



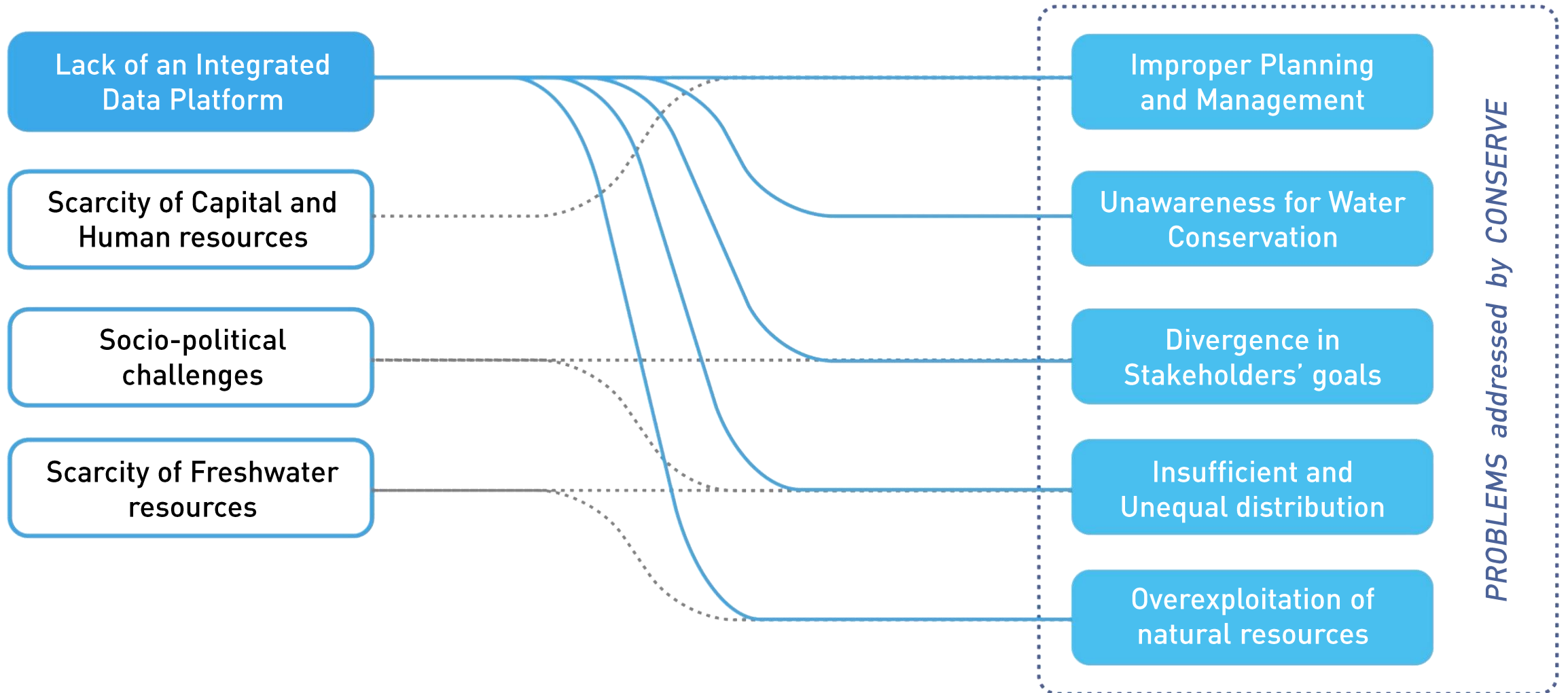
CONSERVE

Bits and Drops of Water

Digital model to inform Water Secure Cities

Team: Naman Sharma | Shilpa Singh

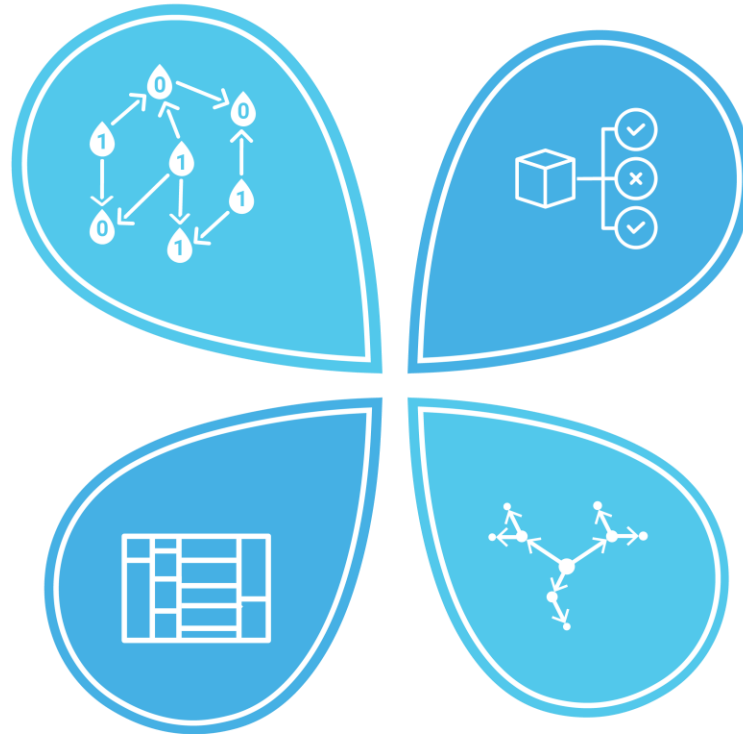
Landscape of Water Security challenges



About Conserve

CONCEPT

To **conserve** the **bits** and **drops** of **water** by tracking **flows & direction** of water and integrating it with city profile



FOUNDATION

Combines the **water balance model** with **GIS** to create a location responsive tool

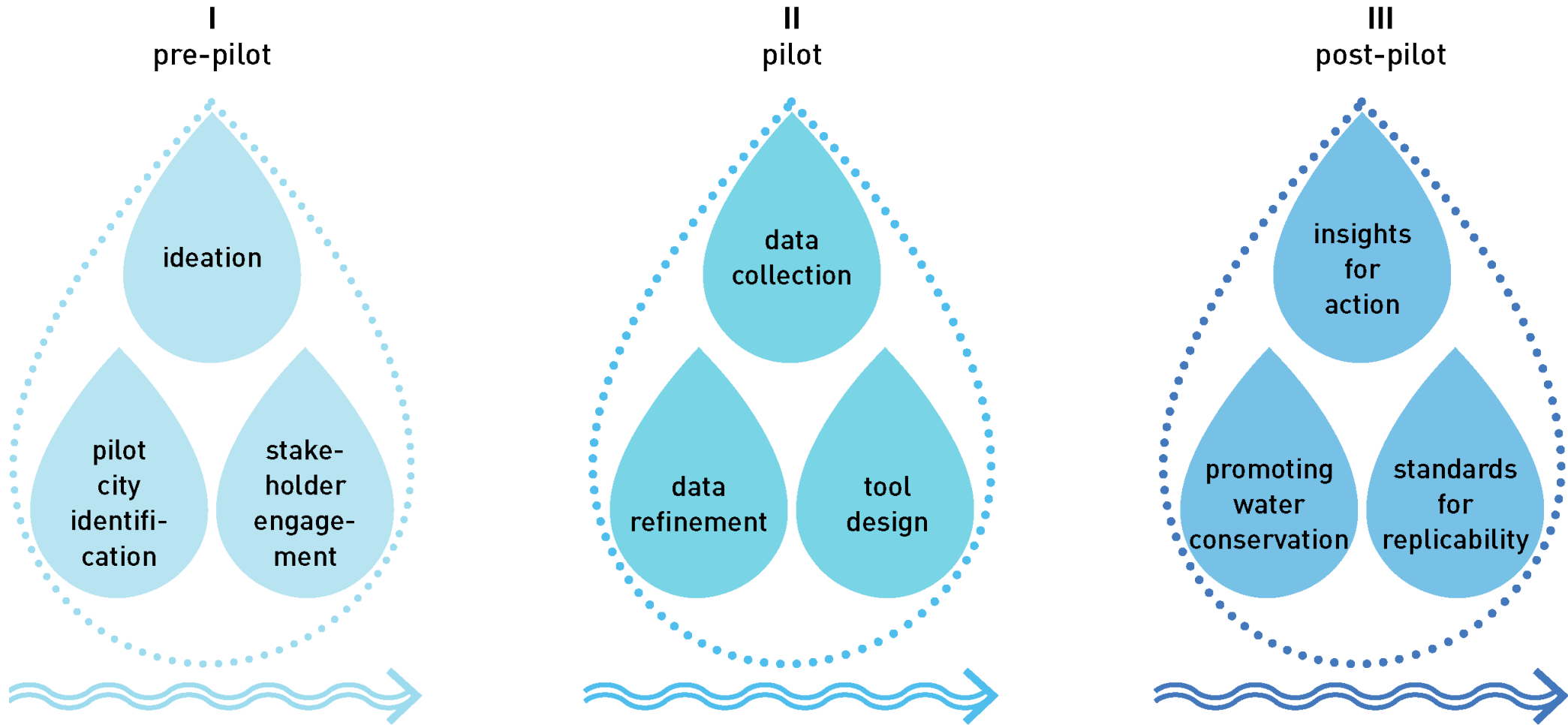
OBJECTIVE

To create a **decision support tool** to inform cities and foster a culture of **data-driven decision making**

