



BORDA · Bremen Overseas Research and Development Association

Developing City Wide Planning Instruments for Decentralized Urban Sanitation Services



 Consortium for
DEWATS
Dissemination
Society

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Deficit of Urban Basic Sanitation Services → It is a catastrophe



1. **Developing countries: 50% no access to toilets**

→ **1/3 humanity**

2. **World wide: 90% wastewater not treated**

3. **Growth of slums: Urban population living outside the limits of formal service provision**

→ **2013 → 1/6 humanity**

→ **2030 → 1/4 humanity**

1. **Urbanization : In Asia 30% in Cities**

India 2030 → + 200 Mil. in cities

Present Sanitation Approaches do not Work out.

It is not a technological debate.

→ It's about **recognizing the great**
planning approaches that e.

→ **Deficiencies of present**

1. Sanitation interventions based on present approaches
Flush-Toilet – Sewer – Treatment – Disposal

2. Unit "City" is too large for planning and implementation

3. Incremental expansion is not possible

4. They are not flexible towards an "unknown" future

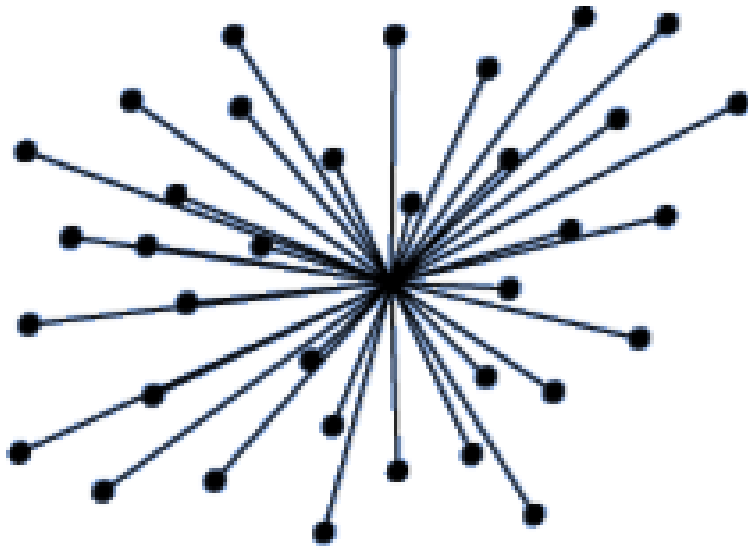
5. Too resource intensive → too expensive

6.



