

Adopting Integrated Urban Water Management

By

ICLEI – Local Governments for Sustainability South Asia

Scoping Meeting

20th Nov 2018



ICLEI - Local Governments for Sustainability

ICLEI – Local Governments for Sustainability is a network of more than 1,750 local and regional governments, supported by a team of global experts, driving sustainable urban development worldwide.



ICLEI Offices



ICLEI is present in **17 offices worldwide** with over 300 staff who manage **local and global projects**. Active in **100+ countries**, impacting over **25 percent** of the global urban population.

What we do?

How we promote urban sustainability

We connect leaders



We accelerate action



We provide
gateways to solutions



Towards Sustainable Cities

COMMITMENTS

SCALE UP
AND EXPAND THE MODEL OF
SUSTAINABLE
CITIES AND REGIONS

MAKE SUSTAINABILITY A
FUNDAMENTAL
PART OF ALL LOCAL AND
GLOBAL DEVELOPMENT

TACKLE THE MOST
PRESSING ISSUES
OF OUR TIME TO PROTECT THE
LONG-TERM INTERESTS OF
CITIZENS

UNDERTAKE A
COLLECTIVE
EFFORT
FOR GLOBAL CHANGE ACROSS ALL
SECTORS AND LEVELS OF GOVERNMENT

LOW EMISSION
DEVELOPMENT



RESILIENT
DEVELOPMENT



PATHWAYS

CIRCULAR
DEVELOPMENT



EQUITABLE AND
PEOPLE-CENTERED
DEVELOPMENT



NATURE-BASED
DEVELOPMENT



POLICY

OUR POLICY APPROACHES
TO DRIVE GLOBAL
TRANSFORMATION

SUSTAINABLE GOVERNANCE
& MANAGEMENT: SUSTAINABLE
DEVELOPMENT IS A
COLLECTIVE EFFORT

INNOVATION & SCIENCE:
SUSTAINABLE DEVELOPMENT
MUST WORK WITH
AND FOR ALL

FINANCE: SUSTAINABLE
DEVELOPMENT NEEDS
INNOVATIVE
MODELS OF FINANCE

ICLEI'S Projects on Integrated Water Management

Regional Level

IAdapt

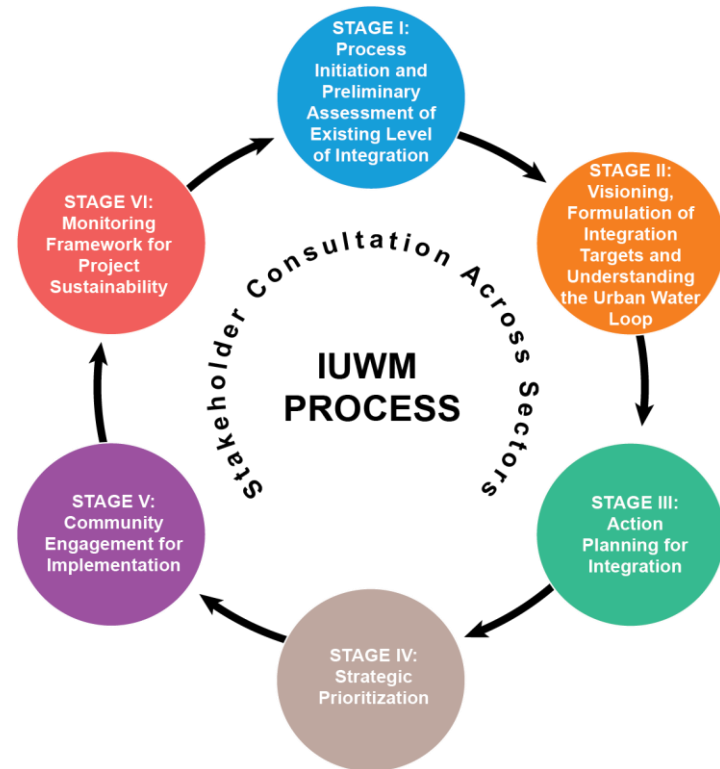
IDRC funded initiative at micro catchment level. The project is being implemented by ICLEI South Asia in partnership with IITM, IWMI and Athena Infonomics.