VISION

To create a movement for **water conservation**, starting from **decentralised** level to achieve **water security**

Project Journey



Stakeholders and Beneficiaries

Statistics
Department

Water
Resources
Department

Ground
Water
Department



**STAKEHOLDERS &
CONTRIBUTORS**

City/State
IT
Department

District
Development
Authority

Water
Supply
Department

Municipal
Corporation

Smart
City

BENEFICIARIES



Citizens

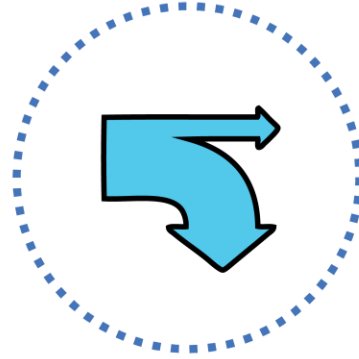
Research
Institutions

Civil Society
Organisations

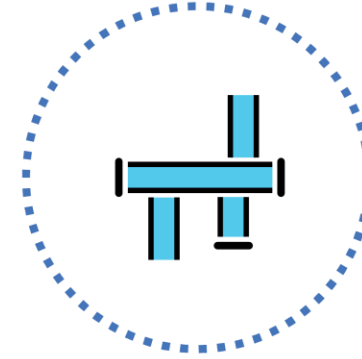
Features



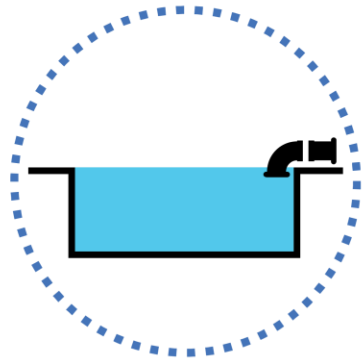
Macro and micro level water supply information of city



Water inflows, outflows and losses



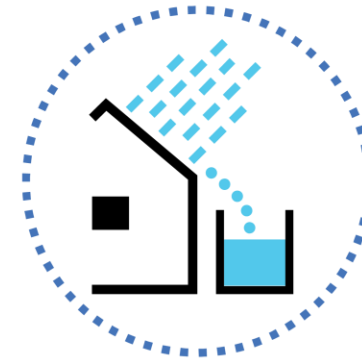
Types of water connections and consumption



