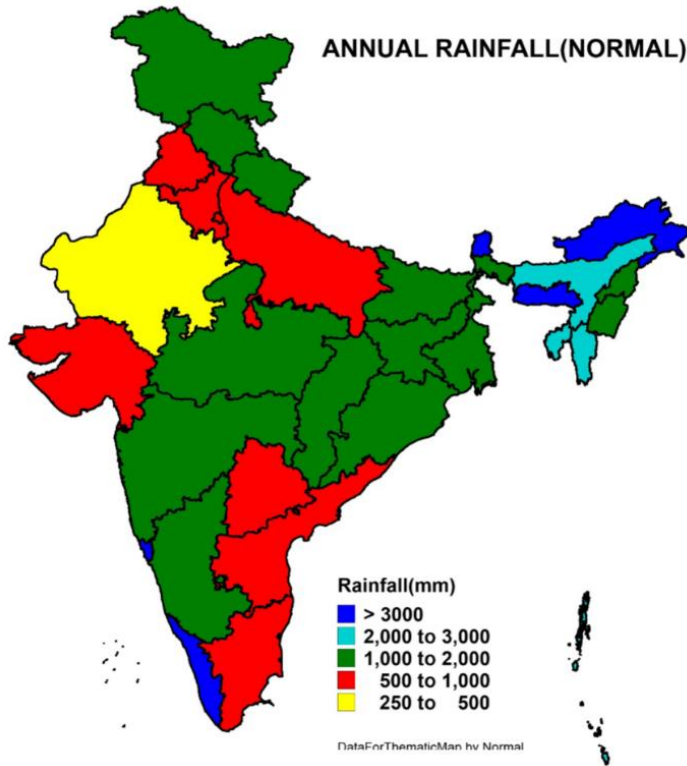
Out of 500 **AMRUT cities**, 261 are in Ganga Basin

Out of 100 **Smart Cities**, 31 are under Ganga Basin

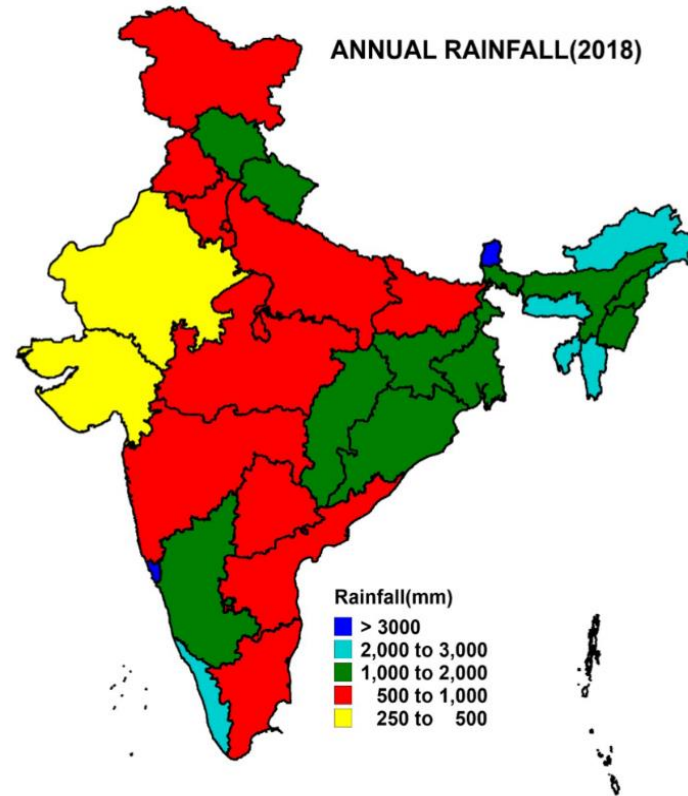
**Out of 118 NMCG Priority towns /cities
(in the main Stem States) -
54 AMRUT Cities & 8 Smart cities**

Key Urban Challenges

Pre & Post Urban Development:

