

Overview of current WSUDP initiatives in RSA: Policy, guidelines, projects, Community of Practice

*Virtual Roundtable meeting on 'Mainstreaming Water Sensitive
Design and Planning into City planning in South Africa'*

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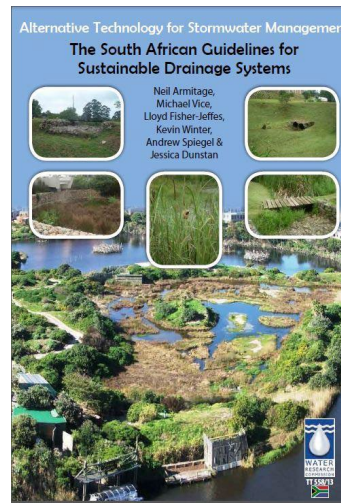
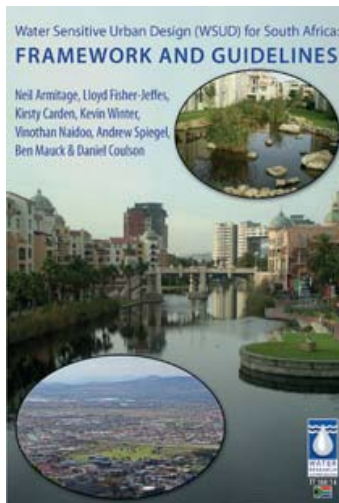
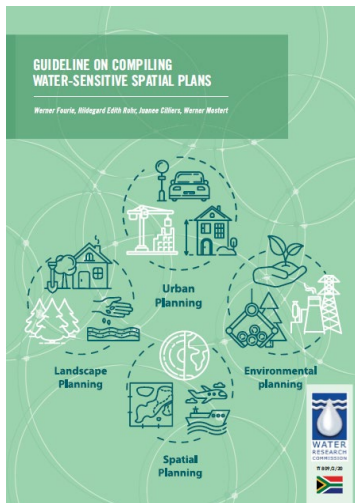
25 August 2021

Outline of presentation

- Water sensitive strategy in South Africa
- Guidelines and policy
- WSD projects
 - *Benchmarking*
 - *Liveable neighbourhoods*
 - *GDARD SuDS implementation*
 - *PaWS*
- WSD Community of Practice
 - *WSUDP training with CSE*
- Ongoing initiatives
 - *Increasing impact*
 - *Roadmaps for implementation of WSD*

*“In its broadest context, WSD encompasses all aspects of integrated urban water cycle management, including **water supply, sewerage and stormwater management**. It represents a **significant shift** in the way water and related environmental resources and water infrastructure are considered in the **planning and design** of cities and towns, at all scales and densities”*

