

INDIA'S JOURNEY OF MAINSTREAMING WSUDP

Status Quo (Old Way) to Sustainable Results (New Way)

Suresh Kumar Rohilla, Programme Lead

International Water Association(IWA)

email: suresh.rohilla@ iwahq.org

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**CSE Webinar on *'Towards Water Sensitive Cities for Climate Resilience
- Experience of Approach and Practices in India'***

Story of Water > Shortage, or mismanagement?

- Community role **destroyed**
- Lost: rich **hydrological** traditions
- Broken water cycle, depleting aquifers
- Flush and forget

Story of Urban Areas Water Problems - Shortage & Abundance



No city has 24x7 water supply



Groundwater Exploitation,
More recharge –
40 % India falls under
dark zone

Water Scenario



Heavy rain causes waterlogging at Ring Road near Sarita Vihar in Delhi. (TOI photo)

Drainage Scenario

Missed Opportunities -

How much rainwater / stormwater can we harvest?

Example: Chennai

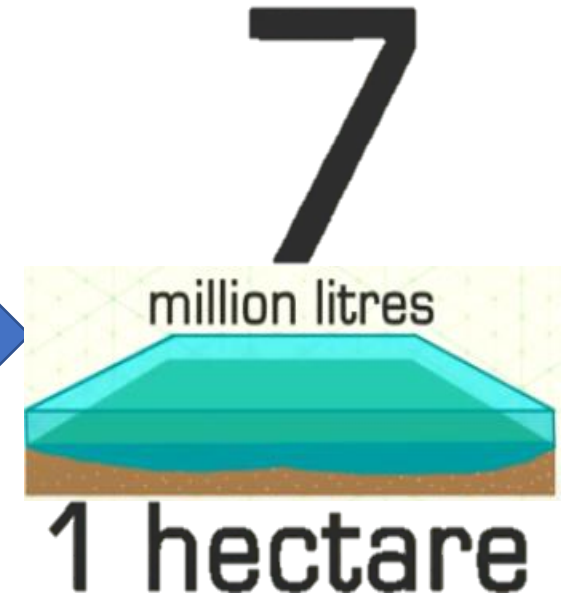
Area = **1 Ha** (10,000 m²)

Annual rainfall = **1400 mm**

= 1,40,00,000 (14 Million litres)



Even if we assume only **50 %** of the rainfall can be harvested, about **7 million litres** of water can be harvested



A Story of Sustainable Urban Water Management Agenda in India ...

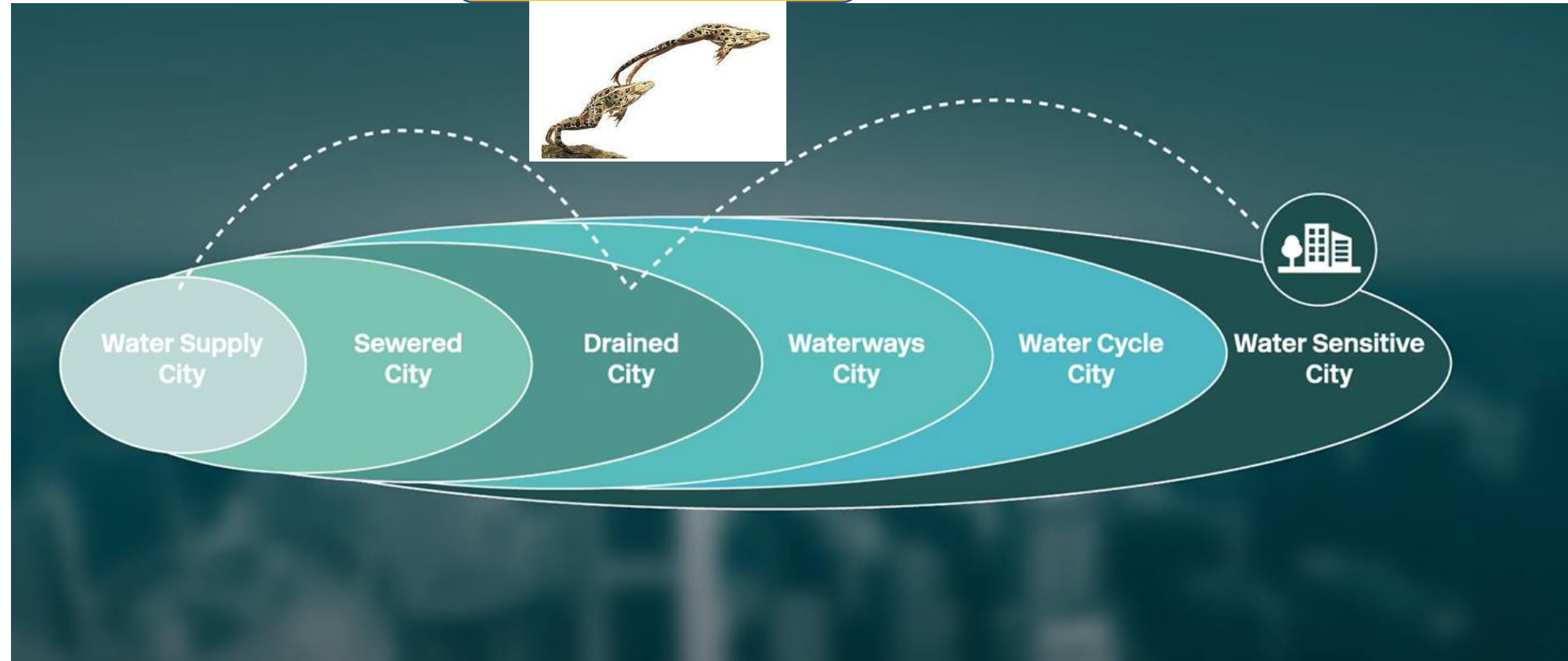
Challenge of innovative policy and practice