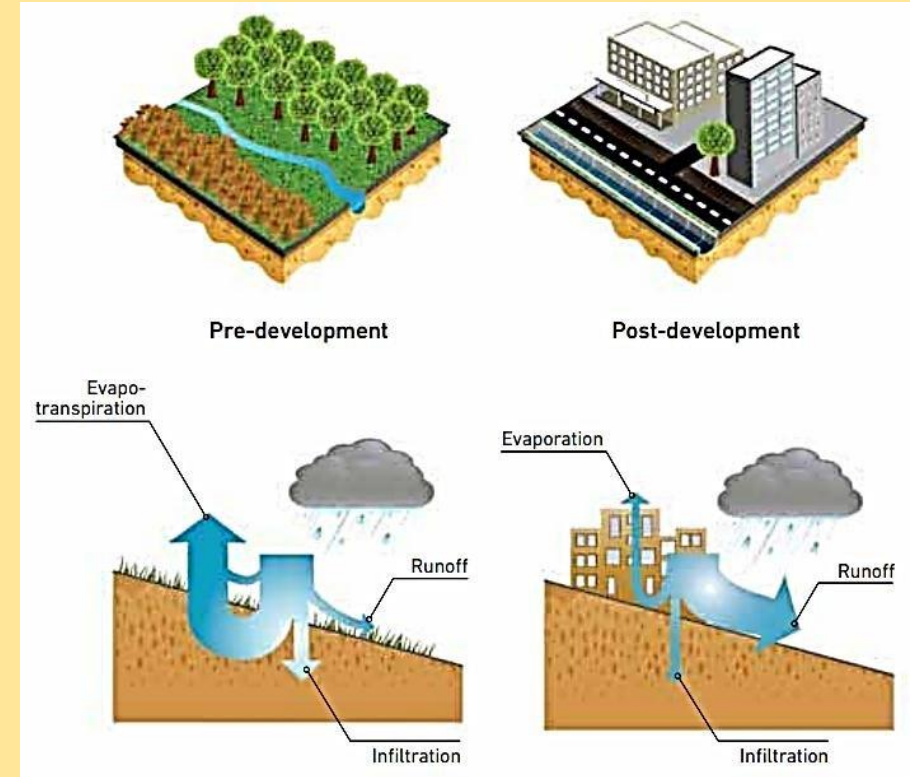


Source: India Meteorological Department, GoI

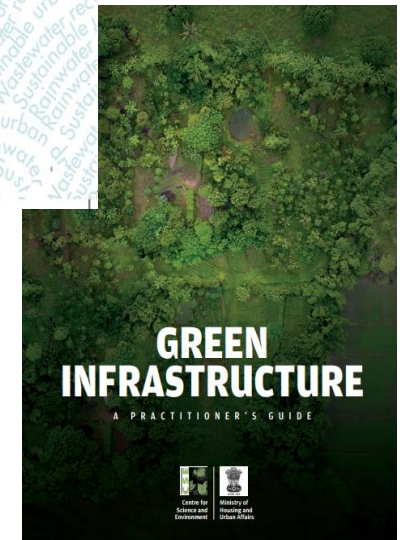
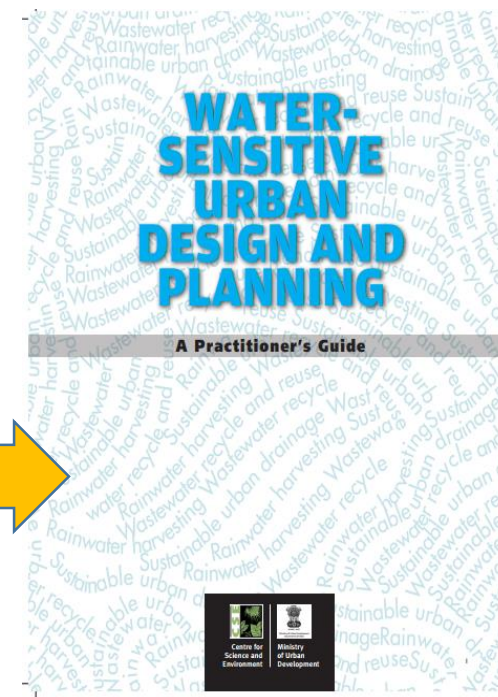
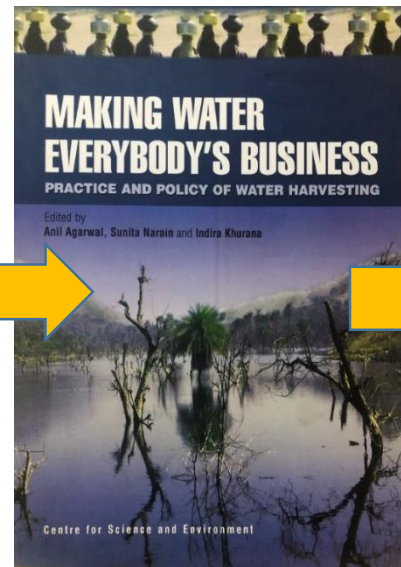
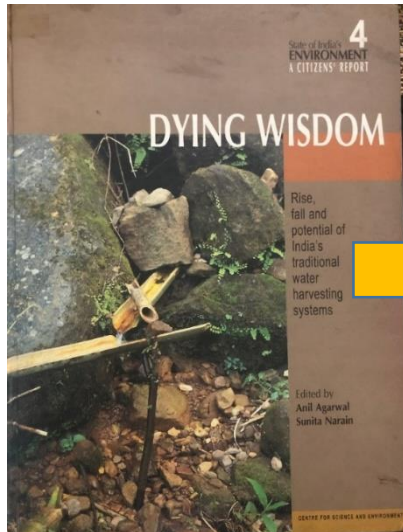