Exploitation of resources and their recharge

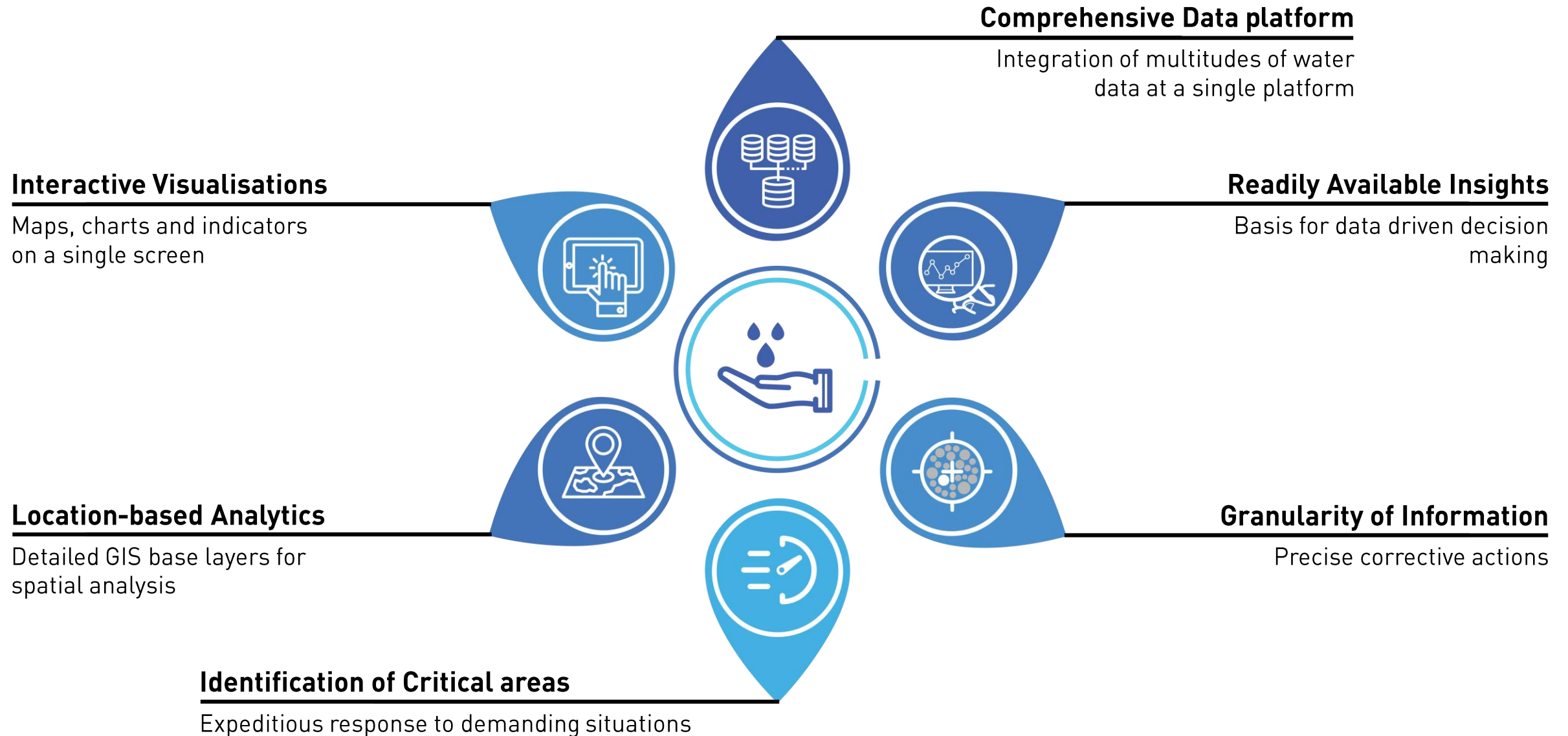


Groundwater level fluctuations and historical trends

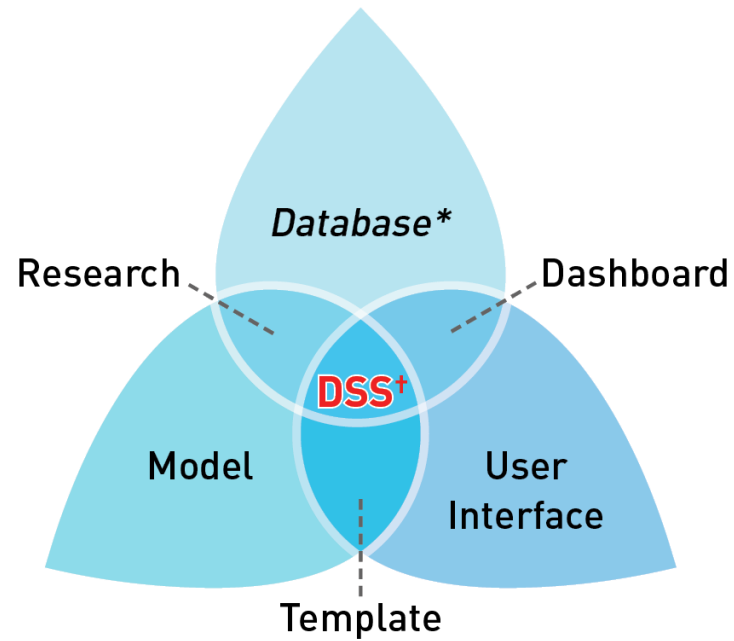


Rainwater harvesting potential for every rooftop in city

Benefits



Impact



*: City needs to input local data to create their own version of the tool