Challenge of scale -- implement change at the scale of the transition needed

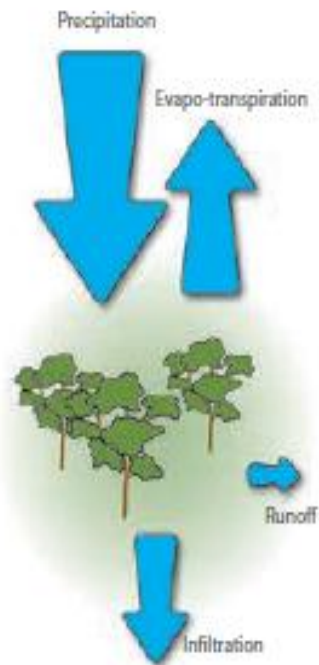
Challenge of capacity – need multipliers in society to implement changes, think and act differently

Water Sensitive City:

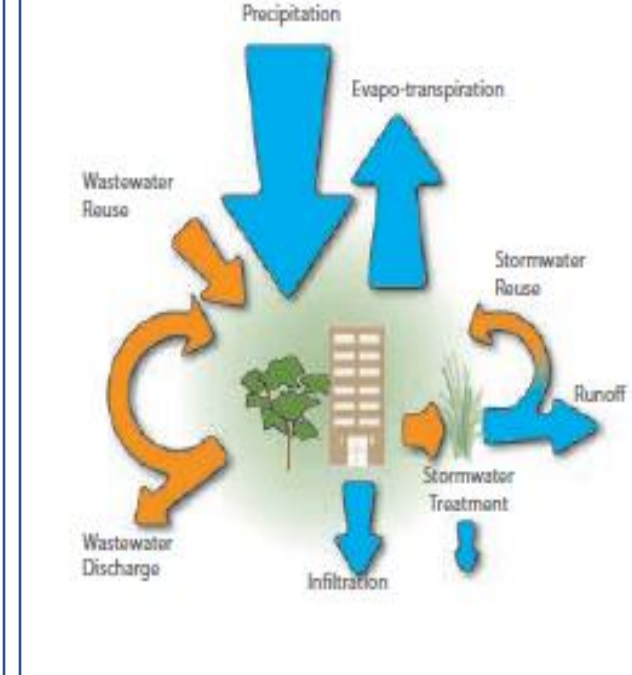
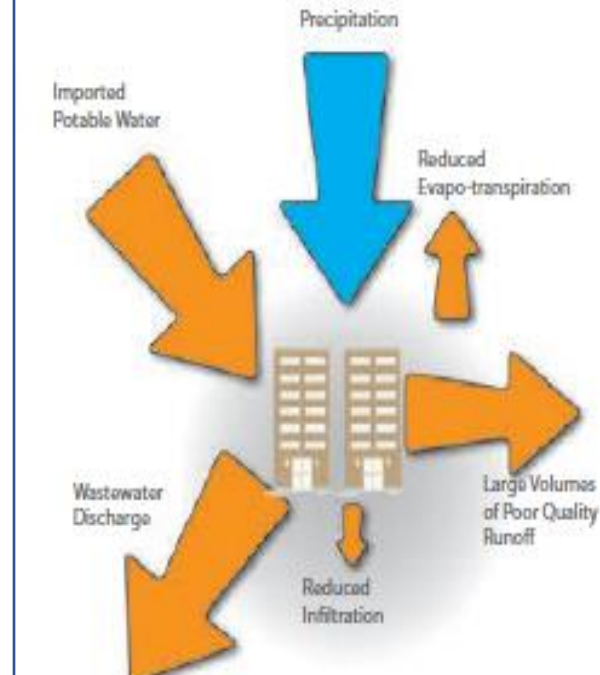
Need to Leapfrog