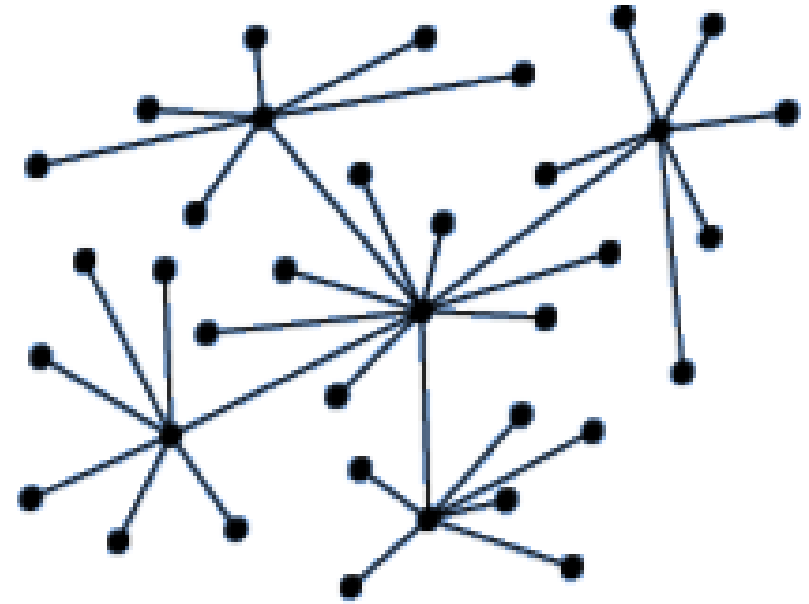
Decentralized Sanitation Service

Complementing Existing Centralized Services



Centralized Services

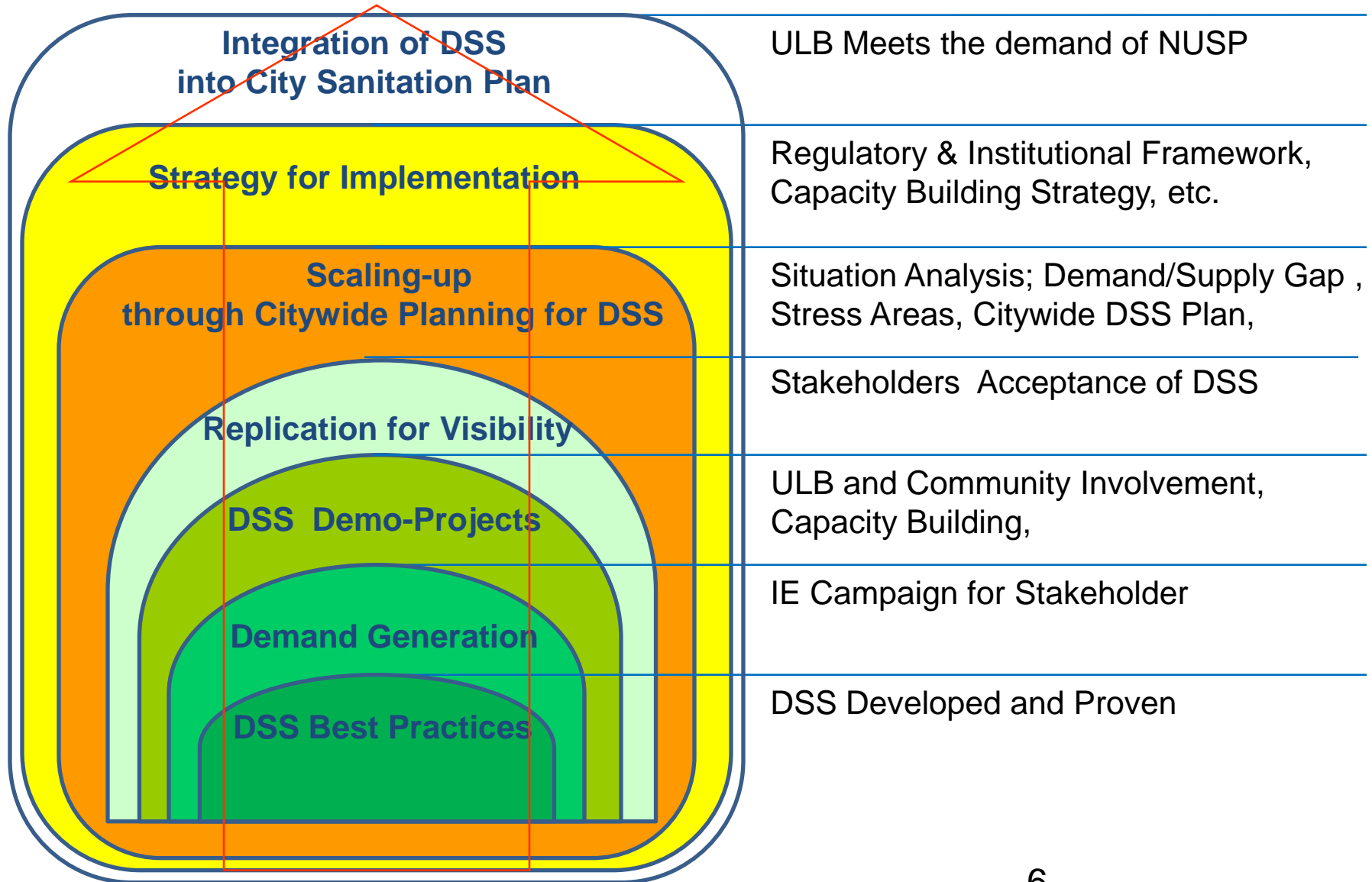
- Traditional underground drainage networks and centralized treatment plants.



