

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

Funded by



Partners



- **Donor:** International Development Research Centre (IDRC)
- **Duration:** 3 years
- **Partners:** ICLEI South Asia
 - Athena Infonomics
 - IWMI
 - IIT Madras
- **Cities:** Solapur, Maharashtra & Vijayawada, Andhra Pradesh



Overall Objective

To **institutionalize** climate change adaptation measures through the creation of an **enabling ecosystem** within cities to adopt & implement IUWM approaches at a city level and IWRM at catchment level guided by:

- **Participatory Catchment Planning,**
- simple **Decision Support Tools,**
- preparation of **catchment level action plans**
- and multipronged **financing approaches.**

Specific objectives

- A. Expanding an existing IUWM framework to catchment area**
- B. Developing multi-stakeholder platforms to bring together rural and urban stakeholders and/or upstream and down-stream users**
- C. Scientifically informed and participatory Catchment Management Plan formulation**
- D. Capacity building**
- E. Creation of a compendium on 'innovative' financing options**

Project Progress

- Focus group discussions & quadrat studies in the micro-catchments
- SWOT analysis for delineation of micro-catchments
- Preliminary hydrological and climate modelling
- Identification of vulnerable micro-catchment
- Review of existing IUWM toolkits
- Development of IAdapt Framework



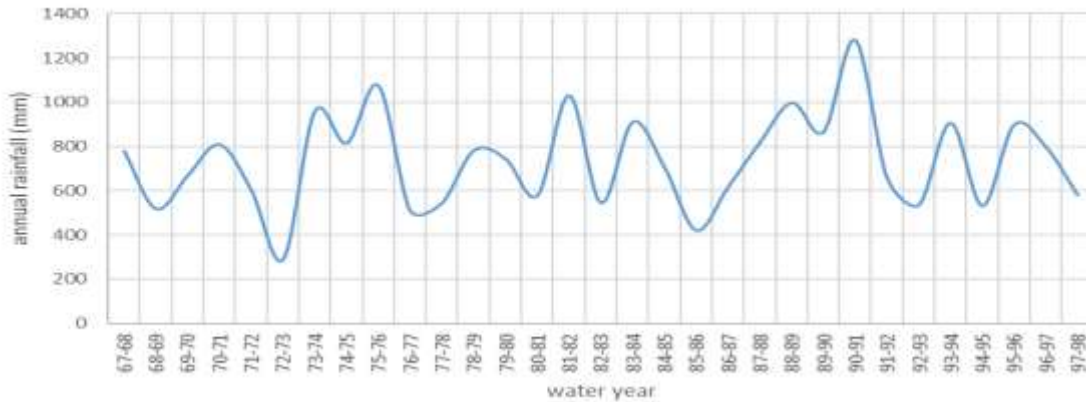
Quadrat studies



FGD

Preliminary hydrological and climate modelling