Natural Water Balance



Urban Water Balance



New Paradigm



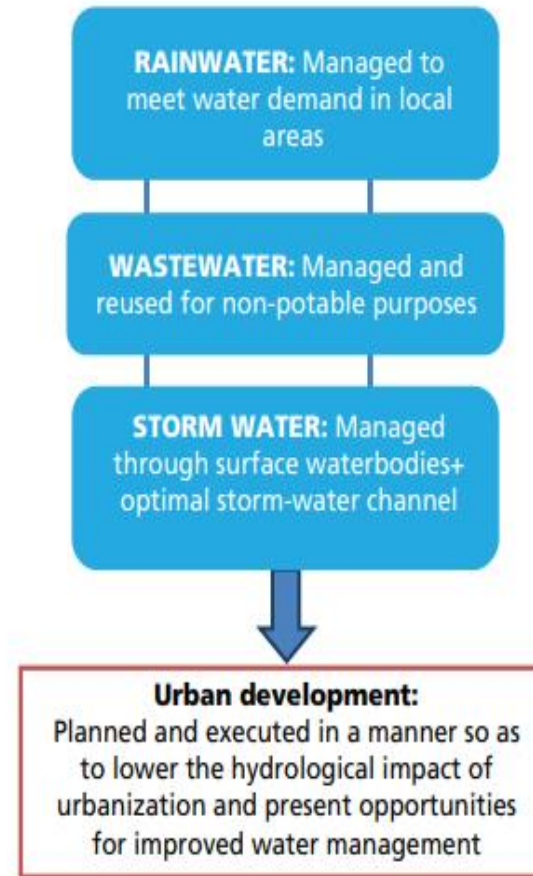
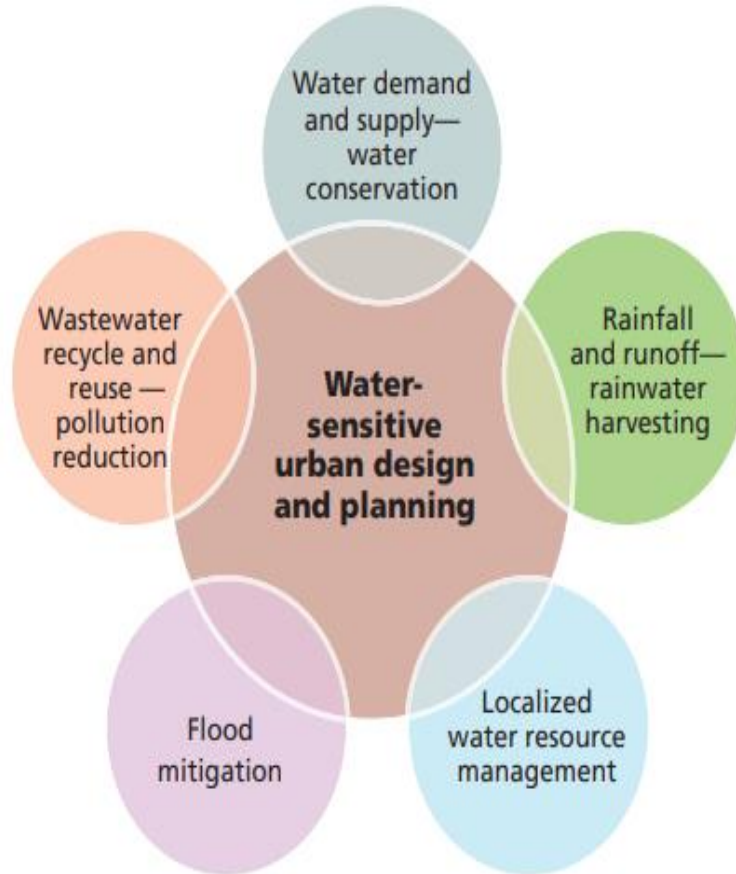
Natural State