Decentralized Services

- All inputs and outputs of the process are managed within the boundaries of the project site, and rely upon community or customer-based decision-making processes

Dissemination of Decentralized Sanitation Solutions (DSS)



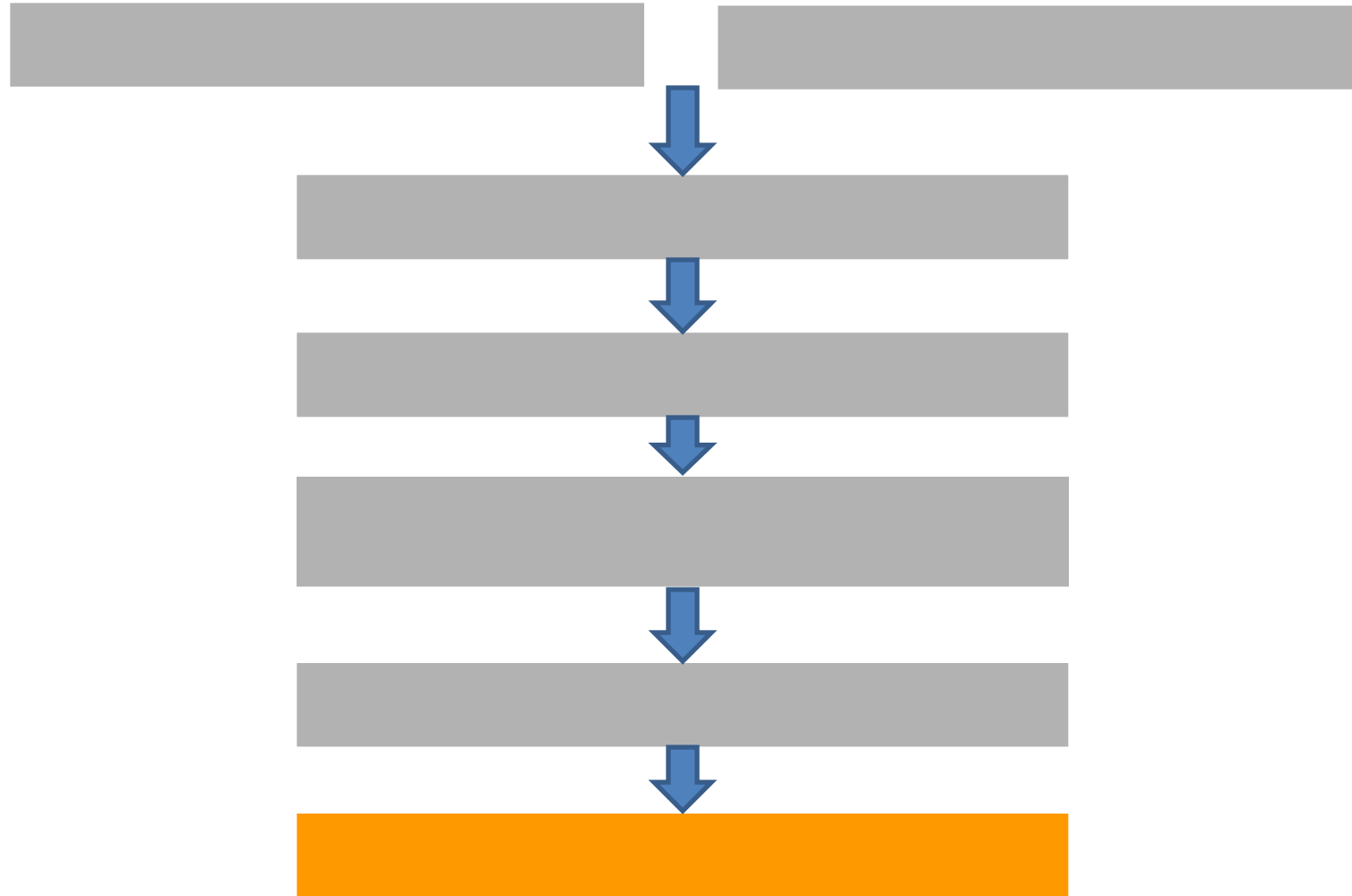
2006 : 1st Attempt of Citywide Planning for DSS → DEWATS Master Plan for Pune