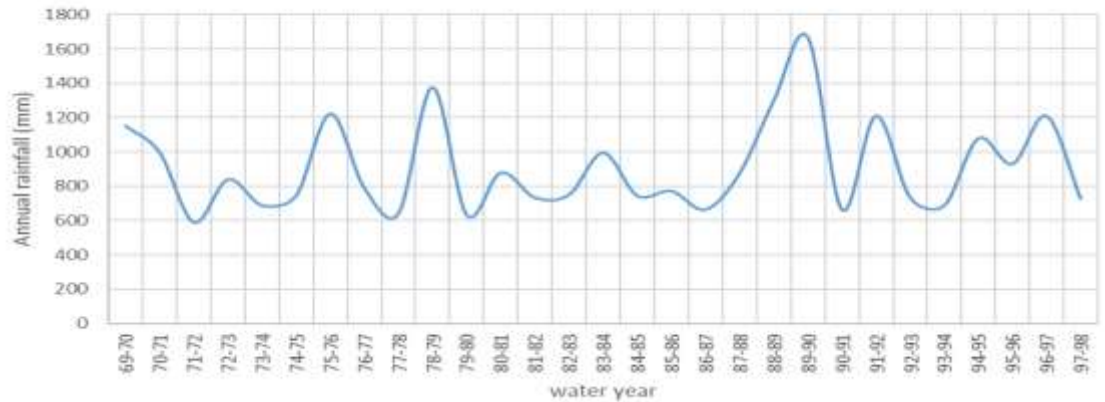
Annual rainfall



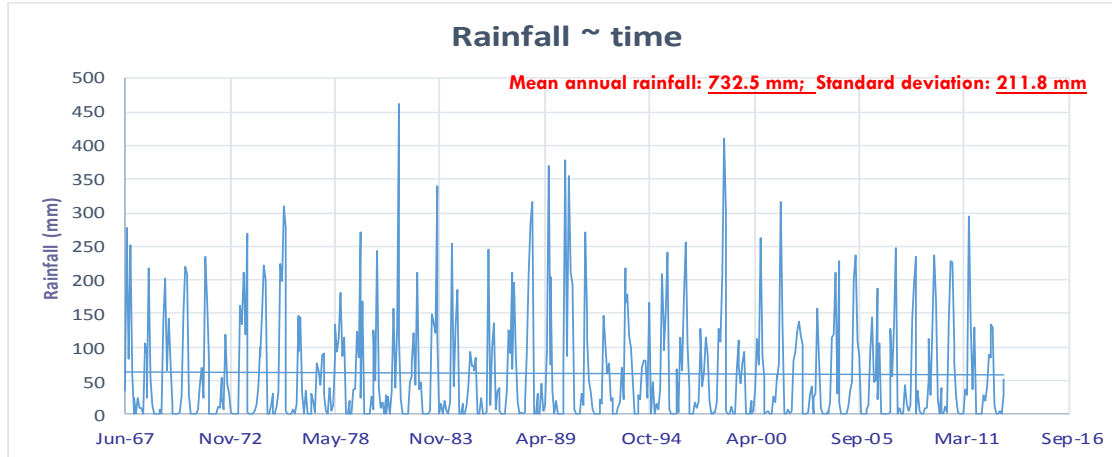
Annual Rainfall in Solapur

Annual Rainfall in Vijayawad

Annual rainfall

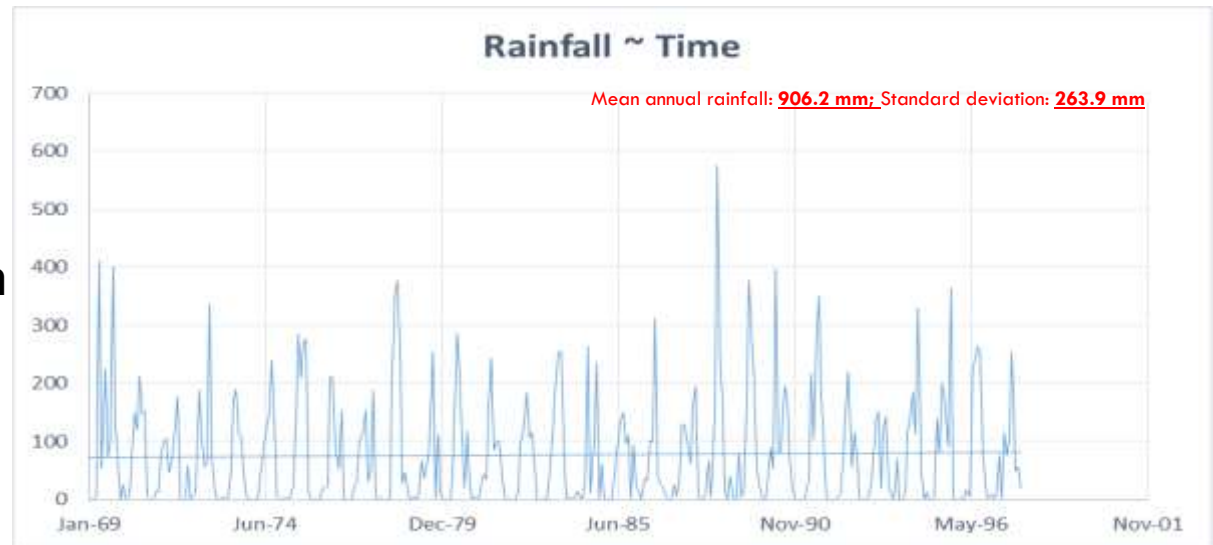


Trend Analysis



Solapur

Vijayawada

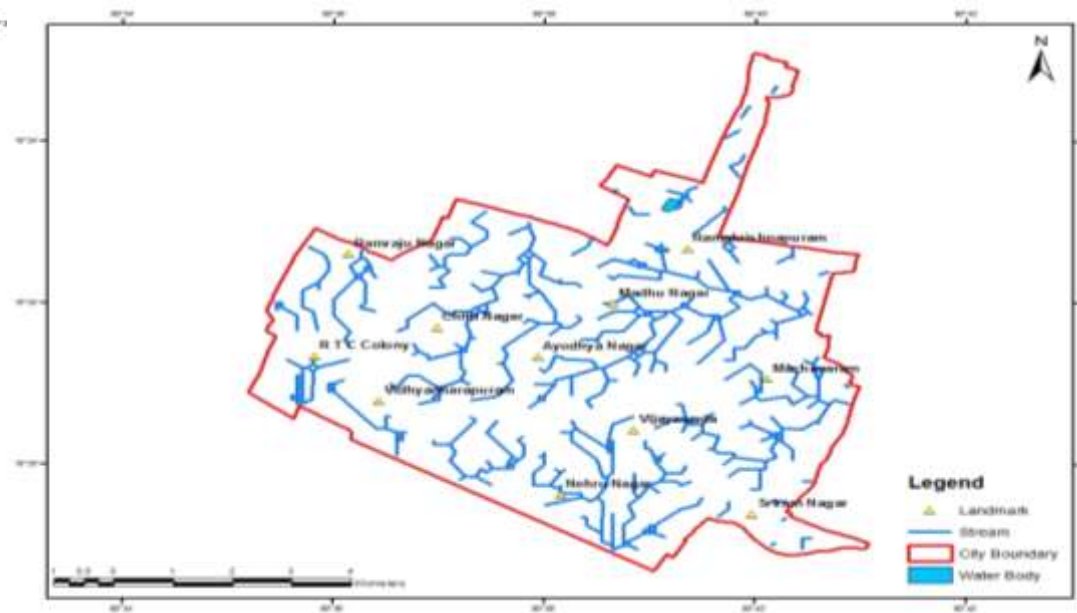


Stream Network

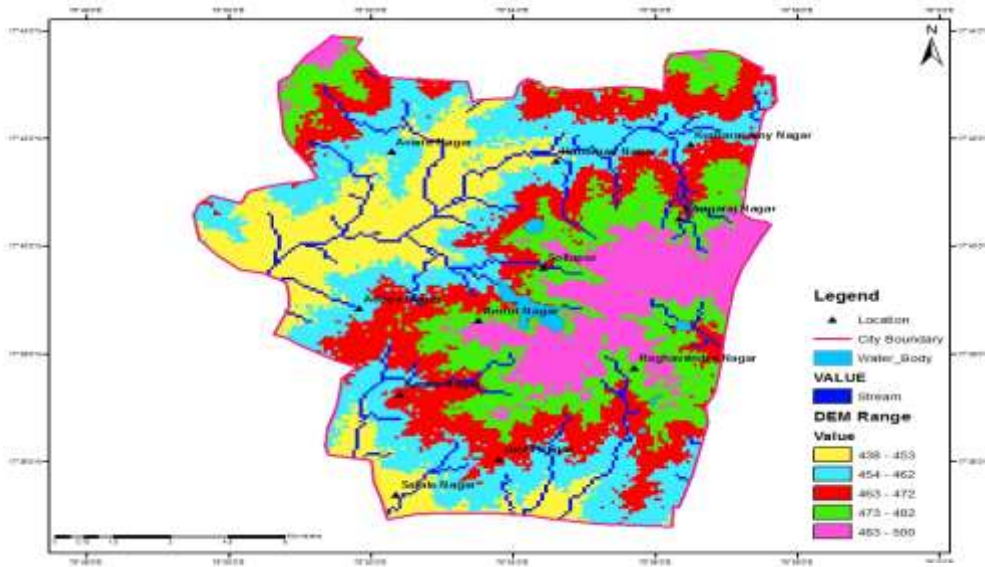


Solapur

Vijayawada

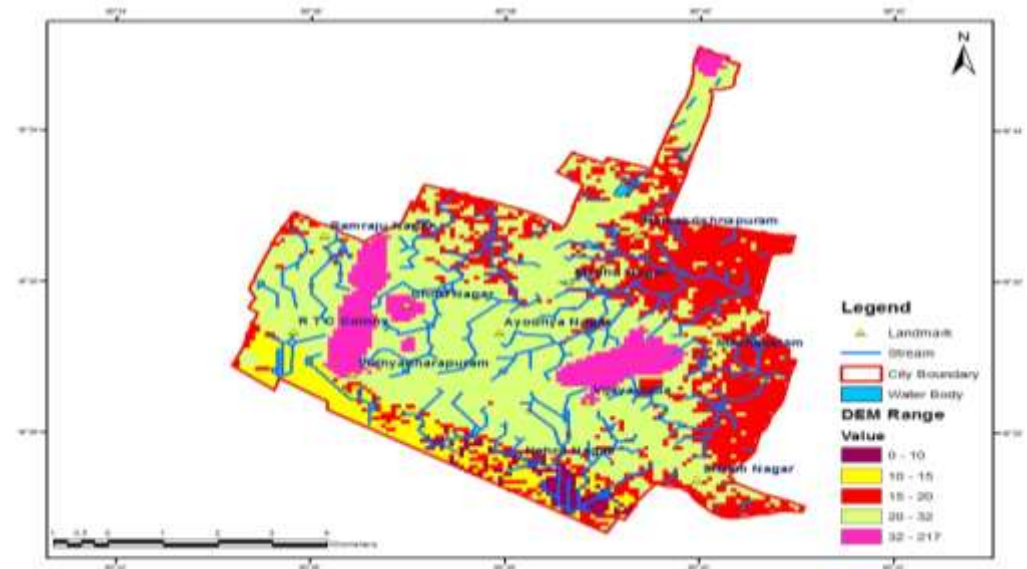


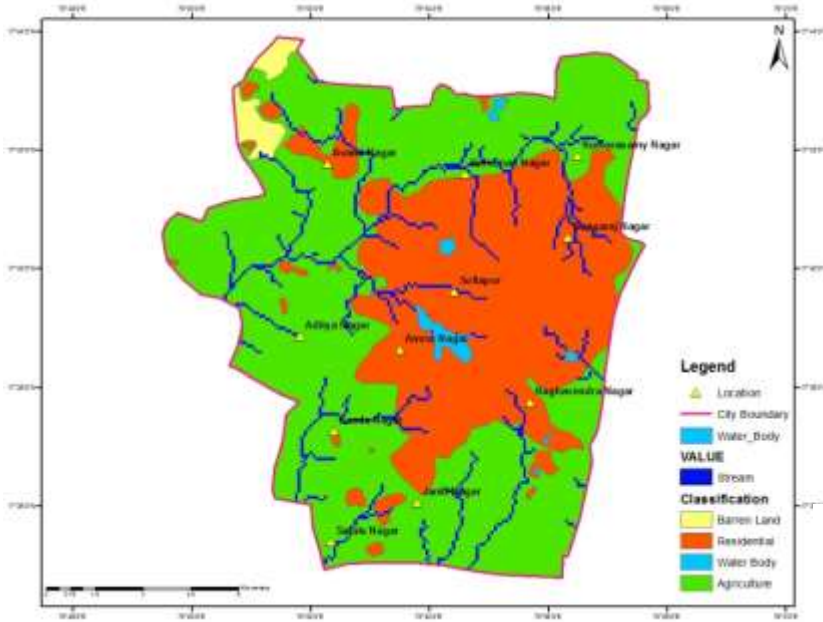
Digital Elevation Modelling