Source: India Meteorological Department, GoI

Increasing intensities and decreasing number of days it rains... rapidly urbanising river basin



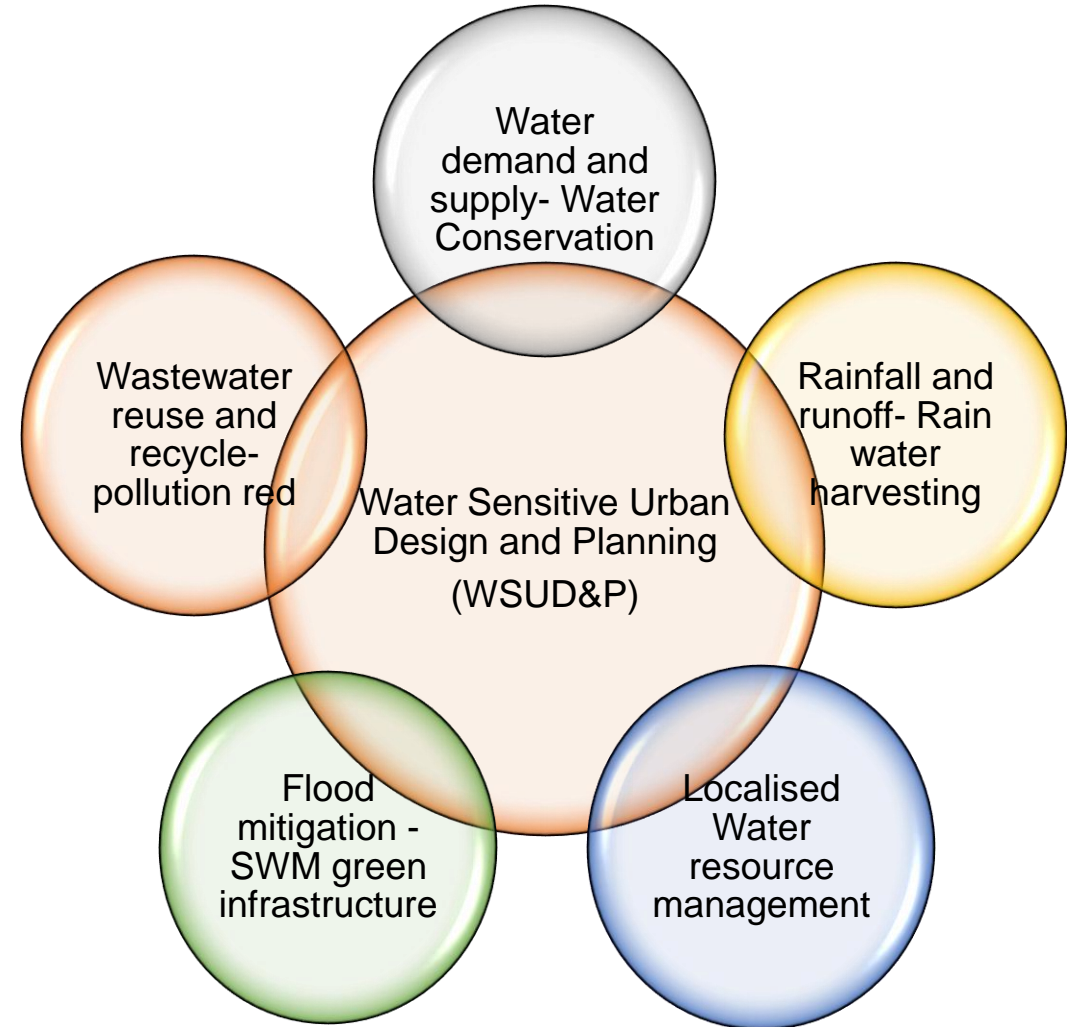
Rapid Urbanization resulting change in Urban Water Balance