The Objective

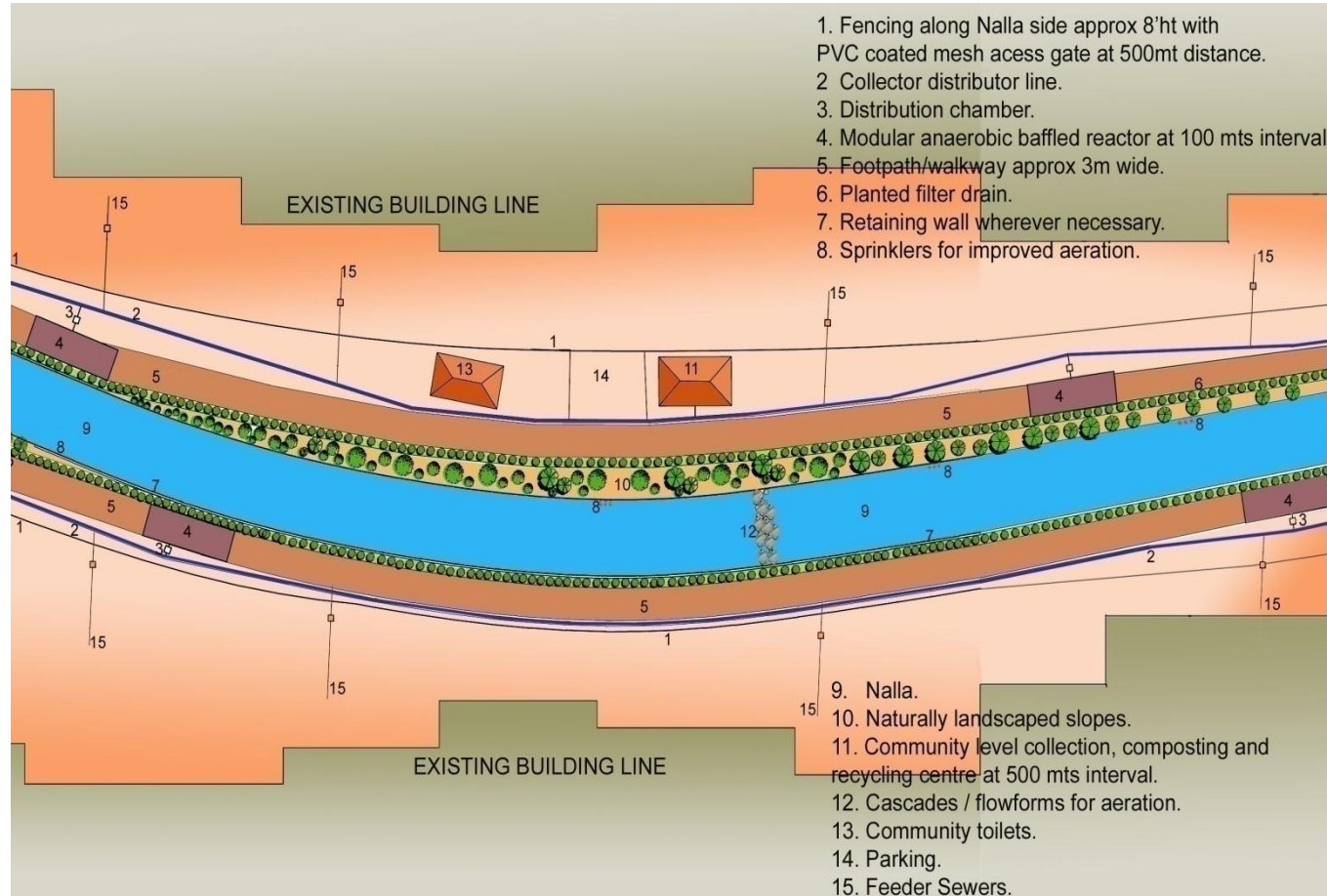
To assess the possibility of integrating decentralized sanitation solutions with conventional (centralized) systems through preparation of a “Master Plan” for DEWATS in the City of Pune