Solapur

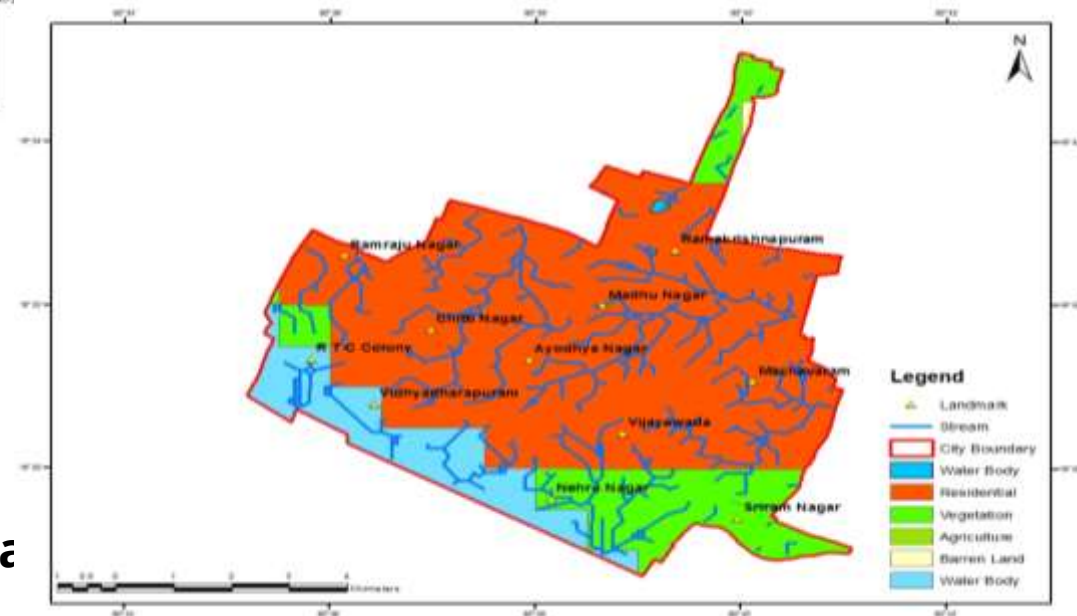
Vijayawada





Solapur

Vijayawada



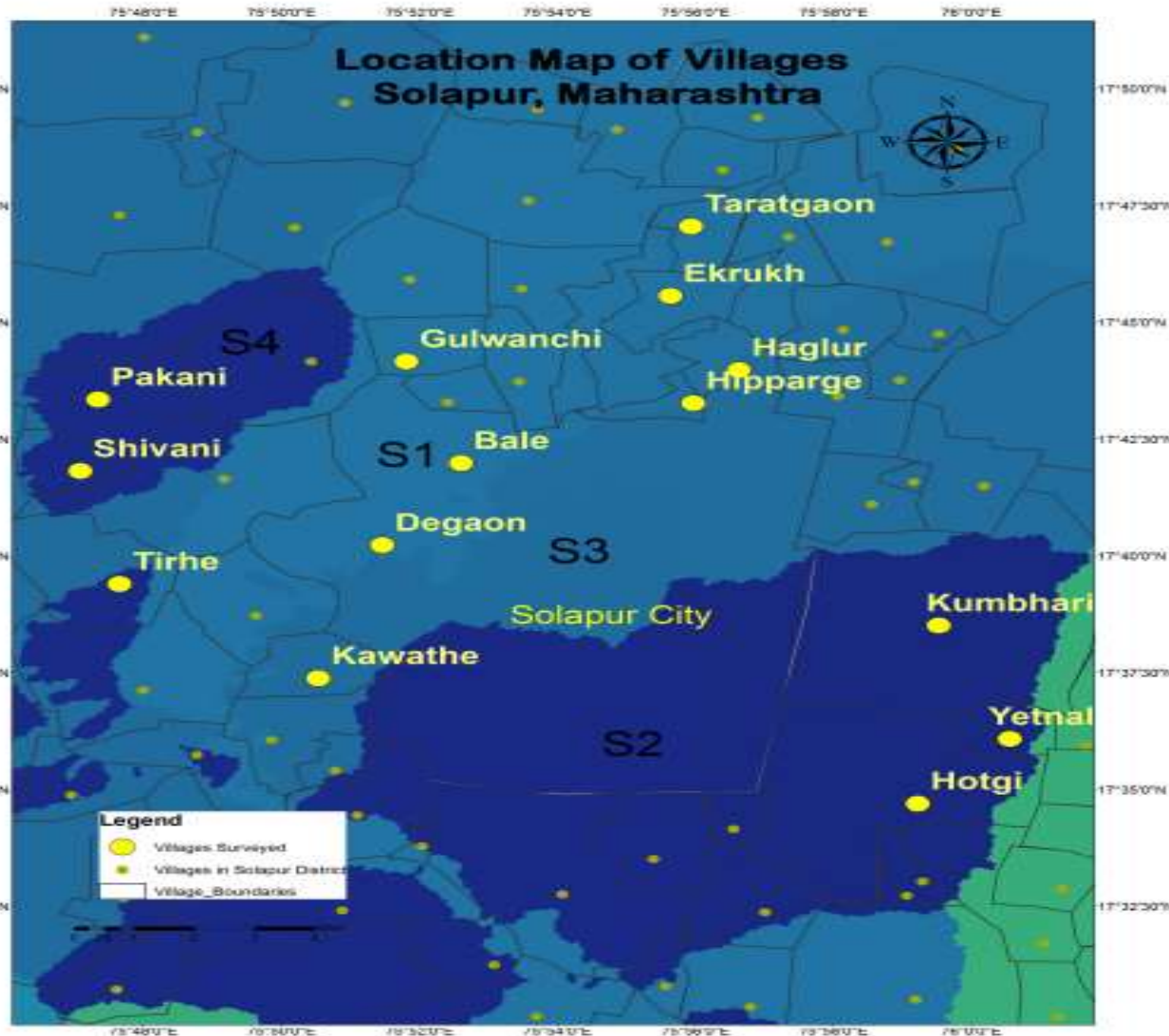
Delineation of Catchment Area

- Parameters studied
 - flow accumulation,
 - drainage direction,
 - location of streams and catchment, and
 - Slope length and steepness
- Delineation carried out on GIS platform
 - 4 microcatchments in Solapur and 7 in Vijayawada identified



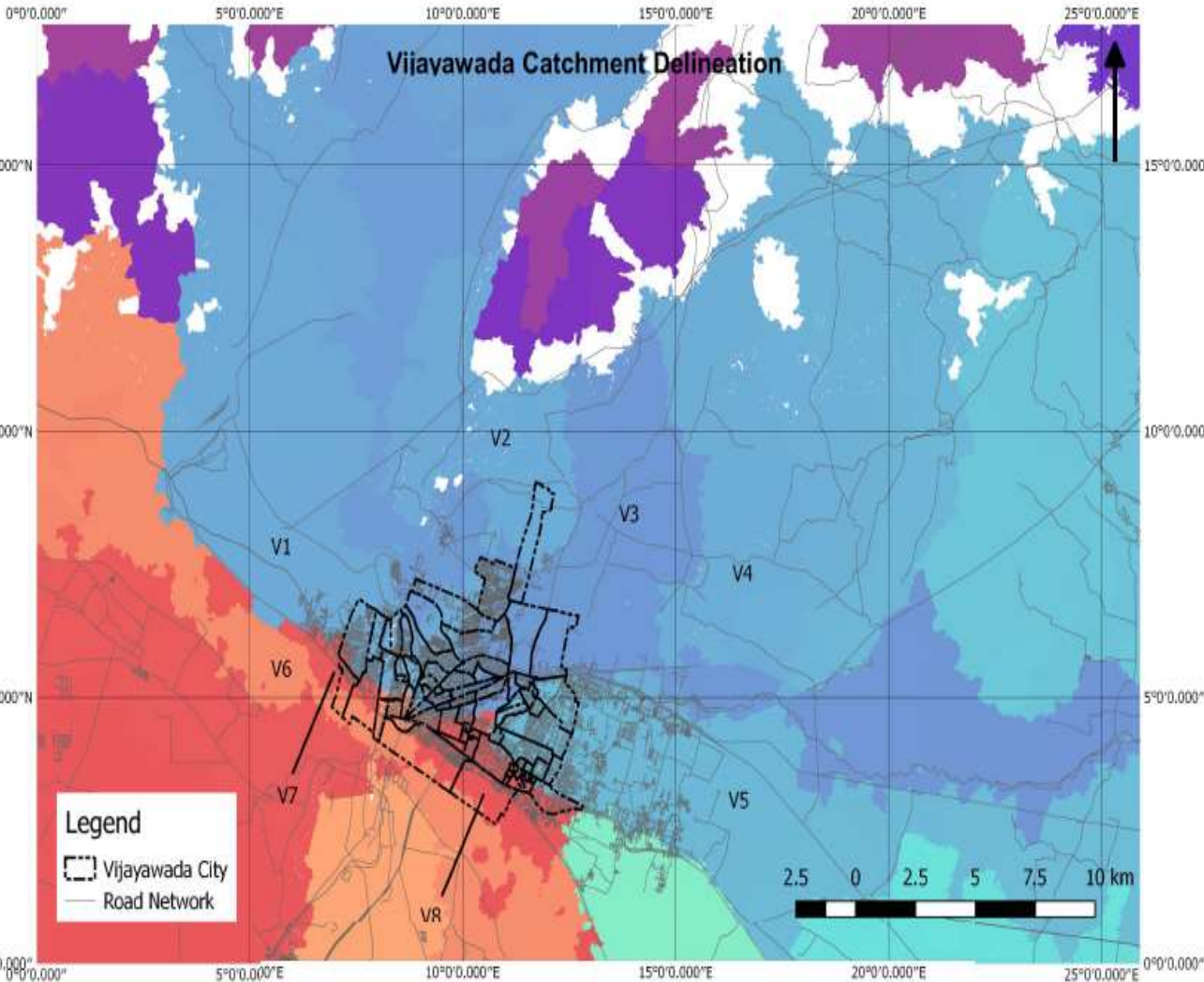
Steps followed for catchment delineation