Water Sensitive Cities - Approach

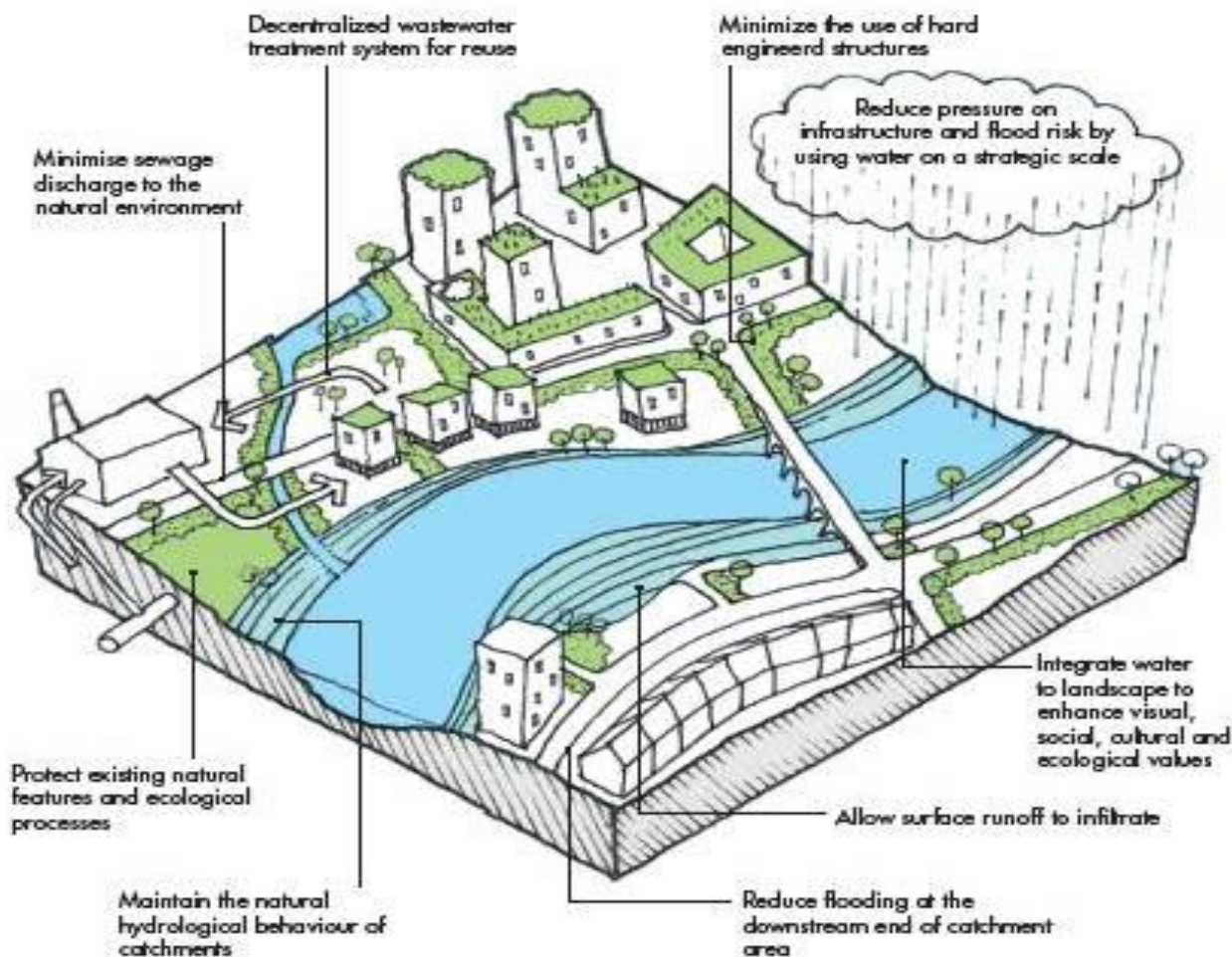
- **Protecting** local waterbodies (**lakes, ponds and wetlands**) for supplementary water sources
- **Storm-water management at public places, including open areas in cities**
- Increasing **water-conservation approaches at various scales** (buildings/campus).