City Level

Adopt IUWM

EU funded project implemented by ICLEI South Asia in collaboration with ICLEI European Secretariat and VVSG.

Adopting Integrated Urban Water Management in Indian Cities (Adopt IUWM)



1. An innovative approach for **holistic understanding and planning of water resources** (source to sink planning)
2. **Capacity building and undertaking water sector reforms** using IUWM principles
3. **Involving all institutions and communities**
4. **Actions for long term sustainability**
5. **Integration across urban water sectors to close the Urban Water Loop**
 - Water supply
 - Waste water
 - Storm water

Project Supported By

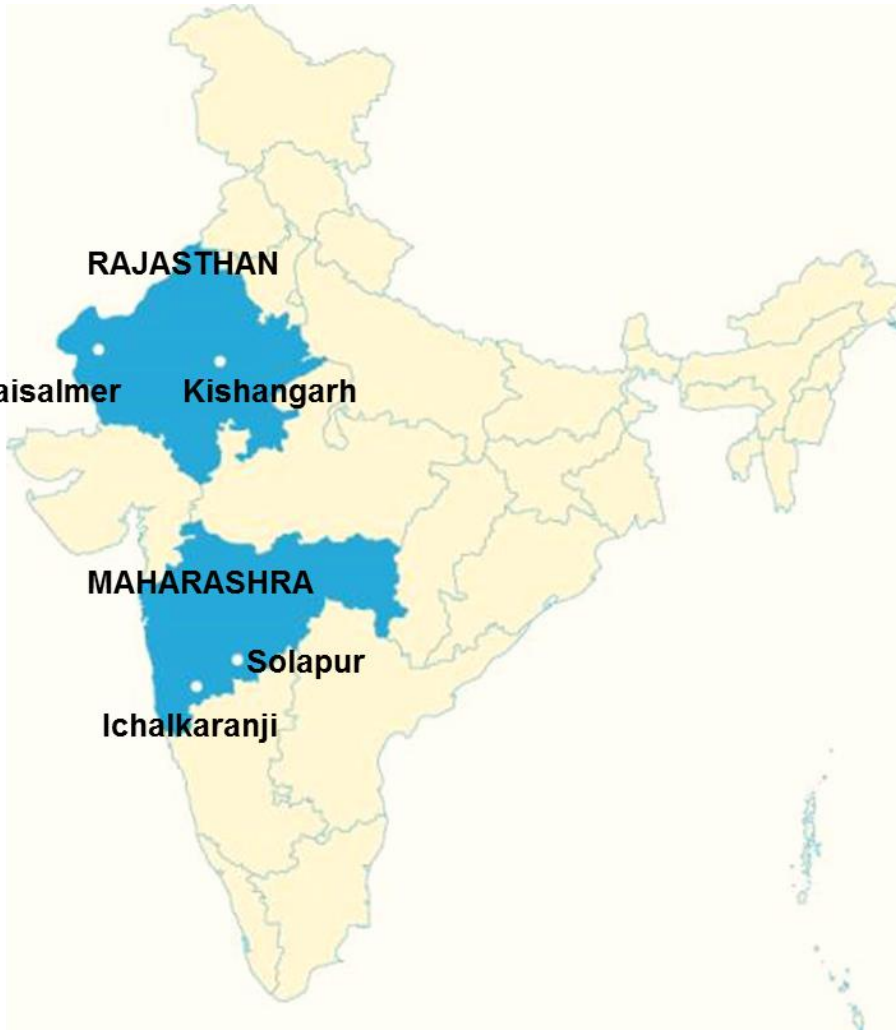


Project Partners



Understanding urban water sectors and their linkages to the larger urban system, including land-use, urban poor, housing, etc. and solid waste management.

Project Cities



Location of IUWM Cities



Focus Areas under Adopt IUWM

■ Jaisalmer:

A desert city and a prominent tourist destination facing issues related to urbanisation, water scarcity, and dying traditional water conservation knowledge.

■ Kishangarh:

The Marble city of Rajasthan facing issues related to water pollution and solid waste management

■ Solapur:

The textile hub of Southern Maharashtra facing issues related to water availability and quality. Main water source is located 100km from city.