Micro-catchments in Solapur



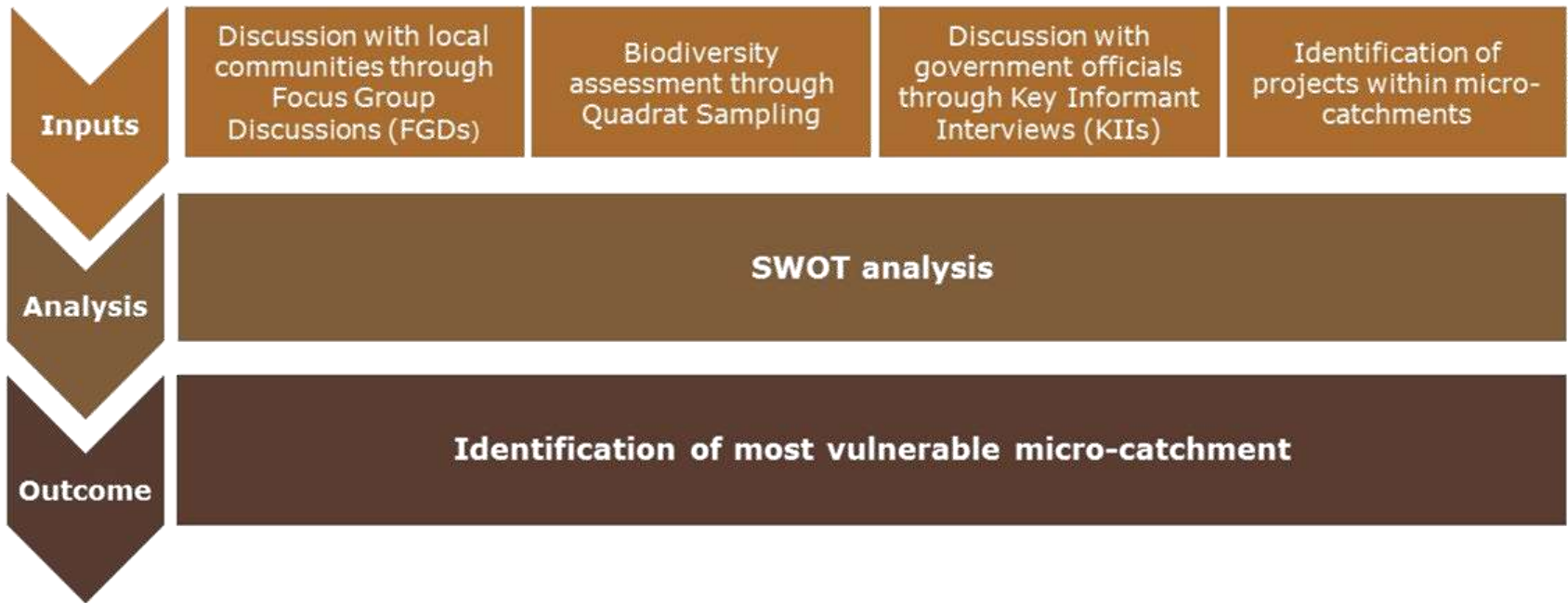
- Area: 14,845 km²
- 11 subdistricts
- 1150 villages,
- 1 Municipal Corporation
- 9 Municipal Councils
- 4 Micro-catchments

Micro-catchments in Vijayawada



- Area - 8,727 Sq.Kms.
- Revenue Villages - 67
- Grampanchyats - 972
- Mandals - 50
- Population - 4,517,970
- Micro-catchments: 7

Identification of vulnerable micro-catchment



Identification of vulnerable micro-catchment

- Focus Group Discussions
 - 12 in Vijayawada and 6 in Solapur
- Quadrat Studies
 - 20 in Vijayawada and 40 in Solapur
- Key Personnel Interviews and Discussions
 - Detailed discussions carried out with city and district officials



FGD



Quadrat studies

Community interactions



SWOT Analysis- Solapur

Micro-catchment	Strength	Weakness	Opportunities	Threats
Micro-catchment S1	4	-5	1	-2
Micro-catchment S2	3	-5	2	-4
Micro-catchment S3	9	-4	2	-1
Micro-catchment S4	3	-3	2	-1

Parameters considered:

- Urban rural integration
- Biodiversity
- Pollution
- Regional significance of water bodies
- Agriculture and Economy
- Attitude of the community
- Related ongoing work