†: DSS- Decision Support System

Tool components

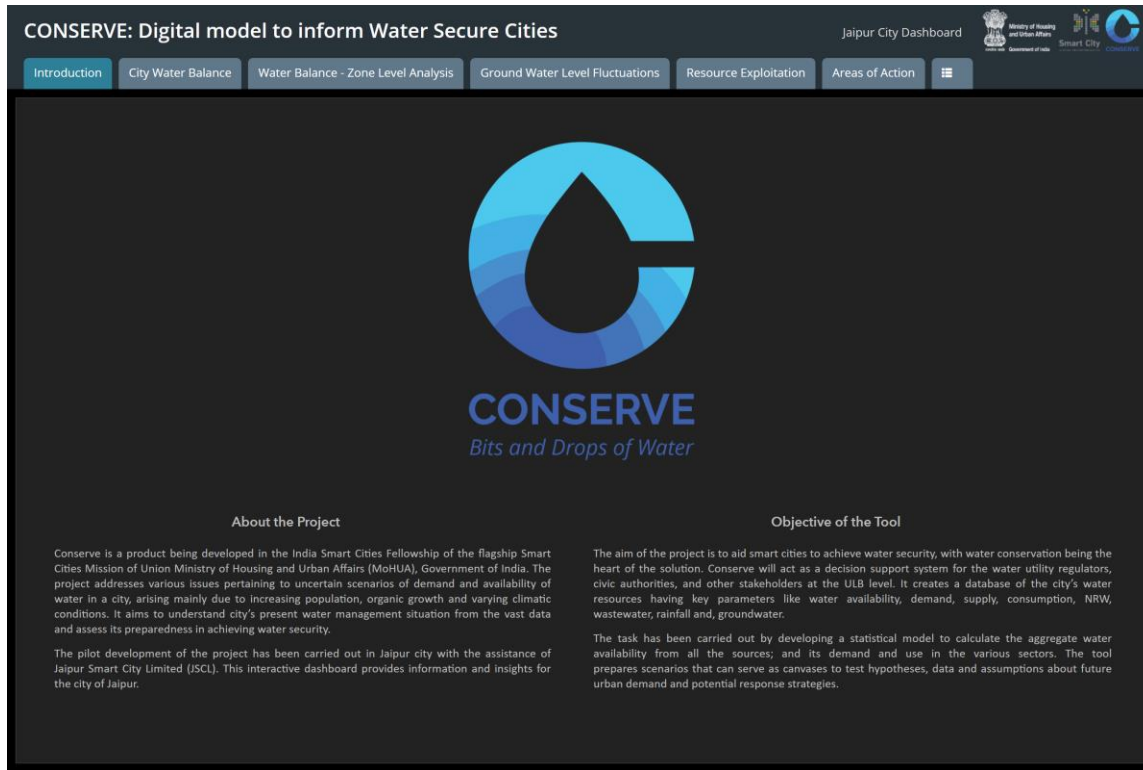
Modular nature of Conserve ensures easy **Replicability**

Adoption by other cities:

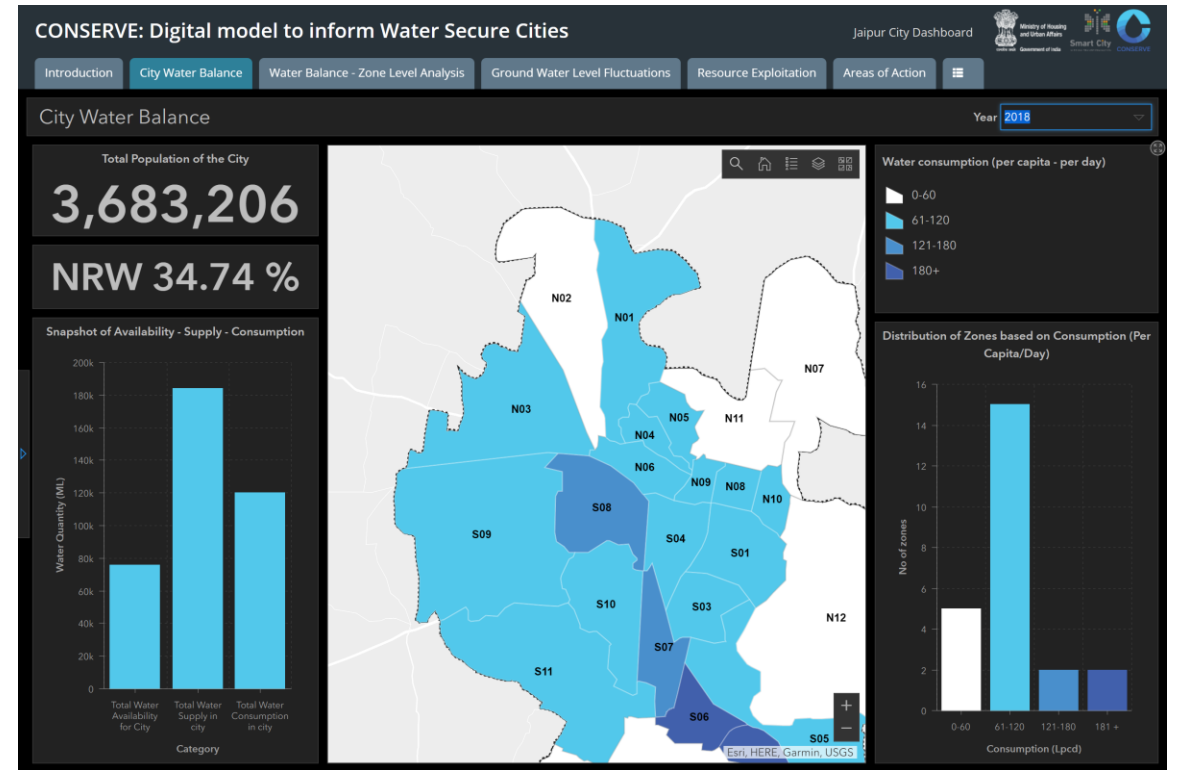
- Same **User Interface** and **Data Model**
- City to input **local data** to create their own **Database**