■ Ichalkaranji:

Facing severe issues of water pollution, water availability, lack of sanitation facilities etc.

Focuses Areas

Revival of interlinked pond and traditional RWH structure

Reduce pollution in the catchment areas of local water bodies

Revive and recharge ground water and include local level sources in supply

Reducing pollution load on water bodies

Project Outcome/Outputs

- **Implementation of IUWM Toolkit and action plans**
- ✓ **A multi stakeholder platform** at city level
- ✓ **Developed an IUWM toolkit** as a step by step guide for Indian cities to implement and follow IUWM Principles.
- ✓ **Prepared action plans** for 4 Indian cities to formulate IUWM based vision and strategies.
- ✓ **Dissemination of IUWM toolkit-** Two national level workshops to disseminate IUWM Toolkit . Presented IUWM toolkit and process at several National and International platforms. Recognition by Ministry of Urban Development to Adopt IUWM toolkit as potential planning tool.
- **Implementation of 2 pilot projects** in each city to test IUWM toolkit and demonstrate alternative low cost technologies, especially for urban poor.

Pilot Projects

- **7 pilot projects and one DPR** prepared and implemented in all four cities to showcase best IUWM approaches that are locally adaptable and acceptable.
 - **In Rajasthan, 11,552 people** benefited directly (slum population and urban poor including women (**110 school** girls and **2,300 women** in 2 wards in Kishangargh and **2,858** in 2 wards **in Jaisalmer**).
 - Connected more than 30 house holds in Raja Reddy slum in Kishangargh with **Swachh Bharat Mission (SBM)**.
 - **In Maharashtra**, a total population of **2,953** (includes slum population and urban poor including **women (550)**, children and elderly within the wards were directly benefited . Besides that, more than **30 officials** from the local urban authorities were trained and benefitted from the dissemination and training on IUWM toolkit.

Kishangarh

Pilot project 1

Solid waste management in 2 wards

Issue

Absence of SWM facility clogging drains and streams resulting in urban floods, health issues

- Distribution of dustbins to collect segregated solid waste and IEC activities for residents and training to municipal staff
- Provision of a vehicle with separate bins to collect waste
- Composting plant

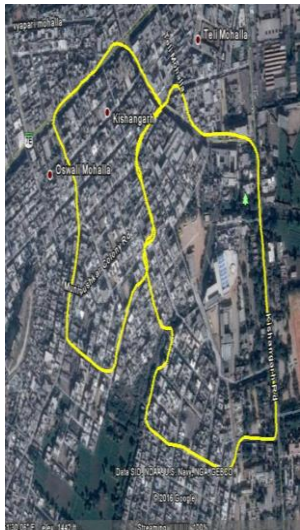
Pilot project 2

Integration across sectors in School Complex

Issue

Absence of SWM facility, Open defecation, no sanitation facilities for girls and women

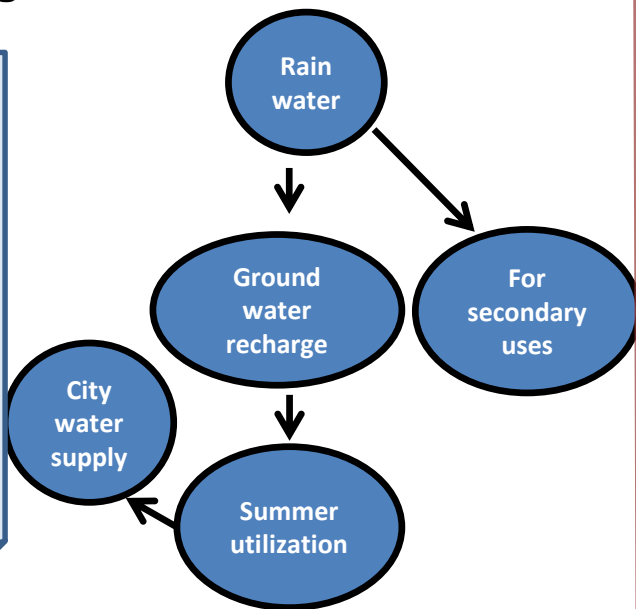
- The school complex is located in a slum: a stream flows through the centre of the slum.
- Construction of toilet within the school complex with water efficient fixtures & wastewater treatment facility
- Reuse of treated wastewater for gardening
- Awareness and training for school children and local residents on WASH