S3 chosen as micro-catchment for project

SWOT Analysis- Vijayawada

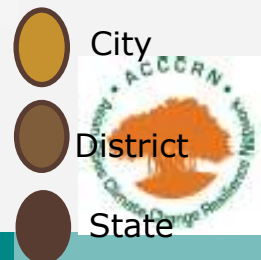
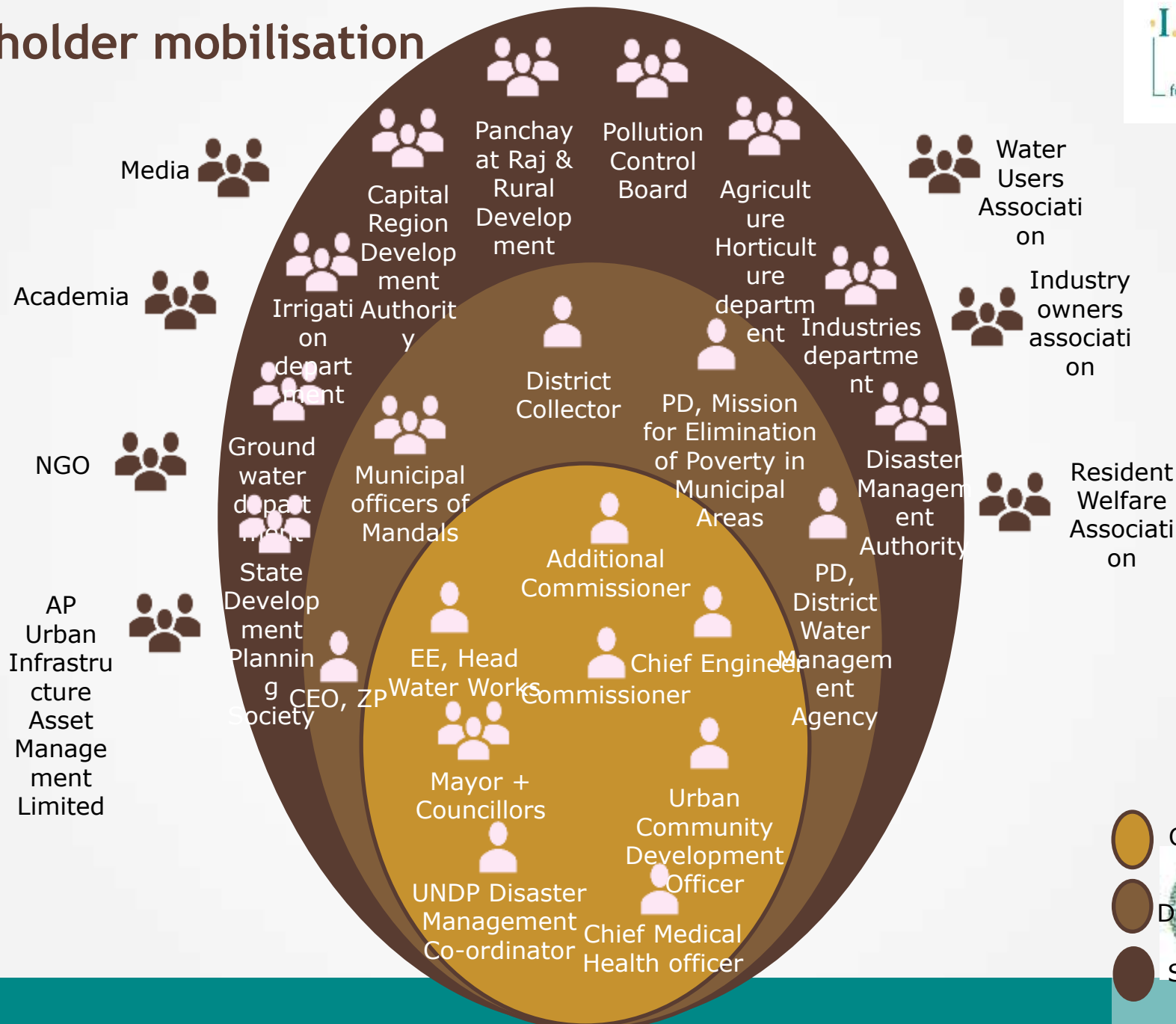
Micro-catchment	Strength	Weakness	Opportunities	Threats
Micro-catchment V1	2	-7	4	-3
Micro-catchment V2	4	-9	5	-4
Micro-catchment V3	6	-9	6	-4
Micro-catchment V4	4	-7	3	-5

Parameters considered:

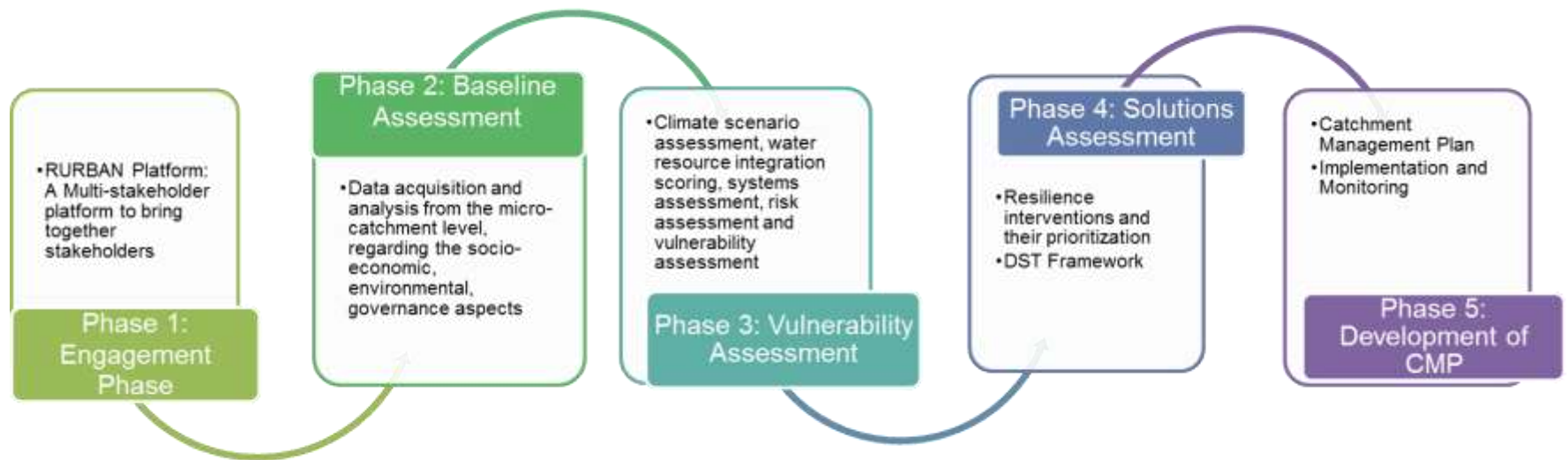
- Urban rural integration
- Biodiversity
- Pollution
- Regional significance of water bodies
- Agriculture and Economy
- Attitude of the community
- Related ongoing work

V3 chosen as micro-catchment for project

Stakeholder mobilisation



Adapt Framework



- Meetings with State, District and City Governments
- Formation of RURBAN Platforms
 - representatives from Municipal Corporations, District Collectors, state government agencies like Pollution Control Board and Ground Water Boards, state government departments like Urban Development and Water Resources Departments
- Formation of Project Advisory Board
- Development of Decision Support Tool
- Development of Catchment Management Plan
- Pilot project selection and implementation

Thank You

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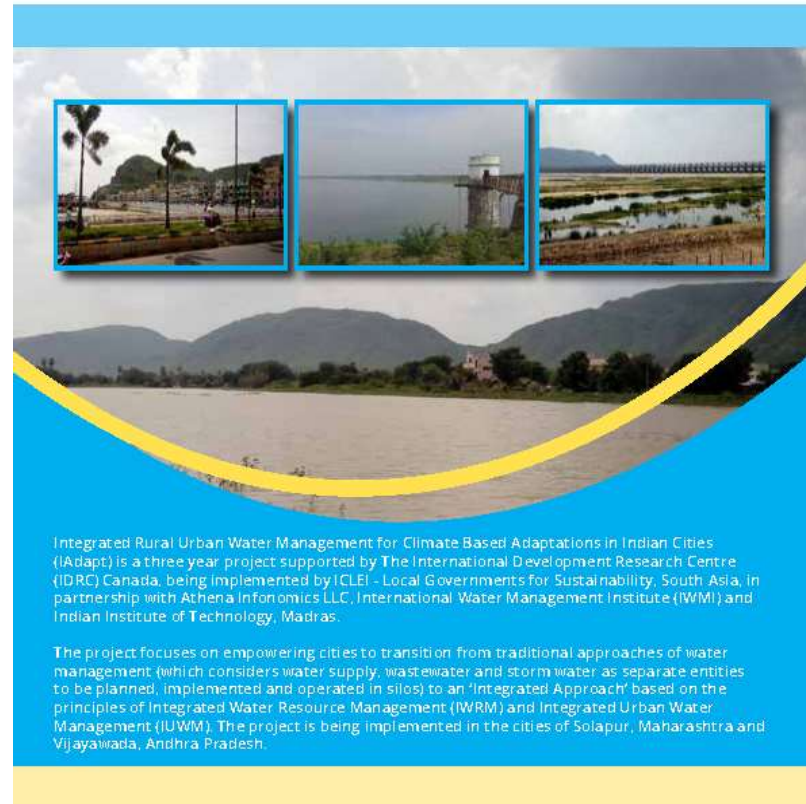


Implemented by



IAdapt

**Integrated Rural Urban Management for
Climate Based Adaptations in Indian Cities**



Integrated Rural Urban Water Management for Climate Based Adaptations in Indian Cities (IAdapt) is a three year project supported by The International Development Research Centre (IDRC) Canada, being implemented by ICLEI - Local Governments for Sustainability, South Asia, in partnership with Athena Infonomics LLC, International Water Management Institute (IWMI) and Indian Institute of Technology, Madras.

The project focuses on empowering cities to transition from traditional approaches of water management (which considers water supply, wastewater and storm water as separate entities to be planned, implemented and operated in silos) to an 'Integrated Approach' based on the principles of Integrated Water Resource Management (IWRM) and Integrated Urban Water Management (IUWM). The project is being implemented in the cities of Solapur, Maharashtra and Vijayawada, Andhra Pradesh.