Altered State

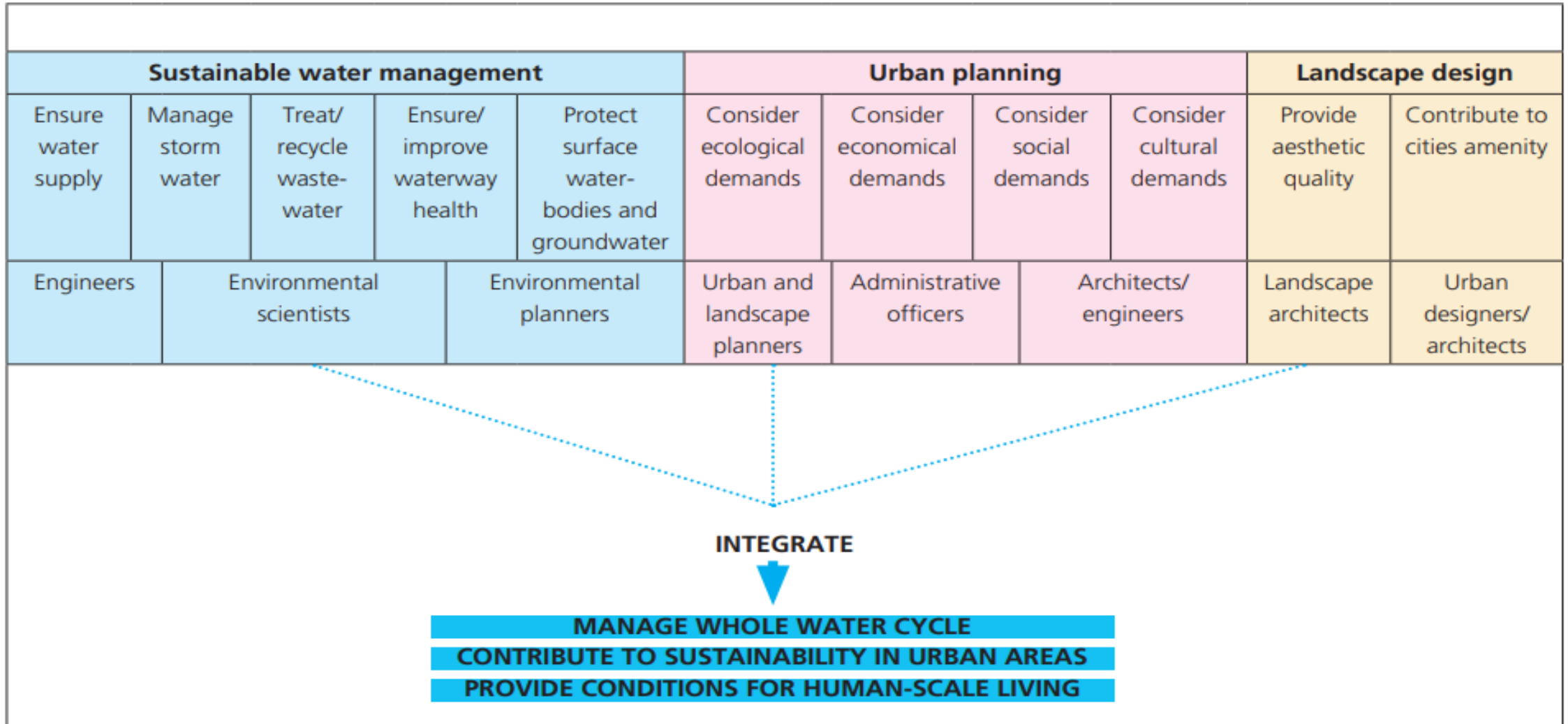
What is Water Sensitive Urban Planning & Designing ?