Pune

Methodology



Intervention Typologies for DEWATS

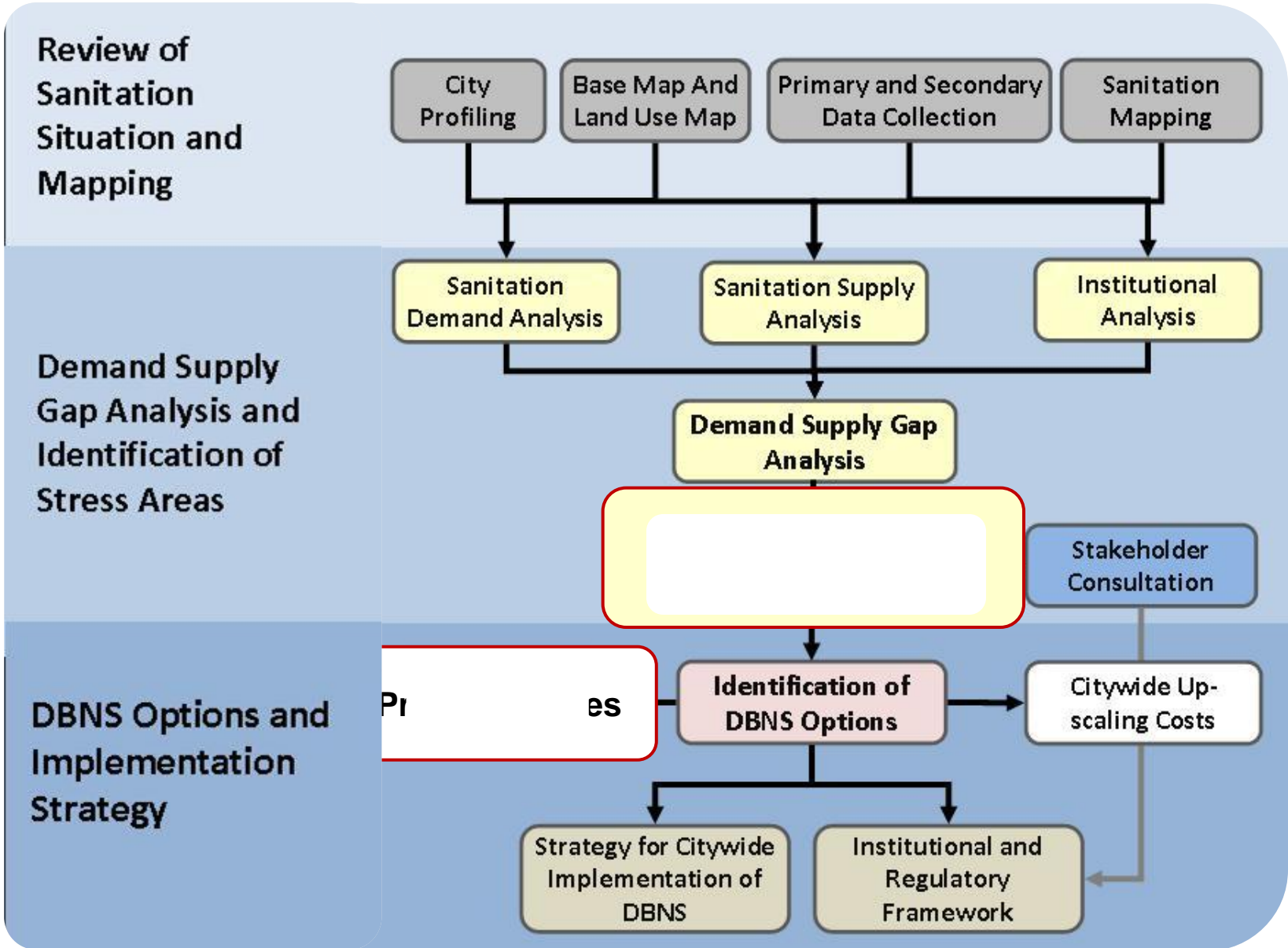


Storm water drain (nala) Development - Eco-system and development of recreational space