On-site water conservation with rainwater harvesting (RWH) is important to reduce water scarcity **incl. use of treated wastewater**



WSUDP APPROACH ON DIFFERENT SCALES

1 WATER-SENSITIVE PLANNING (CITY/ZONAL SCALE)



2 WATER-SENSITIVE DESIGNING (NEIGHBOURHOOD SCALE)

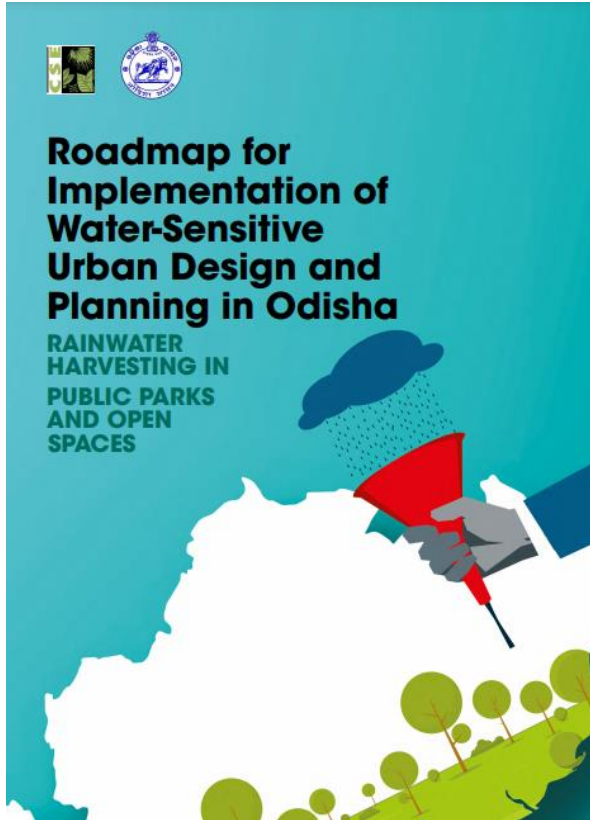


3 WATER-SENSITIVE DESIGNING (INDIVIDUAL SCALE)



CSE Research Reports :

Mainstreaming Water sensitive Urban Design (WSUDP) in India in Policy & Practice



CSE Publication July & Nov. 2020



Web compendium

Launched in January 2021

CSE-NMCG Launch Event

“Making Ganga Basin Cities Water Sensitive”

About the Event & Webinar

Title : *Capacity building and action research initiative (3-year duration project) on making water sensitive cities in the Ganga basin aimed at **improving river health/flows**.*

Key focus areas : Water Sensitive Urban Design and Planning, Urban Water Efficiency and Conservation, Decentralized Wastewater Treatment and Local Reuse, Urban Groundwater Management and Urban Waterbodies / Lake Management.

The initiative is aimed at **engaging 1300+ number state / municipal functionaries** and other sector players involved in promoting sustainable urban water management.