Approach Integrating Water Cycle Management



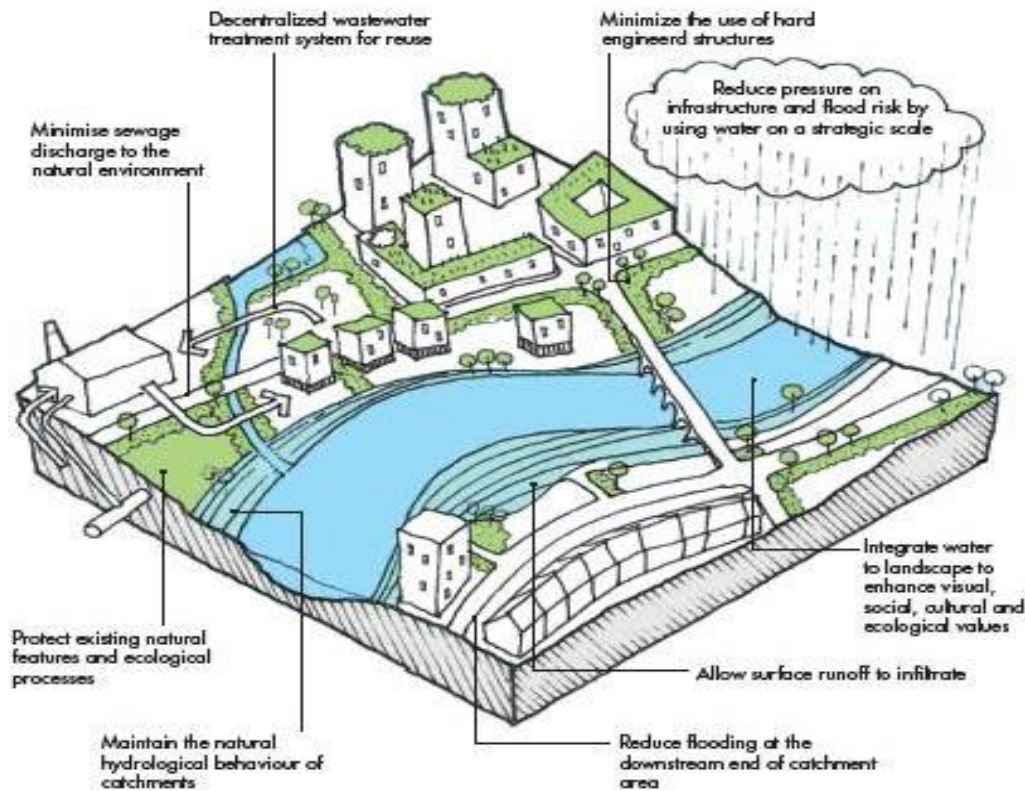
Source: CSE, 2016

WSUDP Components - Overview



WSUDP APPROACH ON DIFFERENT SCALES

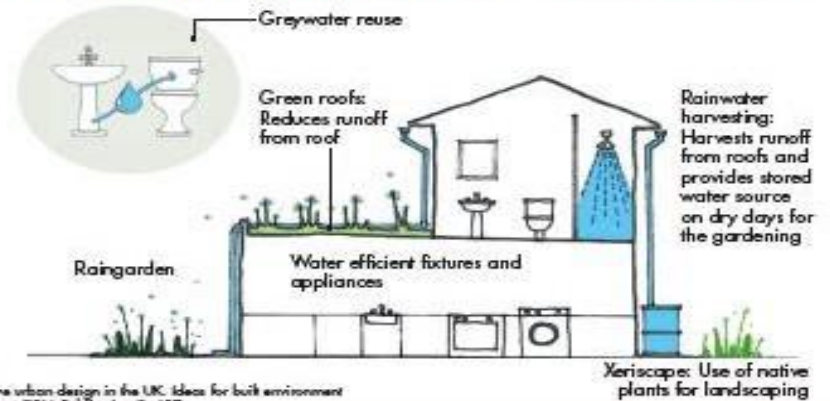
1 WATER-SENSITIVE PLANNING (CITY/ZONAL SCALE)



