

# National Water Policy and Action Plan for India

## Technologies to Monitor the Progress of the National Water Policy

**Dr. Aabha Sargaonkar**  
Senior Principal Scientist,  
Cleaner Technology and Modelling Division, CSIR-NEERI, Nagpur-  
440020

# Introduction

## GOI Schemes

The first National Water Policy was adopted in September, **1987**

It was reviewed and updated in **2002** and later in **2012**

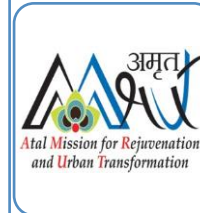
The objective of the National Water Policy is to take **cognizance of the existing situation**

**Adequate safe drinking water facilities** should be provided to the entire population both in urban and in rural areas



### JJM

Jal Jeevan Mission (JJM) – aims to provide **potable water in adequate quantity of prescribed quality** on regular and long-term basis to every rural household, through tap water connection, by **2024**



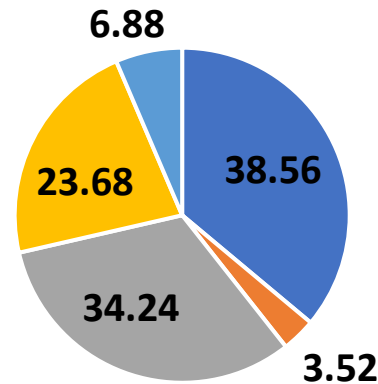
### AMRUT

Atal Mission for Rejuvenation & Urban Transformation (AMRUT) as a water focused national urban mission aim to **achieve universal coverage of water supply in 500 Mission cities till March 2023**

## Major Challenges in Urban Water Supply Management

Typical Water Supply Scenario

% of Water Supply



- Billed
- Authorized Unbilled
- Apparent Losses
- Real Losses
- Un-Identified

NRW:40-50%, Service Level Benchmark is 20%

- Intermittent Supply
- Low Pressure supply
- Customer Complaints
- No willingness to pay
- Less Metering

- O&M: Reactive approach
- Pipe failures no record
- Knowledge Confined to local Operator
- PPP Contract :WDS management
- Critical balance: Investment & RISK



## Current Issues

ULBs do not have updated data of infrastructure/ GIS Map, attributes

No standard method for reporting data, Centralized platform

Insufficient data -poor planning for implementation of reforms/ Application of DSS



Engineering Drawings prepared for Implementation of water supply schemes



ULBs executing structural reforms in water supply network

## Need

Centralized Storage

Uniformity in Data Formats

Access to ULBs for Analytics and Decision Making

Innovative Technologies



## Database Standardization Framework for Smart Cities

SAFRA-WDS is the systematic way of data storage and management.

GIS maps of Water supply Network, Sewerage, Drain, Road with detail attribute data in Standard format ISO-24516-1, AMRUT Guidelines

Data can be stored/downloaded for each District Metering Area (DMA) and used in decision making