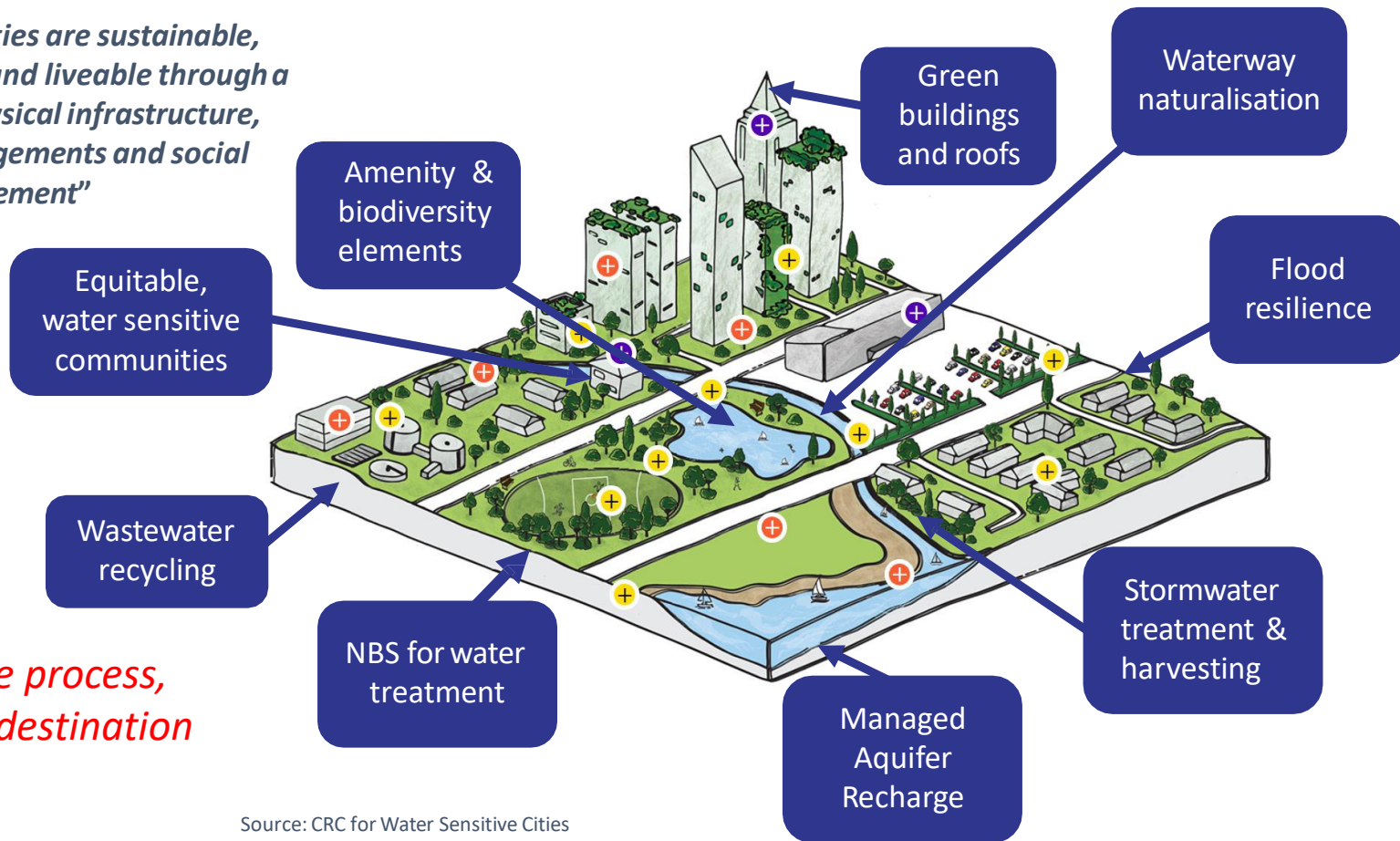
(Fletcher *et al.*, 2014)



A Water Sensitive City



“Water sensitive cities are sustainable, resilient, productive and liveable through a combination of physical infrastructure, governance arrangements and social engagement”