2 WATER-SENSITIVE DESIGNING (NEIGHBOURHOOD SCALE)

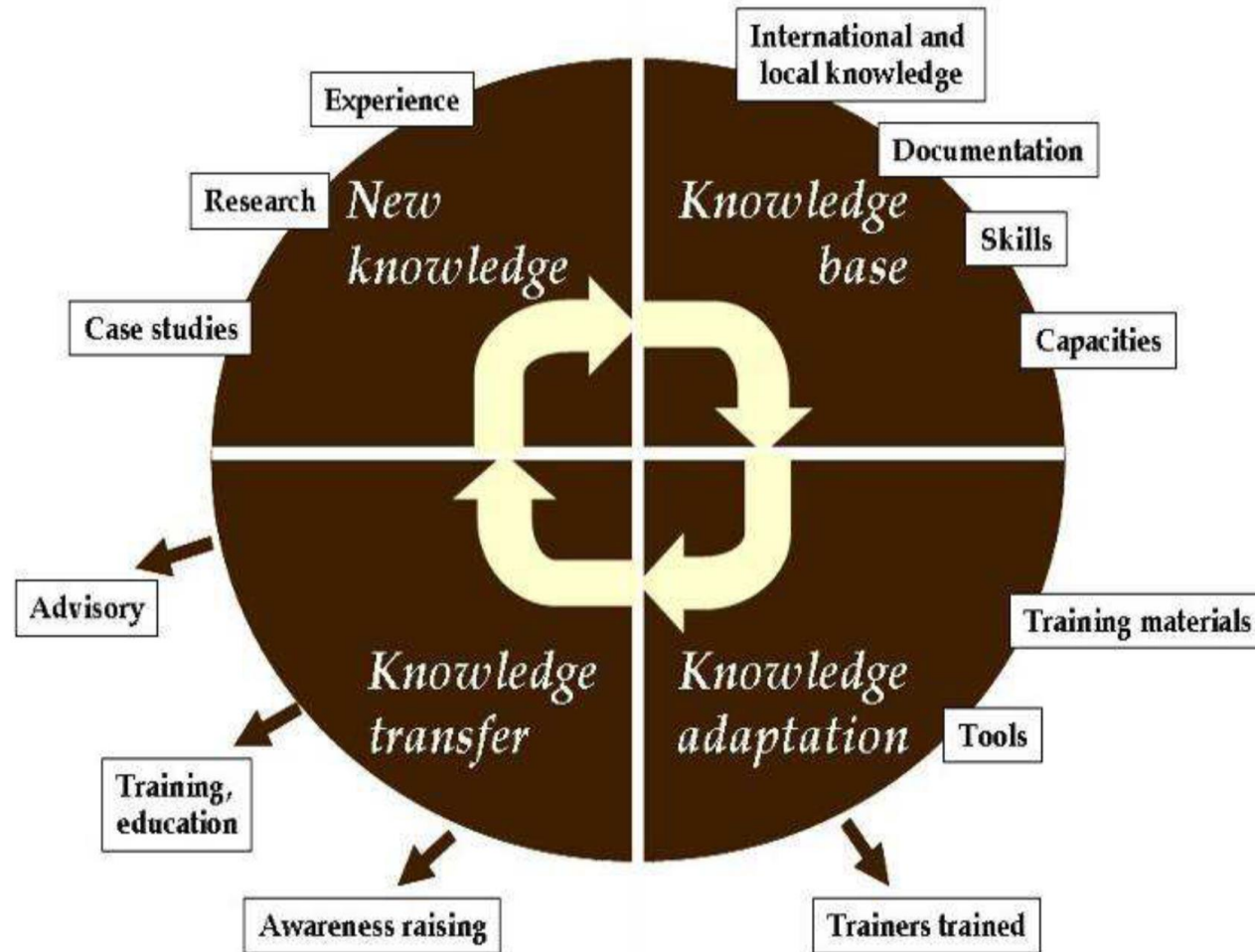


3 WATER-SENSITIVE DESIGNING (INDIVIDUAL SCALE)

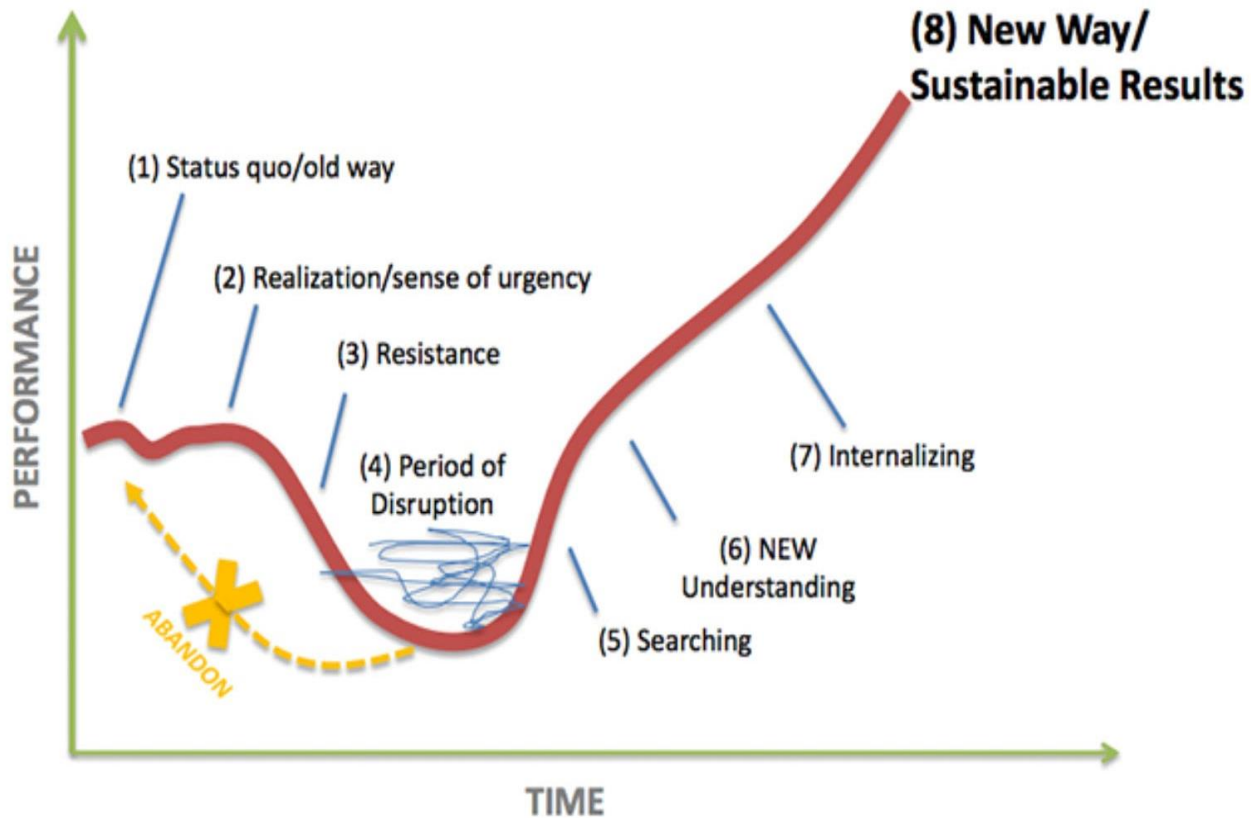


Adapted from: Morgan, C., Berrington, C., Levin, D., Robinson, P., Davis, P., Abbott, J. and Sinkins, P., 2013. Water sensitive urban design in the UK: Ideas for built environment practitioners. CRIA report C, 723; Dudgeon, S., McKay, G., Ison, L. and Shaffer, P., 2010. Planning for SuDS-making it happen. CRIA Publication C, 687

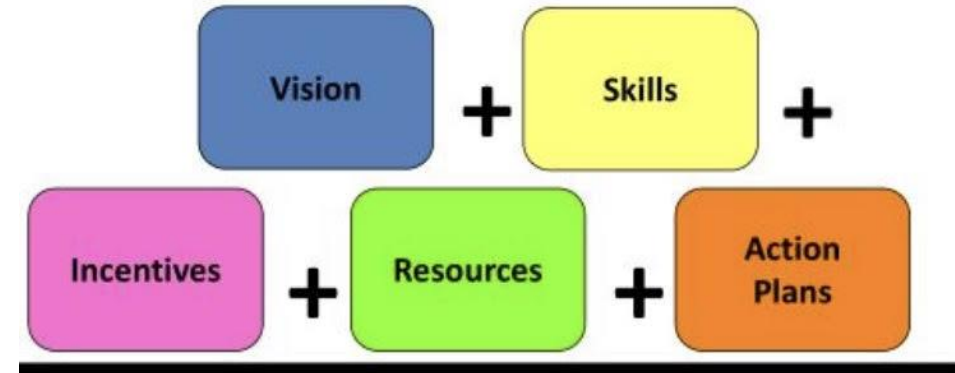
Story of Building Knowledge Base to Creating New Knowledge ..