**Centralised data  
base**

**Offers Authentic  
user login to  
Administer**

**Offers  
Authentic user  
login to ULB-  
User**

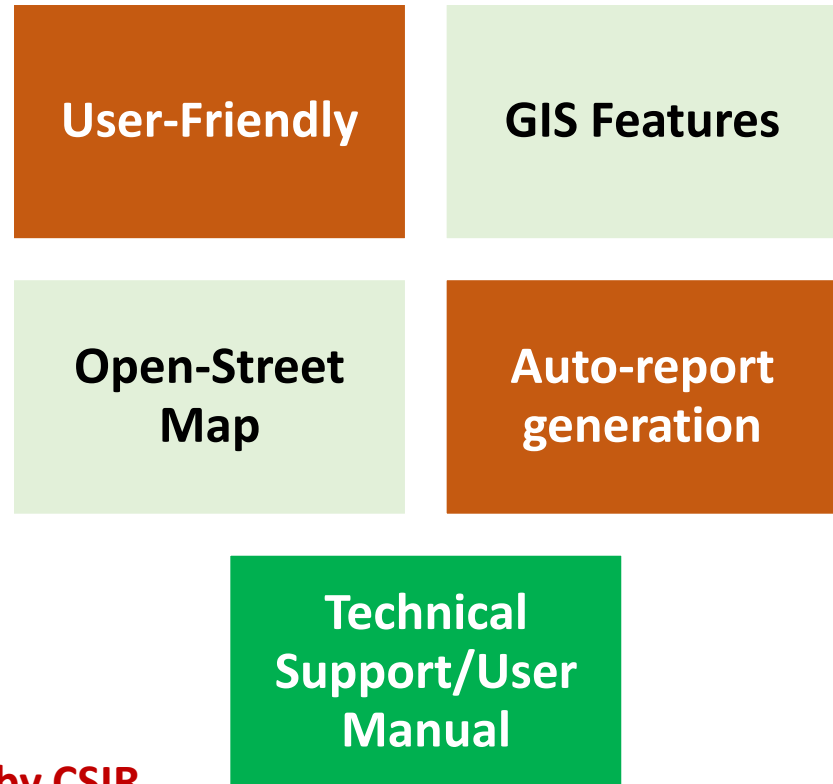
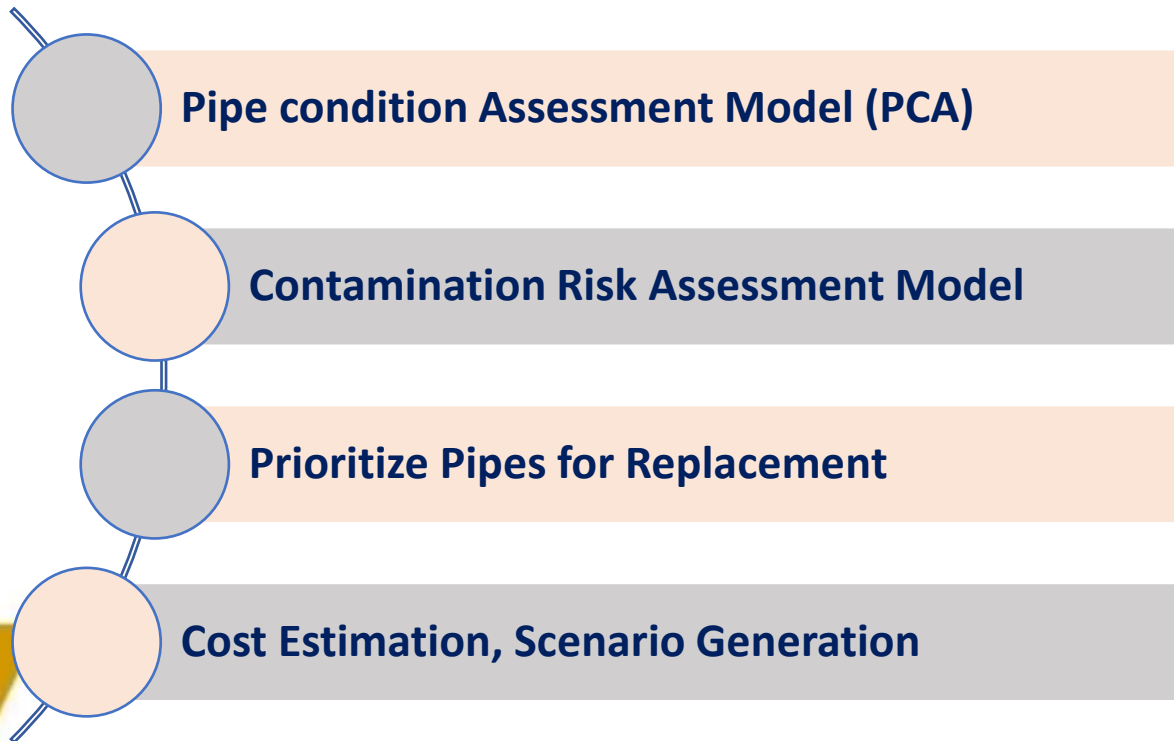
**Authorities  
collaborate with  
IT professionals**