*It is a part of the series of ongoing efforts by NMCG aimed to **ensuring convergence of Namami Gange Mission with national flagship urban missions** (AMRUT, Smart Cities, Swachh Bharat Mission, HRIDAY, NULM) and other missions (Atal Bhujal Yojana, Jal Jeewan Mission, Jal Shakti Mission) **at state /city level across Ganga basin states.***

Three Year Activity Plan:

- # **40+ activities over 3 year** - 24 Training (incl. 12 no. online) , 12 webinars , annual knowledge conclaves & field exposure visits for **capacity building of 1300+ state / development authorities / municipal functionaries**
- # Develop **Practitioner's Guide (5 no.s) on thematic focus areas**
- # **Helpdesk & Web portal** for handholding support to design and implement model WSUDP intervention as model projects

CSE-NMCG Launch Event

“Making Ganga Basin Cities Water Sensitive”

Event Calendar 2021

Name of the Event	Date	Type of Activity
Launch Meeting for CSE-NMCG Capacity building Initiative	27th of July	Webinar
WSUDP (Focus on Rainwater Harvesting) in Ganga basin cities	27th of July	Webinar
Urban Ground Water Management in Ganga Basin cities	4th of August	Webinar
Training on Urban Groundwater Management for Ganga basin cities	1st - 10th of September	Online Training
Training on WSUDP (Focus on Rainwater Harvesting) in Ganga basin cities	2nd- 13th of September	Online Training
Training on Decentralized Wastewater Treatment Systems	15th- 28th of September	Online Training
Training on Urban Groundwater Management for Ganga basin cities	5th - 8th of October	Residential Training
Urban Lake Management in Ganga basin cities	12th of October	Webinar
Water Efficiency and Conservation in Ganga Basin cities	16th of November	Webinar
Training on Water Efficiency and Conservation	17th of 27th of November	Online Training
Training on WSUDP (focus on Rainwater Harvesting) for Ganga basin cities	7th - 10th of December	Residential Training
Training on Urban Lake Management for Ganga basin cities	8th - 15th of December	Online Training
Training on Decentralized Wastewater Treatment Systems	14th - 17th of December	Residential Training

Expert Planning & Advisory group

THEME 1: WATER SENSITIVE URBAN DESIGN & PLANNING

RAINWATER HARVESTING, WATER EFFICIENCY & CONSERVATION AND DECENTRALISED WASTEWATER TREATMENT & LOCAL REUSE.



Venkatesh Dutta
Professor,
SEES, BB Ambedkar
University, Lucknow



P Z Thomas
Managing Director,
EEPCL



Himanshu Joshi
Professor, Department of
Hydrology, IIT Roorkee



Deepak Khare
Professor, Water
Resources Development &
Management, IIT Roorkee



Manu Bhatnagar
Principal Director,
Natural Heritage
Division, INTACH, New
Delhi



Somanth Sen
Associate Professor,
IIT Kharagpur



Sumit Sen
Head and Associate
Professor, Department of
Hydrology, IIT Roorkee



Victor Shinde
Sector Coordinator for
Water and Environment,
NIUA



Nadeem Khalil
Professor, Department of
Civil Engineering,
Aligarh Muslim University

THEME 2: GROUNDWATER AND URBAN LAKE MANAGEMENT IN URBAN AREAS



S.K. Sharma
Groundwater Expert
Former Member
(Technical), CGWB



Rajiv Sinha
Professor,
Department of Earth
Sciences, IIT Kanpur



Somnath Bandopadhyay
Associate Professor
Nalanda University, Bihar



Shashank Shekhar
Professor (Geology),
Delhi University



Mohit Ray
Independent
Environmental Consultant
& Activist



K.J. Anandha Kumar
Scientist
D(Hydrogeologist)
(Retd.), CGWB



Meenakshi Dhote
HOD, Dept. of
Environment Planning,
SPA, Delhi



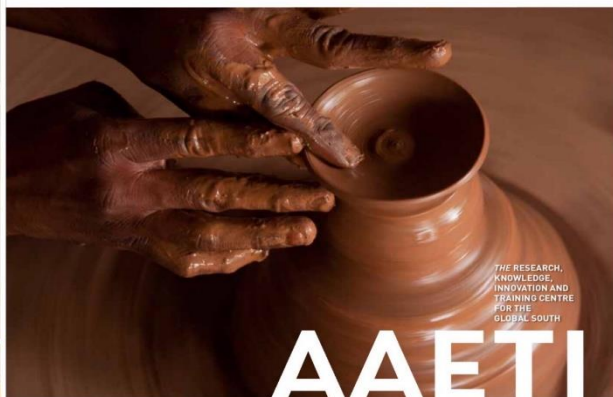
Ritesh Kumar
Head, Wetlands
International, South
Asia, WI-SA