WATER SECURE FUTURE OF INDIAN CITIES

Screenshots

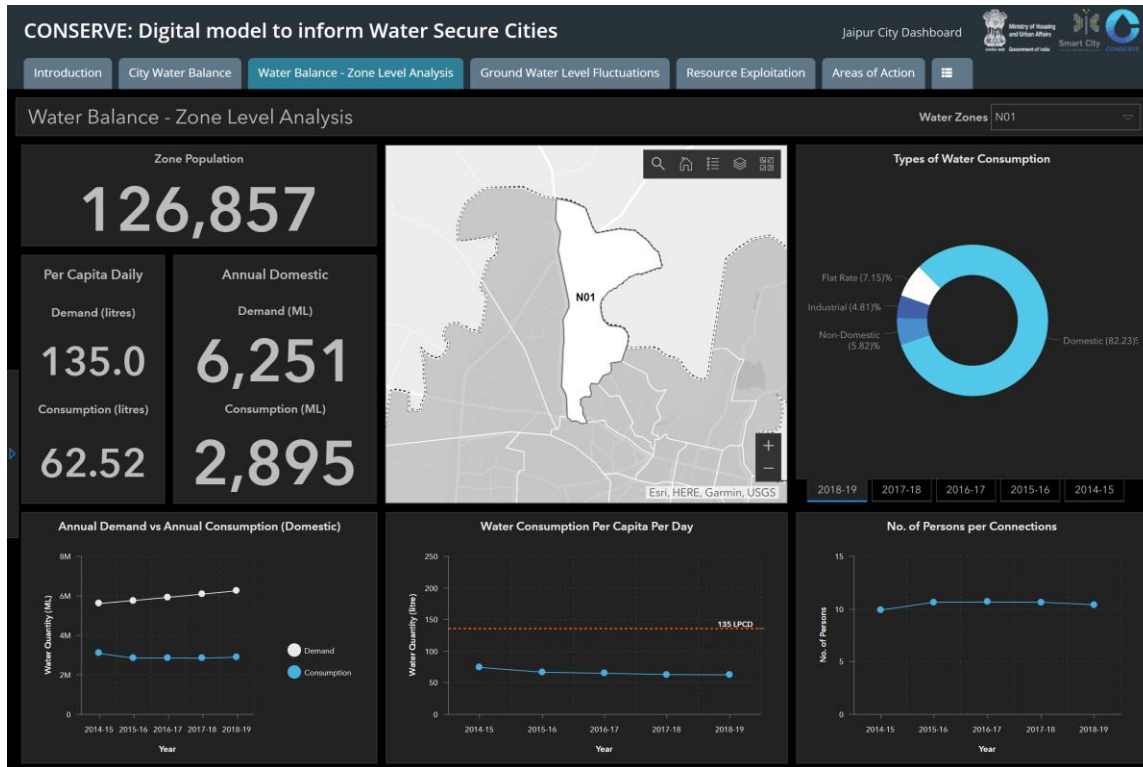


Home screen of the tool

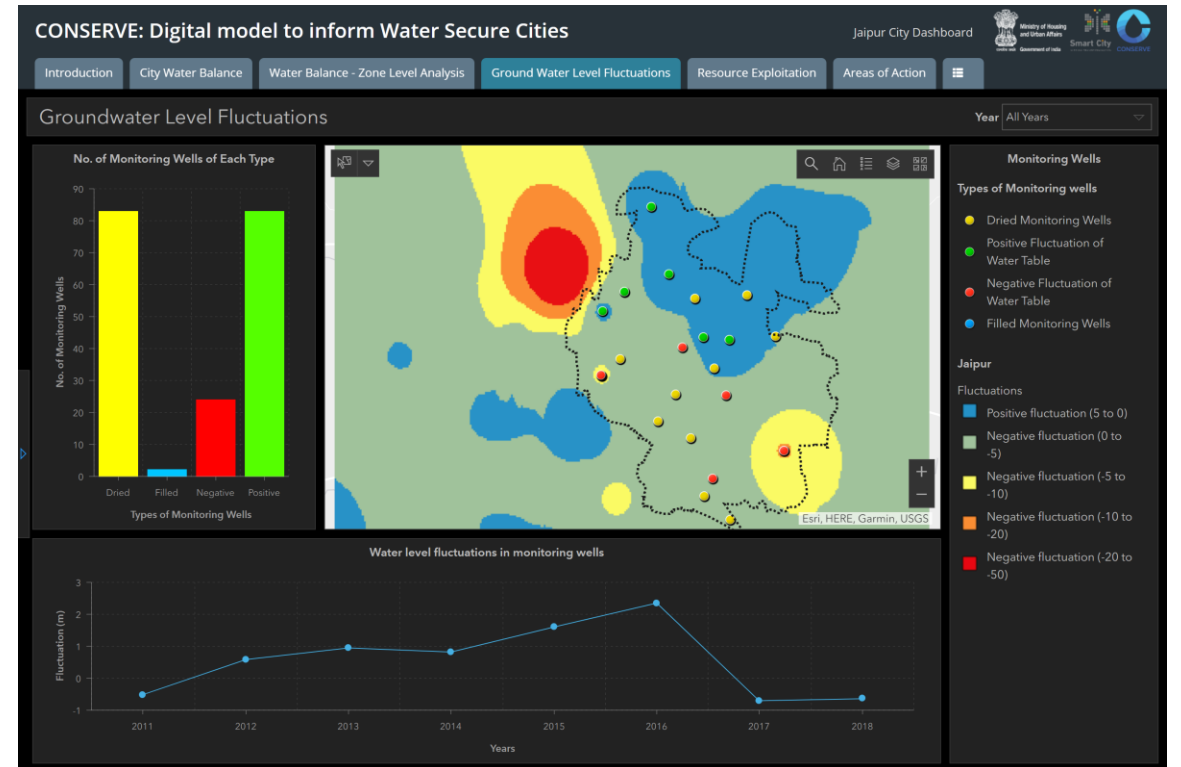


City Water Balance- Snapshot of aggregate water supply in the city

Screenshots