A story that meaningful change takes time and dedicated effort ...



Managing Complex Change



CHANGE

A Story of Choices before us..



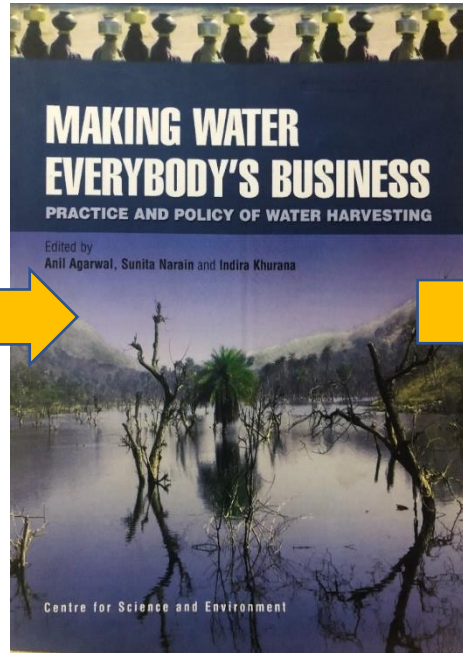
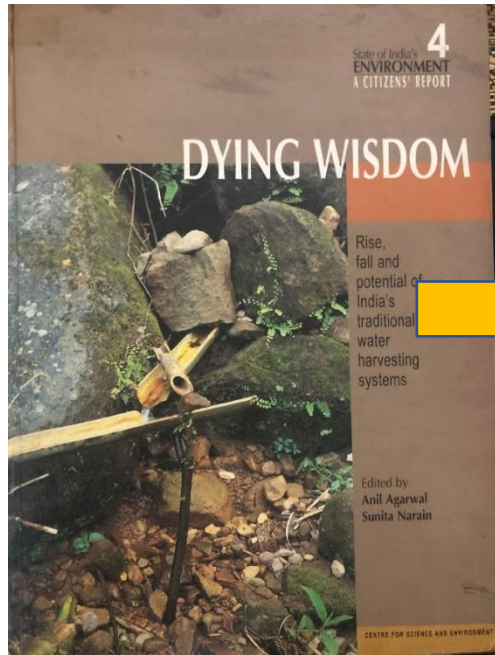
Photo Credit:
K.Vairavamoorthy

.... to a story of putting in people mind in India

CSE Research :Toolkit for Sustainable Water Management



CSE Research :The current paradigm – Water Supply



WSUDP in India

**National Water Mission
focus is on**

‘Catch the Rain’

**Jal Jeevan Mission (JJM)
Jal Shakti Mission (JSA)
Atal Bhujal Mission (ABM)**

**to ensure source sustainability
of water supply through taps
by 2024 to all habitations –
a Govt. of India target.**

25+ years of action research, advocacy / capacity building



Recent updates from India & Next Steps

India : National Programme (s):

- Water Supply
- Water Conservation
Rainwater Harvesting
- Groundwater Recharge
for Sustainability

A Jan Andolan for
Water Conservation

JAL SHAKTI ABHIYAN

1st July, 2019 to 30th November, 2019

is now live!

Share your initiatives, success stories
and short films on water conservation
using #JanShakti4JalShakti

For more information, log on to - www.ddws.gov.in/jalshakti

twitter.com/jalshaktiabhyan

facebook.com/jalshaktiabhyan



Jal Jeevan Mission (JJM)

Jal Shakti Mission (JSA)

Atal Bhujal Mission (ABM)

Making India Water Sensitive

The JSA aims at making
water conservation a
Jan Andolan – a
people's movement
through **asset creation**
and **extensive**
communication.