**Implement DSS**

**Acknowledgement: Project funded by Department of Science and Technology (WTI-2019)**



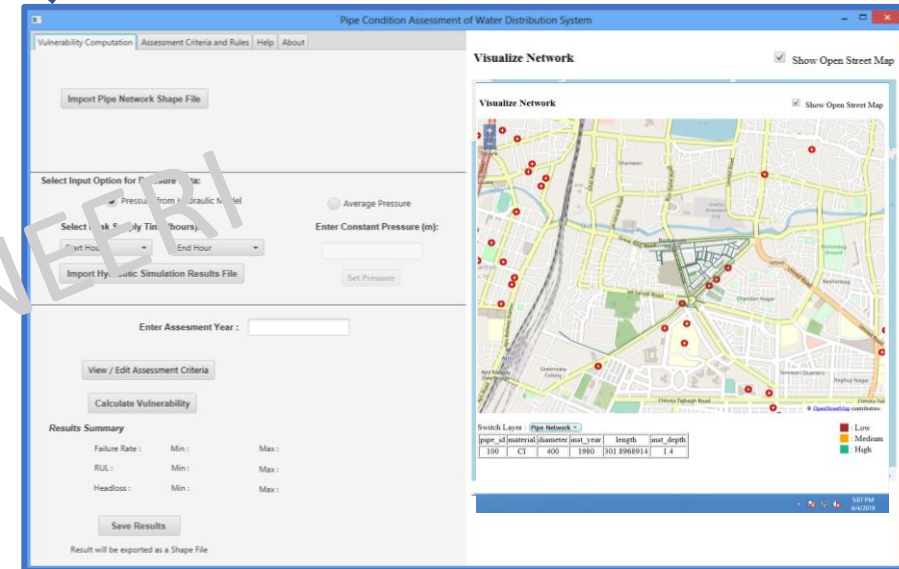
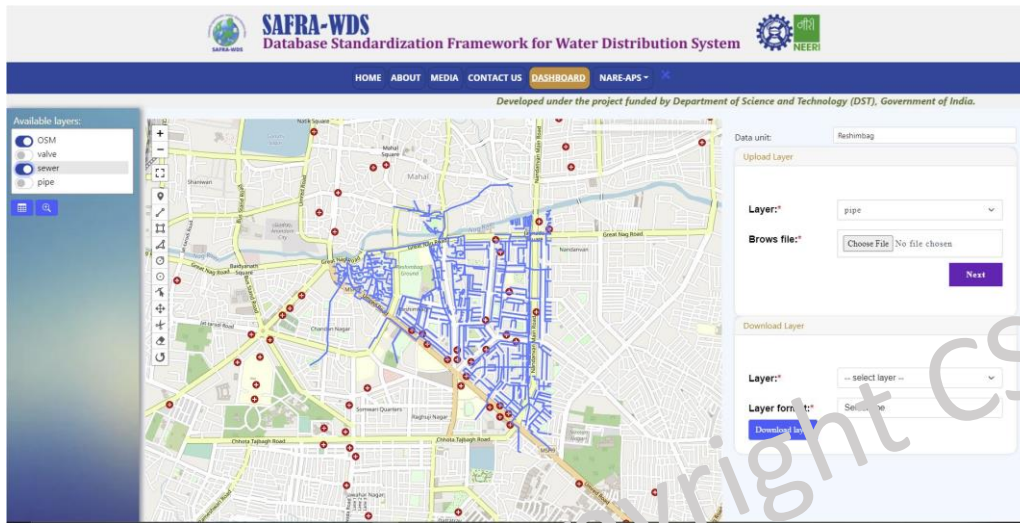
## RISK-PiNET: A Mathematical Modelling Tool for SMART WDS Management for SMART Cities



**Acknowledgement: Project funded by CSIR**



# Linking SAFRA-WDS with DSS



Decision Support System

- A pro-active pipe replacement planning
- Preventive Maintenance of Water Distribution System



# Key Takeaways/ Recommendations

- **Systematic database framework available for ULBs**
- **ULBs can have independent and secured login to SAFRA-WDS**
- **Secured database for each ULB**
- **ULBs can Upload, Update, Edit, and download geo-spatial data of their network**
- **Easy to comprehend and analyse the data**
- **ULBs can perform s Network Assessment using RISK-PiNET/DSS**
- **Decision about O&M of Network with Cost estimation**
- **Easy to Convince Top Management/officials with authentic data**





# Thank You

For discussions/suggestions/queries email: **TEAM RISK-PiNET**

## Links/References

### **RISK-PiNET Video link**

[https://www.youtube.com/watch?v=\\_wOkgtaxMxM](https://www.youtube.com/watch?v=_wOkgtaxMxM)

<https://riskpinet.wordpress.com/>



**91-0712249990**



**ap\_sargaonkar@neeri.res.in**

**a\_sharma@neeri.res.in**

India Smart Grid Forum  
CBIP Building, Malcha Marg,  
Chanakyapuri,  
Delhi-110021  
Website: [www.indiasmartgrid.org](http://www.indiasmartgrid.org)



[www.isgw.in](http://www.isgw.in)



[isuw@isuw.in](mailto:isuw@isuw.in)



[@ISUW22](https://twitter.com/ISUW22)



India Smart Utility Week