Solapur

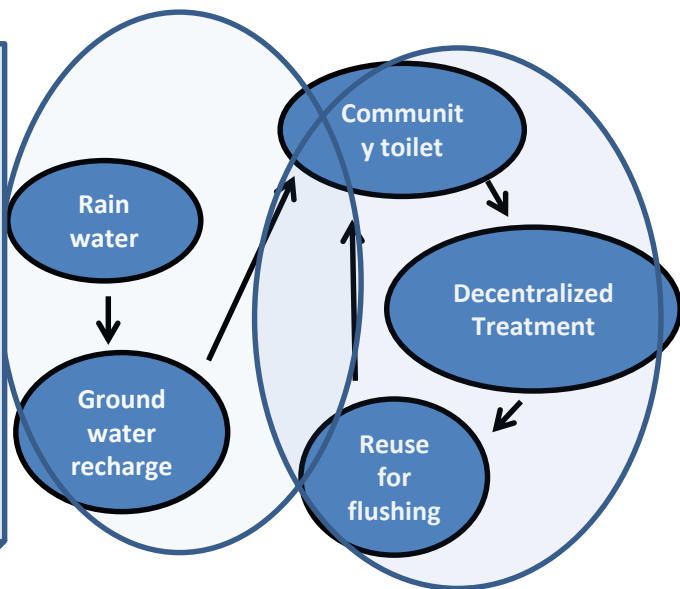
Pilot project 1 Recharge of abandoned bore wells

Issue
Peripheral area (slum) served by water tankers and hand pumps only



Pilot project 2 Revival of defunct community toilet

Issue
Slum served by water tanker & hand pumps, open defecation, and defunct community toilet



Jaisalmer

Pilot project 1

Solid waste management in 2 wards

Issue

Tourist city -
absence of SWM
facility clogging
drains and
streams resulting
in urban floods,
health issues

- Distribution of dustbins in 648 HH's in 2 wards
- Provision of a vehicle with separate bins for collection
- IEC activities for residents & training to municipal staff
- Composting facility – with local support