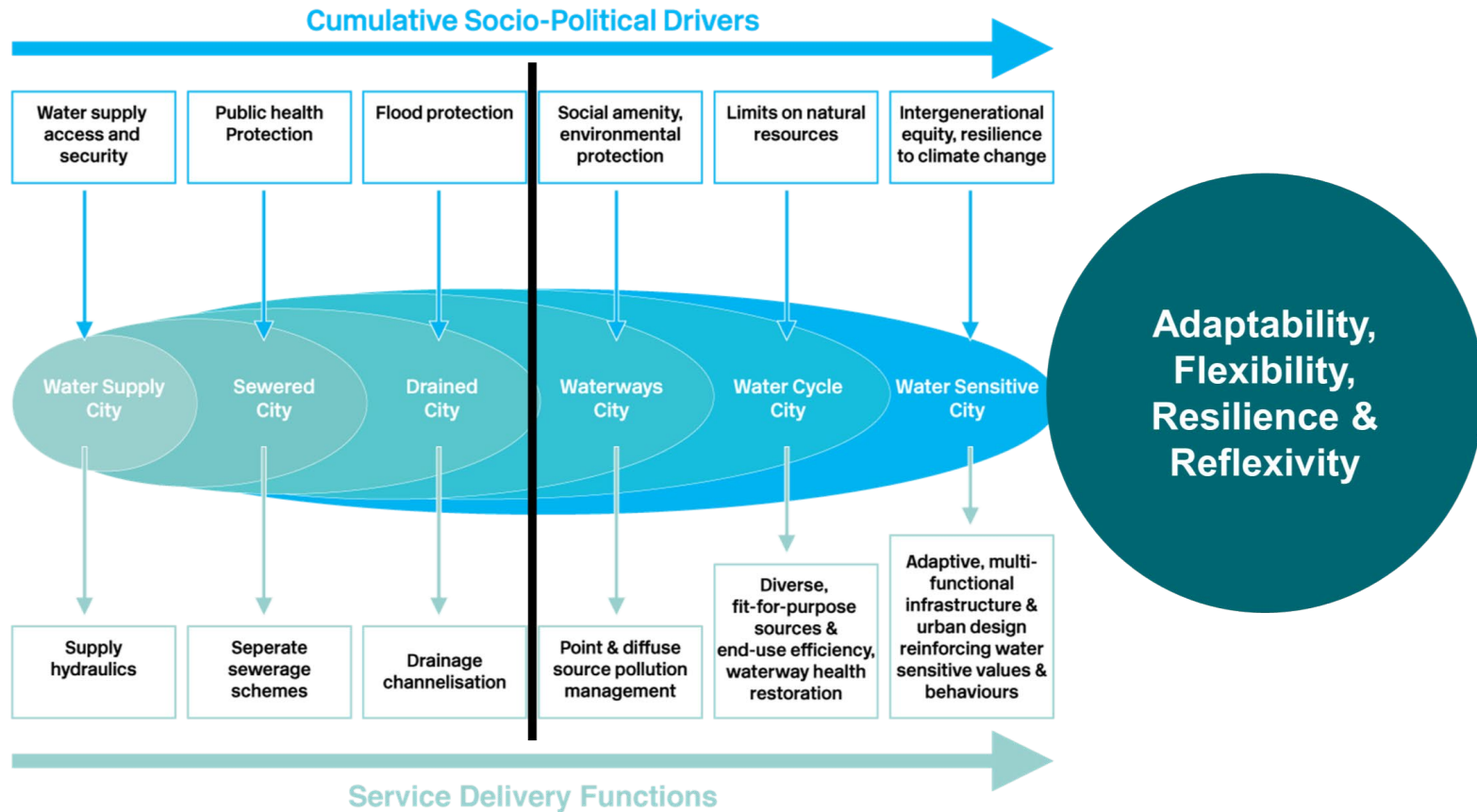


*WSD is the process,
WSC is the destination*

Exclusive large-scale centralised infrastructure and institutions

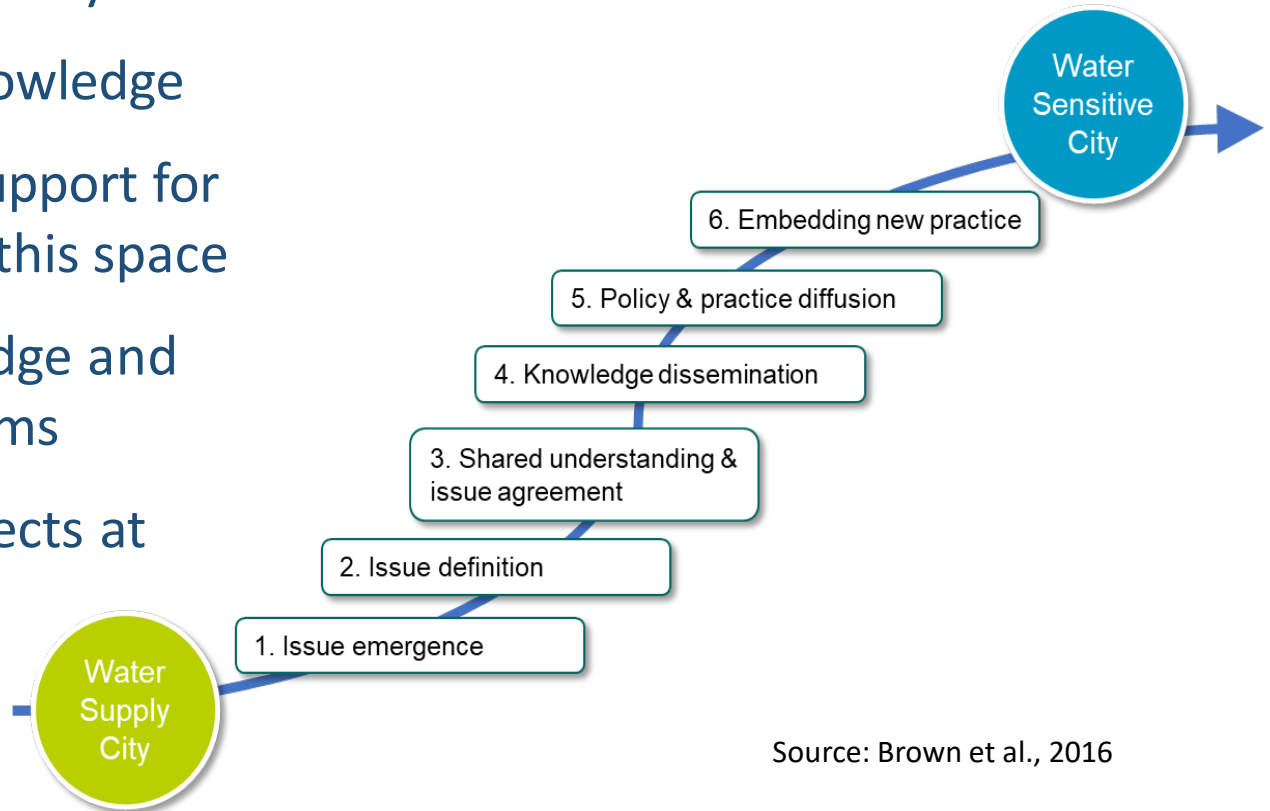


Flexible, integrated, complex infrastructure and institutions



Key focus areas for WSD planning