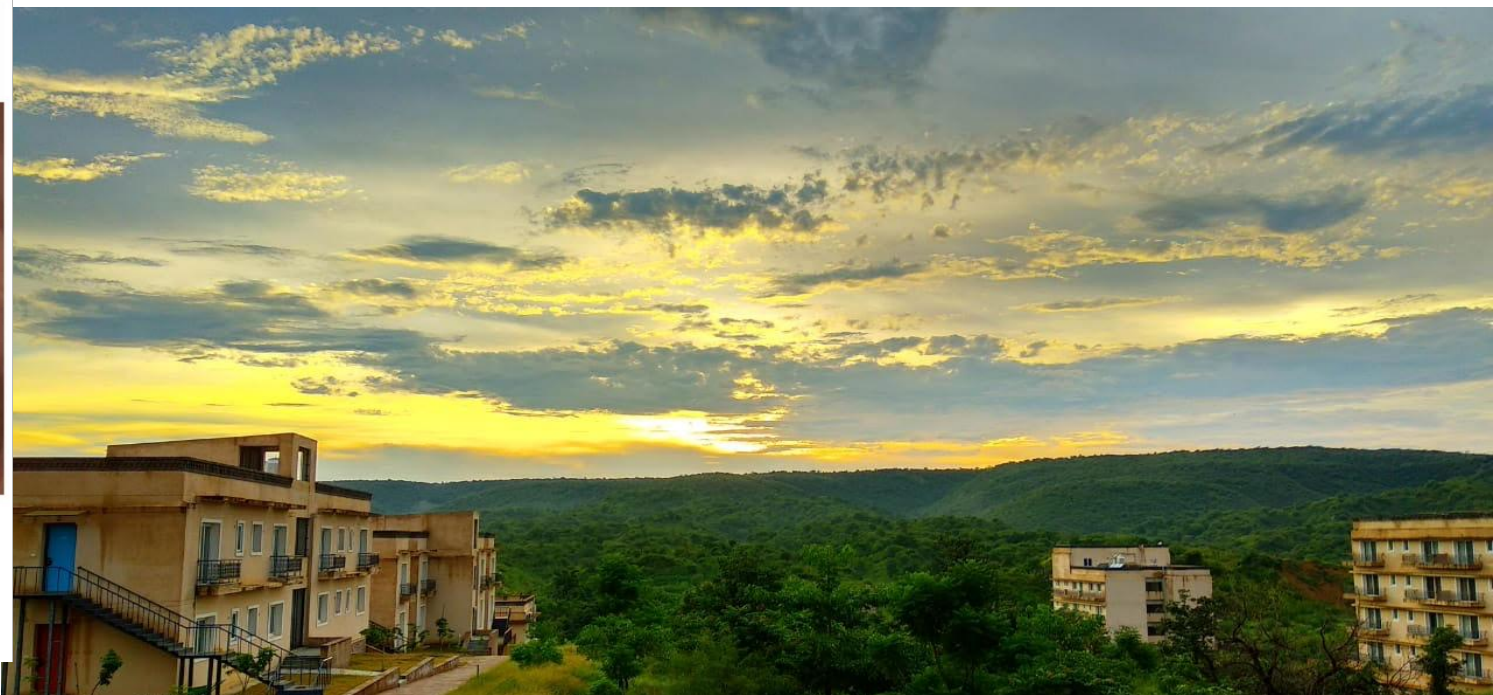
Faiyaz A Khudsar
Scientist In-charge,
Yamuna Biodiversity park



School of Water and Waste



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