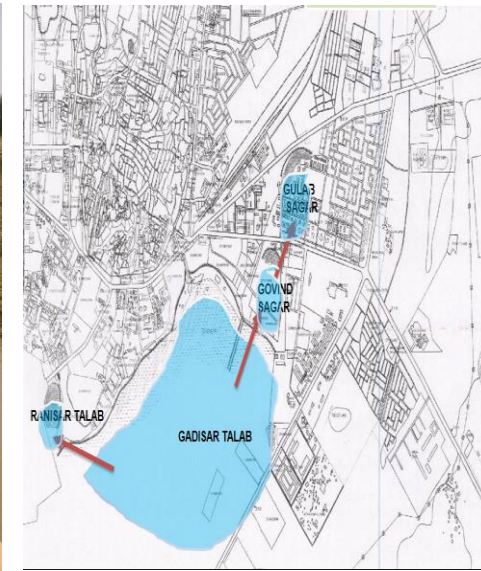
Pilot project 2

Revival of one pond/traditional RWH structure

Issue

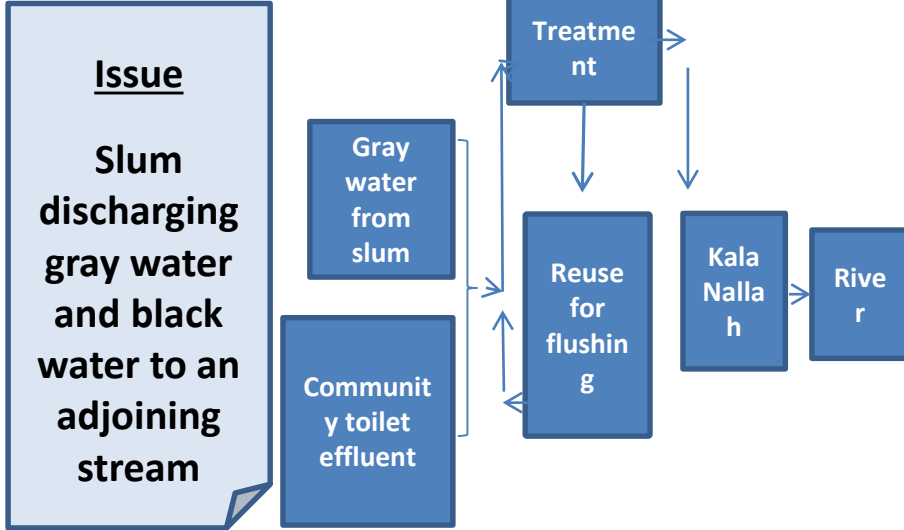
Govind sagar
pond
traditional
rainwater
harvesting
system - Facing
burden of
urbanization

- De-siltation, revival of interlinkages, plantation & drip irrigation for park
- The water is used for upgrading the greenery in the desert city
- Involvement of local stakeholders

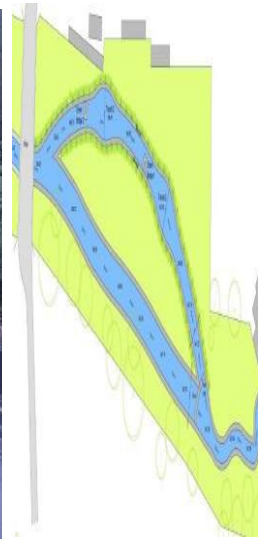
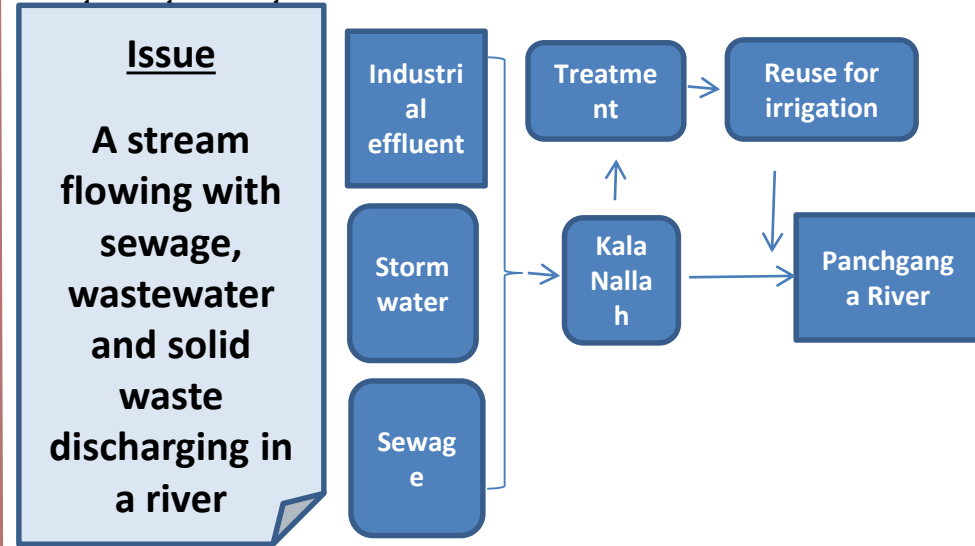


Ichalkaranji

Pilot project 1 IUWM at slum level



Pilot project 2 DPR for Kala nallah



Awards and Recognition Received



- **Second prize at Korea Water Week, 2017**

The IUWM toolkit and interventions under AdoptIUWM project were selected and invited to present at **World Water Challenge 2017, Korea International Water Week**. IUWM process and activities under the project were awarded as outstanding solution for other countries.