**2007: 2nd Attempt of Citywide Planning for DSS
→ Citywide DSS Plan for Kolhapur**

Kolhapur

Methodology



Mapping &
Database Creation



Infrastructure
Assessments



Demand Supply Gap
Analysis

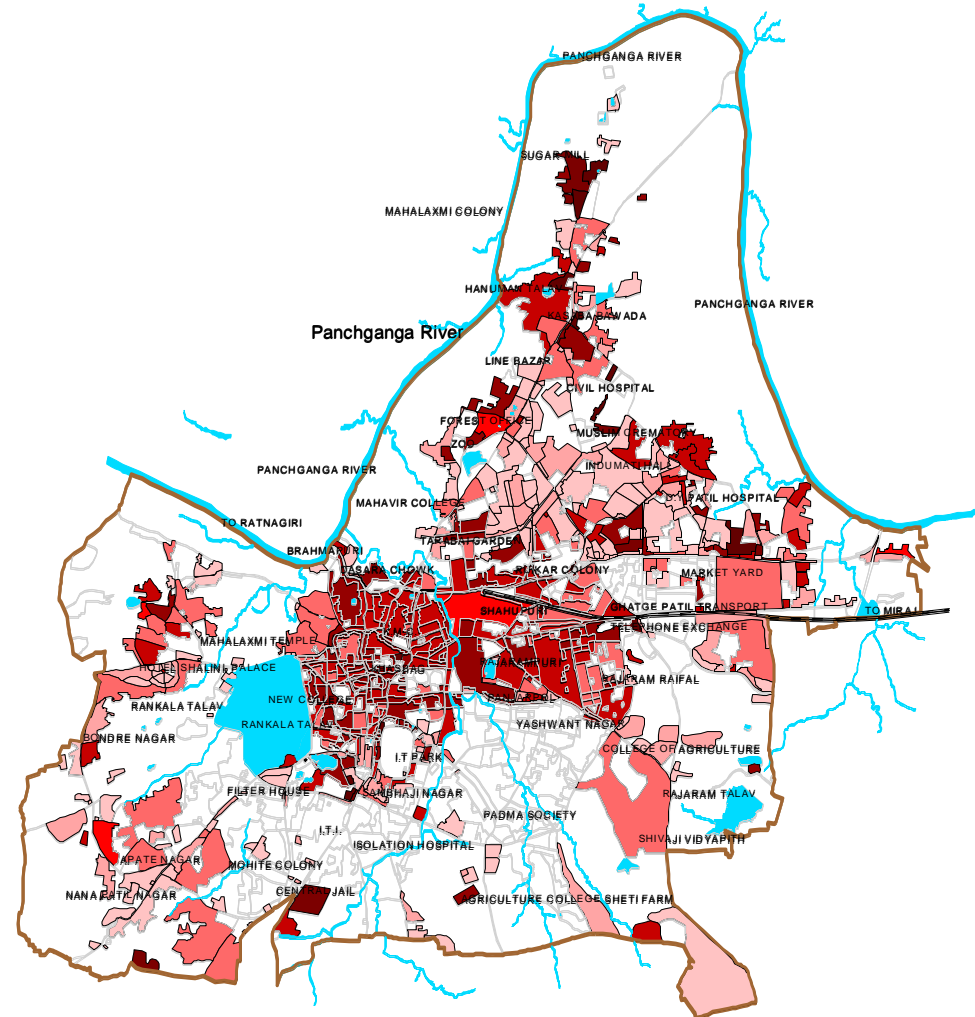
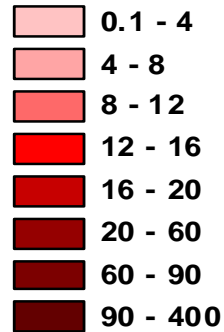


Identify Stress Areas
(Opportunities)