Jal Shakti Abhiyan

Making Water Conservation a Jan Andolan



Water conservation & rainwater harvesting

Reuse borewell recharge structures

Renovation of traditional & other water bodies/tanks

Intensive afforestation

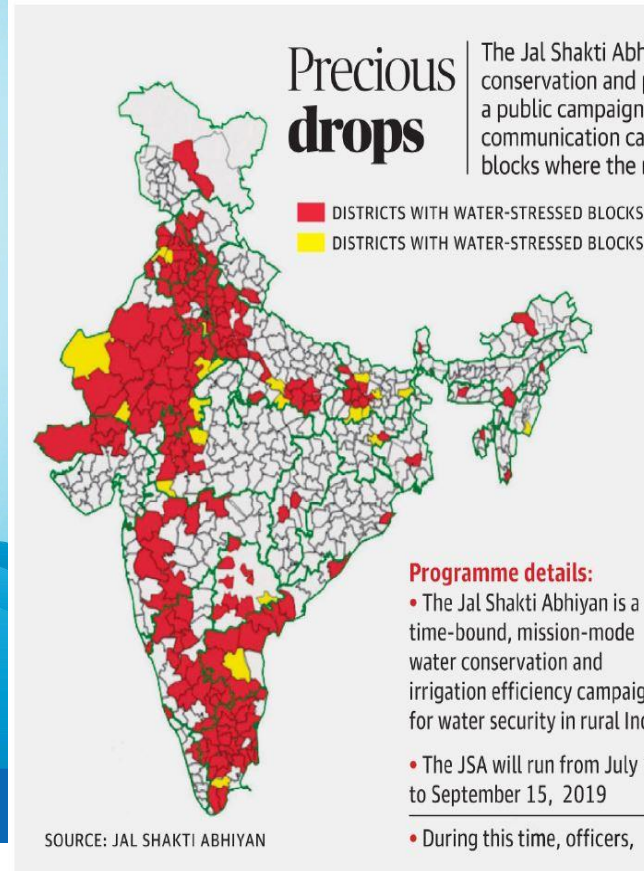
Watershed Development

Focus Areas

High level teams constituted in 256 districts & Technical staff placed in 1,592 blocks to take stock of ground water levels, state of aquifers, ponds & water bodies

Campaign to cover both rural and urban areas

754 water stressed town/cities





Urban Waste Water Reuse

In urban areas, plans/approvals with timebound targets to be developed for waste water reuse for industrial and agriculture purposes. Municipalities to pass by-laws for the separation of grey water and blackwater



Block and District Water Conservation Plan



Scientists and IITs

Scientists and IITs to be mobilised at the national level to support the teams



Krishi Vigyan Kendra Mela



3D Village Contour Mapping

3D Village Contour Maps may be created and made accessible for efficient planning of interventions

**JSA :
Special
Intervention
Areas**

Home / Jal Shakti Abhiyan

Dashboard

Jal Shakti Abhiyan Dashboard

- Dashboard
- Guidelines for Urban Water Conservation
- Partial Modification in AMRUT Guidelines
- Monitoring Framework for Jal Shakti Abhiyan
- Rain Water Harvesting Conservation Manual 2019
- Upload Photo
- Upload Video
- Gallery
- Feedback

↓

Modifications in AMRUT Guidelines

Guidelines for Urban Water Conservation

Rainwater Harvesting & Conservation Manual 2019

Monitoring Framework

↓

Gallery

Upload Photo

Upload Video

Feedback

**Jal Shakti
Abhiyan :
Rollout**

Jal Shakti Abhiyan Dashboard

222919



Total RWH Under Construction

239847



Total RWH Installed

30909



No of Establishments Using Treated
Waste Water

99054240



Total Treated Waste Water Reused (in
MLD)

1470



No of Water Bodies taken up for
Rejuvenation

6050



Total Areas of Water Bodies taken up for
Rejuvenation (in Acres)

7346261



Total No of Saplings Planted

58428372



Total Area Under Green Cover Added (in
m²)

915216



Total No of Events Organized

34005203

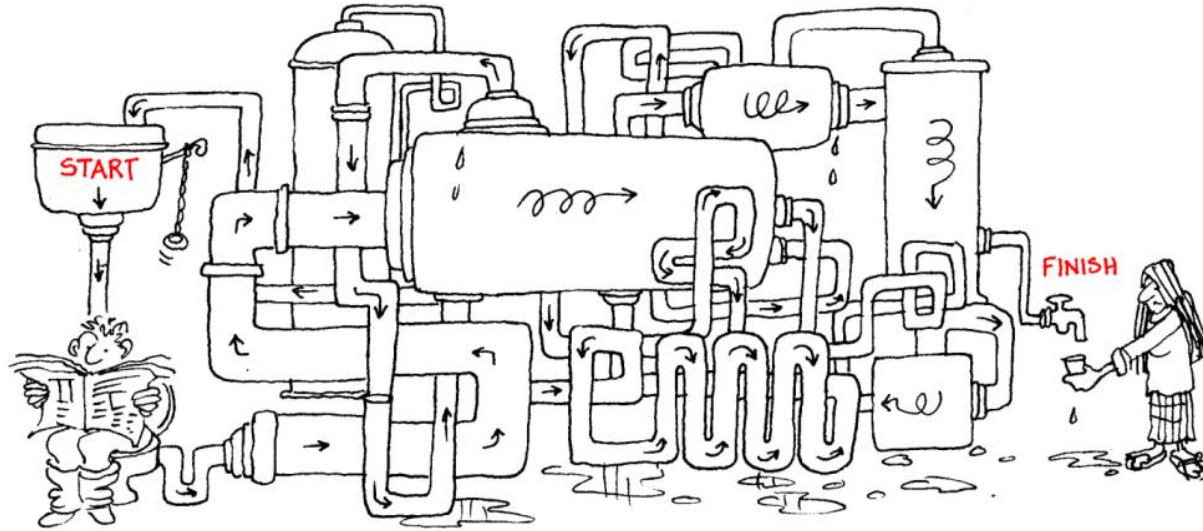


Total Participation (Attendance)

<http://amrut.gov.in/content/Dashboard.php>

*India Water
Sensitive
Cities: –
Dashboard*

Have to find new approaches : **affordable** and **sustainable**



Thank You

Contact email: suresh.Rohilla@iwhq.org