- **Recognition from Ministry of Human Resource Development, Government of India**

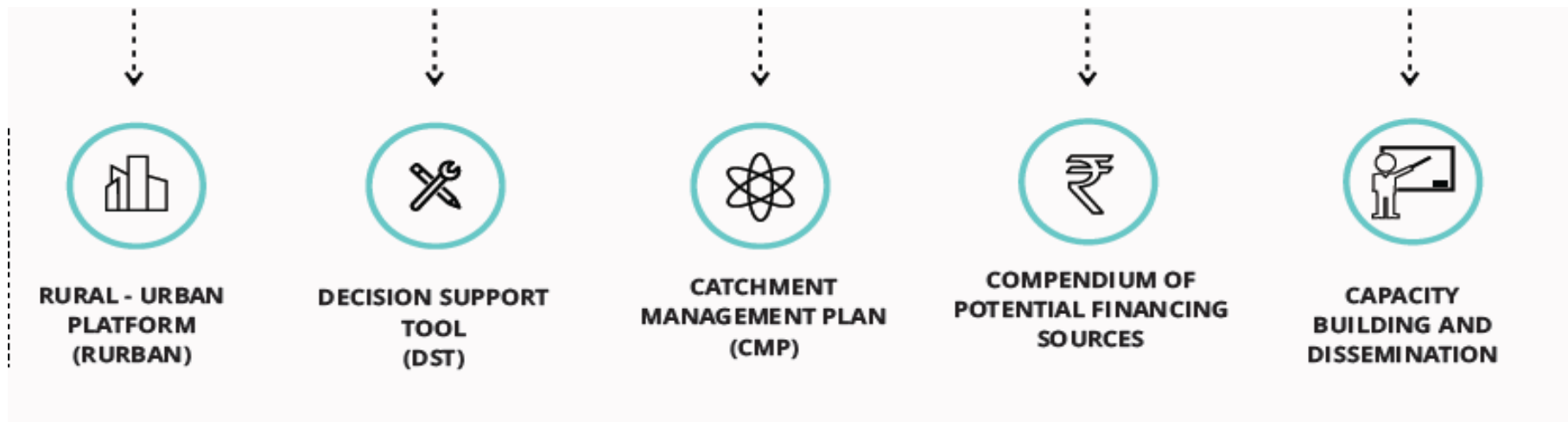
Adopt IUWM project intervention in Kishangarh city on closing the water cycle loop in school complex also received positive reviews from **The Ministry of Human Resource Development (MHRD)** under **Sarva Shiksha Abhiyan**.

Category	Score	Percentage	Rating	Remarks
Handwashing With Soap	18/20	90%	★★★★★	Excellent Keep it up!!
Operations And Maintenance	14/15	93.33%	★★★★★	Excellent Keep it up!!
Water	19/22	86.36%	★★★★★	Very Good
Toilet	14/19	73.68%	★★★	Good, but there is a scope for improvement
Behavior Change And Capacity Building	13/15	86.67%	★★★★★	Very Good

INSTAMAG

Integrated Rural Urban Water Management for Climate based Adaptations in Indian Cities (IAdapt)

To **institutionalize climate change adaptation** measures through the creation of an enabling ecosystem within cities to adopt and implement IUWM approaches at a city level and an approach towards IWRM at catchment level guided by **participatory catchment planning**, simple **decision support tools**, preparation of **catchment level action plans** and multipronged **financing approaches**.



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The IAdapt Framework



- RURBAN Platform: A Multi-stakeholder platform to bring together stakeholders

- Data acquisition and analysis from the micro-catchment level, regarding the socio-economic, environmental, governance aspects

- Climate scenario assessment, water resource integration scoring, systems assessment, risk assessment and vulnerability assessment

- Resilience interventions and their prioritization
- Decision Support Tool to relook at interventions in an Integrated approach