Water Balance- Zone Level Analysis- Granular spatial and temporal information for each water supply zone in the city

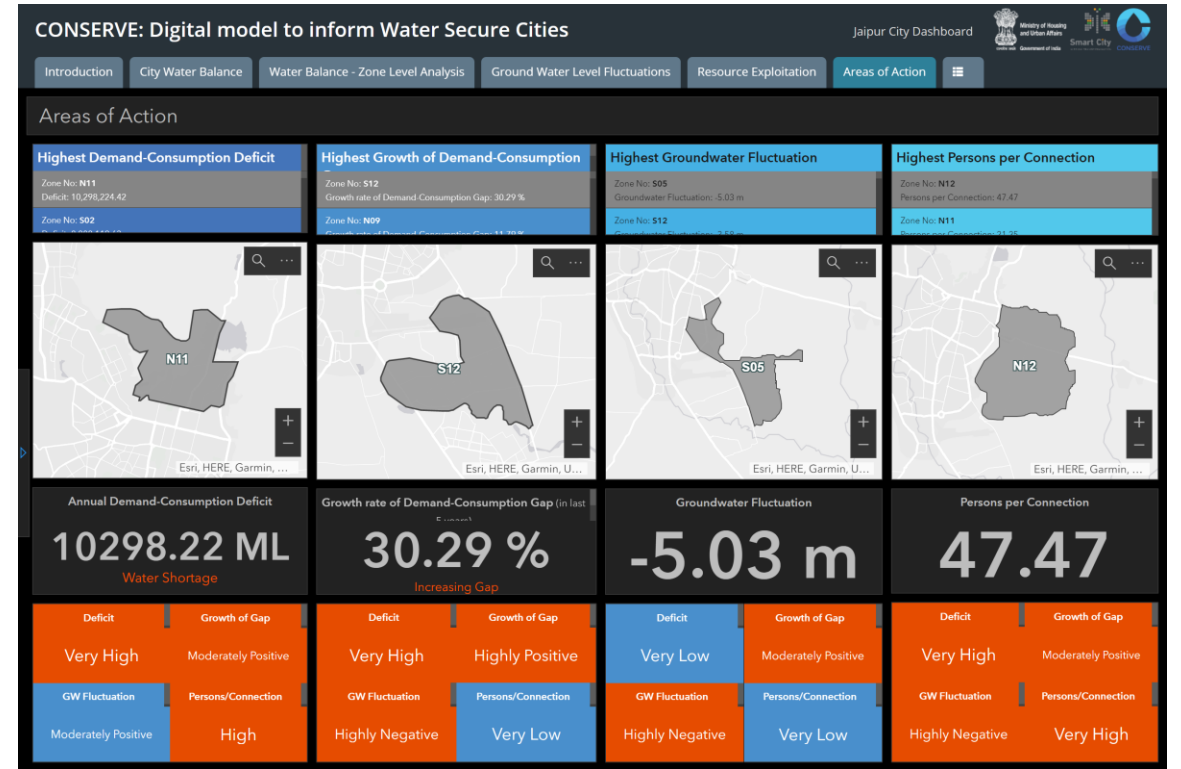


Groundwater Level Fluctuations- Detailed spatial and temporal information of groundwater level fluctuations