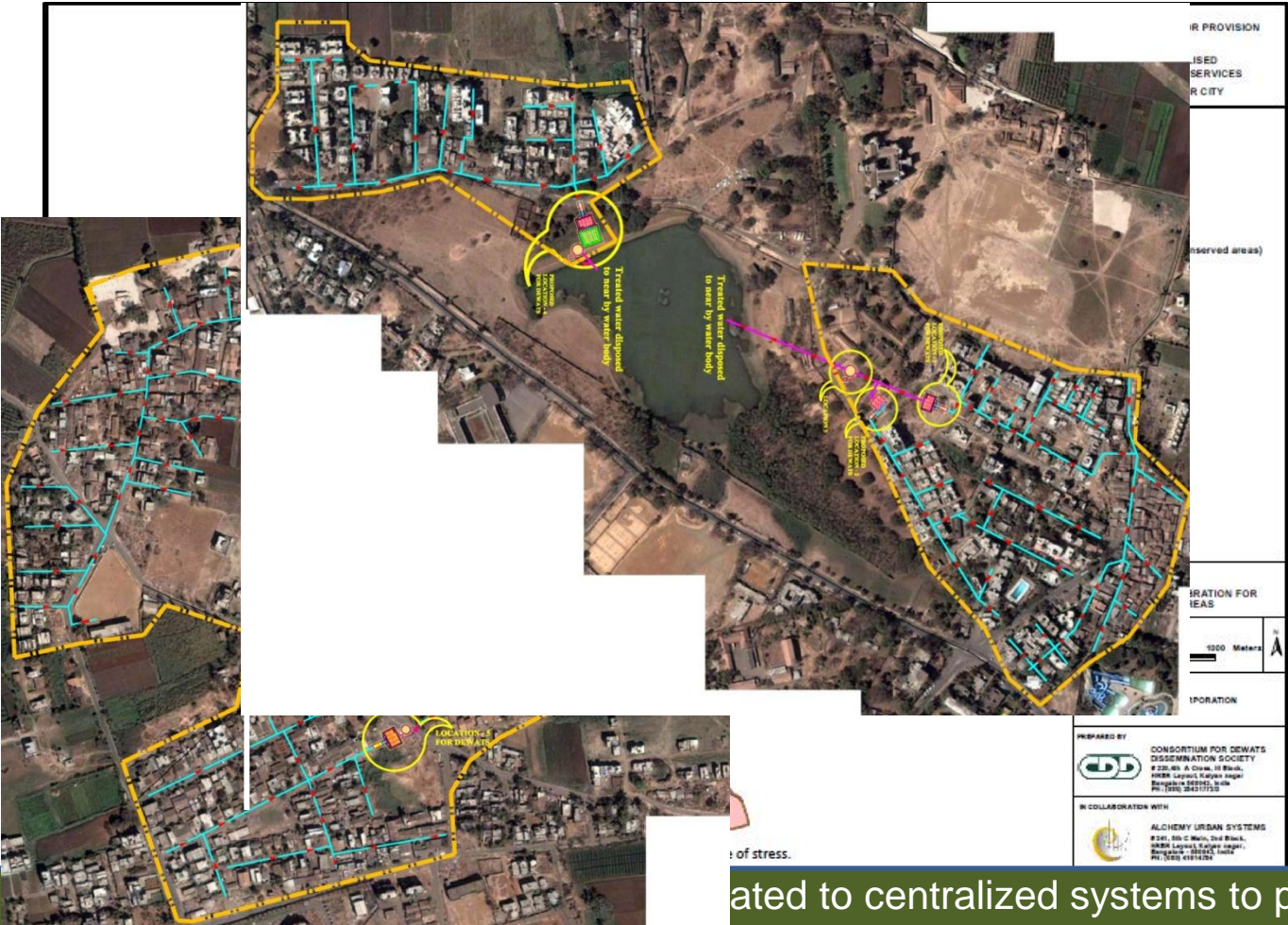
Strategies & Action
Plan

Stress Calibration



Intervention areas for DSS

Project Profiles for DSS Intervention → Selected Stress Areas



Decentral

of stress.

ated to centralized systems to provide complete services in a city

2009 : 3rd Attempt of Citywide Planning for DSS
→ City Sanitation Plans (CSP) for 3 Cities in India

City Sanitation Plan (CSP) Methodology

**City Sanitation
Task Force (CTF)**

**100% sanitation
Campaign**

**City Sanitation
Plan**

**Capacity Building
& Training**



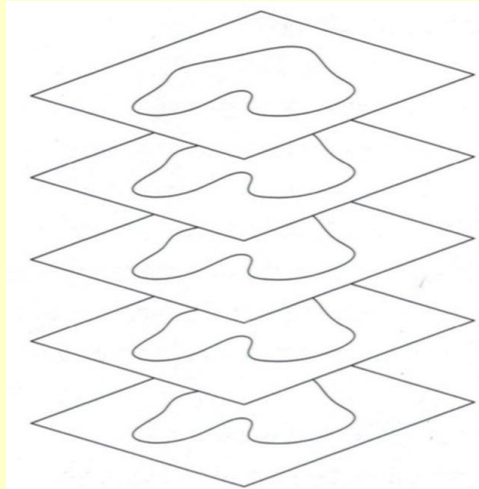
What is Next:

A) Implementation Strategy that Responds to “Ground” Realities:

- Fine tuning of typologies for city’s standard situation
- Further search for reality checks for generated plans.
- Improve then link to Municipal finances
- Improve the link to existing Gov. programs

What is Next:

B) Components of Urban DSS that Require a Separate Planning Layer



O&M

Re-use

Sludge management

Monitoring + Evaluation

Community Service Provider Framework

...

What is Next:

C) Horizontal Planning

Linking with other Aspects of Sustainable City Development

- Urban Agriculture
- Water saving
- Water resource protection
- Climate Change Mitigation and Adaptation
- Renewable Energy
- Urban Green Space
- Other environmental protection measures

Thank you!

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- Stanzin Tsephel
- Rahul Sachdeva
- Rajesh Pai

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