- Catchment Management Plan
- Implementation and Monitoring

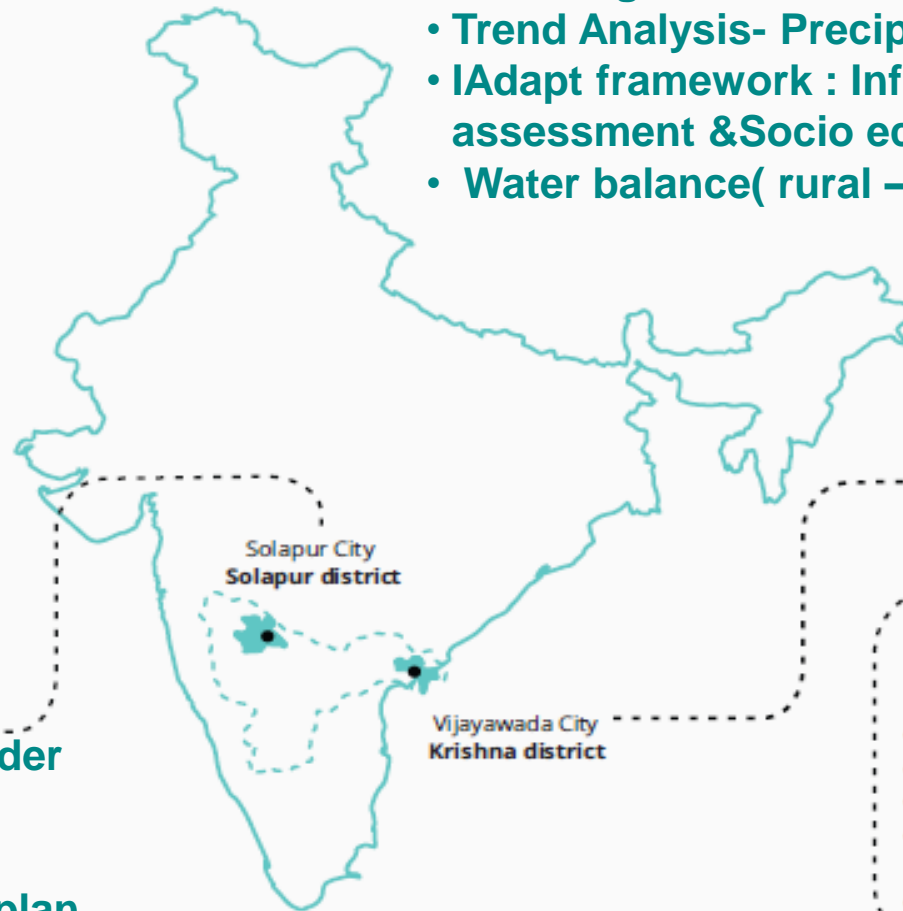
Project Cities

Solapur City Key facts

- High Non Revenue Water losses (50-60%)
- City's dependence on water source which is 100km away from city - high transmission & distribution costs
- 3. Ground water depletion
- 4. Water quality degradation at Ekrukha lake



- Rural and urban stakeholder engagements
- Decision support tool
- Catchment management plan
- Capacity building and training programs



- Delineation of the Micro catchments
- Preliminary hydrological and climate modeling
- Trend Analysis- Precipitation & Temperature
- Adapt framework : Infrastructure assessment & Socio economic assessment
- Water balance(rural –urban)



Vijayawada City Key facts

- Interstate water conflicts
- increased migration
- Flood hazards
- High evapotranspiration
- Poor water quality
- Groundwater depletion

Activities within the micro catchments



- Stakeholder consultations for the catchment level assessment and training on IUWM Toolkits
- Capacity building and WASH training programs (More than 600 students participated in the interschool drawing competition organized in micro Catchment)
- More than 50 SMC official including 15 municipal engineers (PHE) were trained on Acoustic Leak Detection System
- Exposure visits to the cities and villages showcasing best practices for water management India
- Training of more than 300 women's from Women Self Help Groups(Mahila Bachat Gat on on composting techniques , RWH and Bio gas plants



Integrated Urban Water Management and implementation in Kishangargh & Ajmer

Aim : To build capacity of urban local bodies to mainstream integrated urban water management principal into municipal line function's existing activities and planning process.

- To secure local water bodies through the abatement of solid water management within the catchment boundaries of local lakes/water bodies.
- Reduce water logging incidents.
- Action plan
- Implantation of the project in two wards in Kishangargh and one locality in Ajmer City



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Thank you

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For more information on the project please visit project website at
<http://iuwm.urbanwatermanagementindia.org/>

Or

AdoptIUWM project movie at
<https://www.youtube.com/watch?v=aMAVgLHXQxY&t=20s>