Screenshots

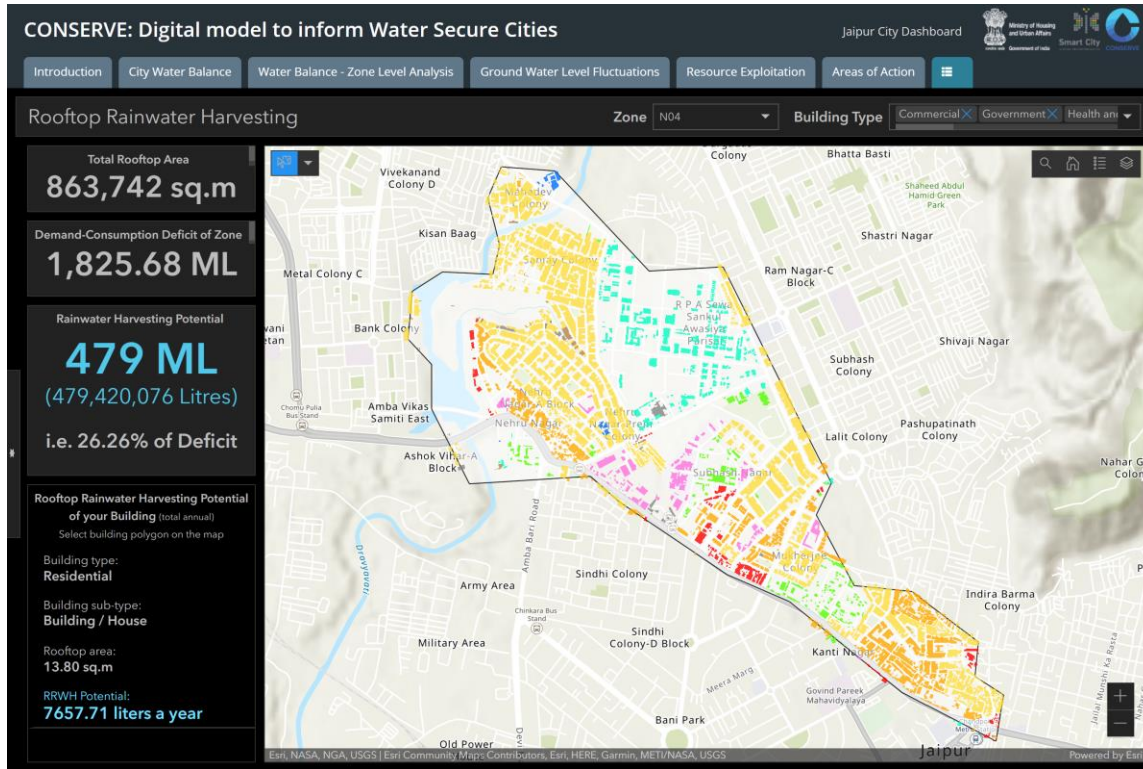


Resource Exploitation- State of exploitation of surface water and groundwater in the city



Areas of Action- Identifies areas requiring immediate attention of city/utility managers

Screenshots



Rooftop Rainwater Harvesting- Calculates the rooftop rainwater harvesting potential of buildings in the city, categorised on the basis of building use

CONSERVE: Digital model to inform Water Secure Cities

Jaipur City Dashboard

Introduction | City Water Balance | Water Balance - Zone Level Analysis | Ground Water Level Fluctuations | Resource Exploitation | Areas of Action

Leadership

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Executive Engineer, PHED, Rajasthan

Data Sources

Dataset	Description	Dataset Provider	Spatial Level
Demographic data	Population and its growth	Jaipur Municipal Corporation	Municipal ward
Shape files	Municipal wards and city limits	Jaipur Municipal Corporation	Municipal ward and City
Maps	Landuse-landcover and building footprint	Department of Information Technology and Communication (DoIT&C), GoR	Water supply zone
Maps	Water supply zones	Public Health Engineering Department (PHED), Government of Rajasthan (GoR)	City
Water Supply	Surface water and groundwater supply statistics	Public Health Engineering Department (PHED), GoR (via Jaipur water supply public portal)	Water distribution center
Water Consumption	Water consumption statistics	Public Health Engineering Department (PHED), GoR	Water supply zone
Water Connections	Number and nature of water connections	Public Health Engineering Department (PHED), GoR	Water supply zone

Project Team

Mentor

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Professor Emeritus
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Fellows

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For more information and downloads, visit:
<https://smartnet.niua.org/iscf/>
 ISCF: 2019-20 Compendium
<https://smartnet.niua.org/iscfp/compendium/#about>

About Us- Leadership, contributors, project team and data sources

Thank you!

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