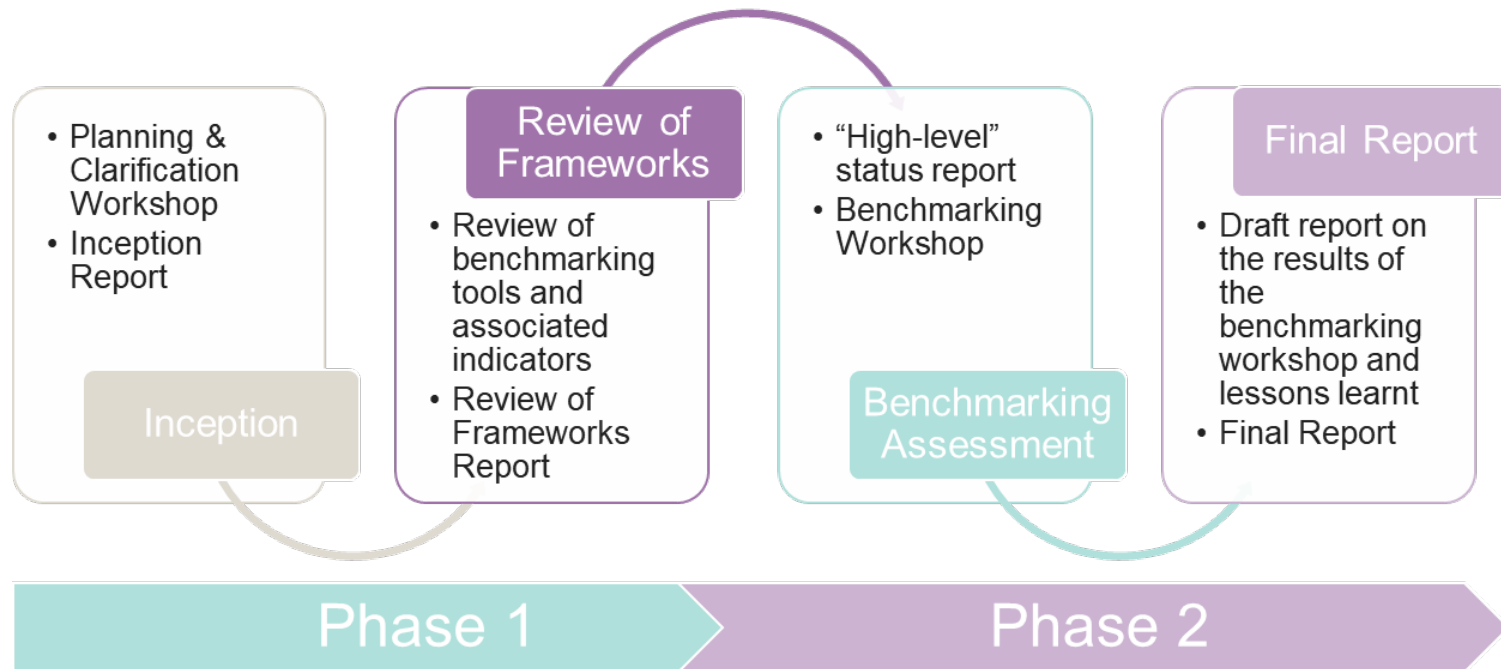
- Incorporation into policy
- Consolidation of knowledge
- Identification and support for champions to drive this space
- Creation of knowledge and data sharing platforms
- Demonstration projects at scale



Ongoing WSD projects – Future Water

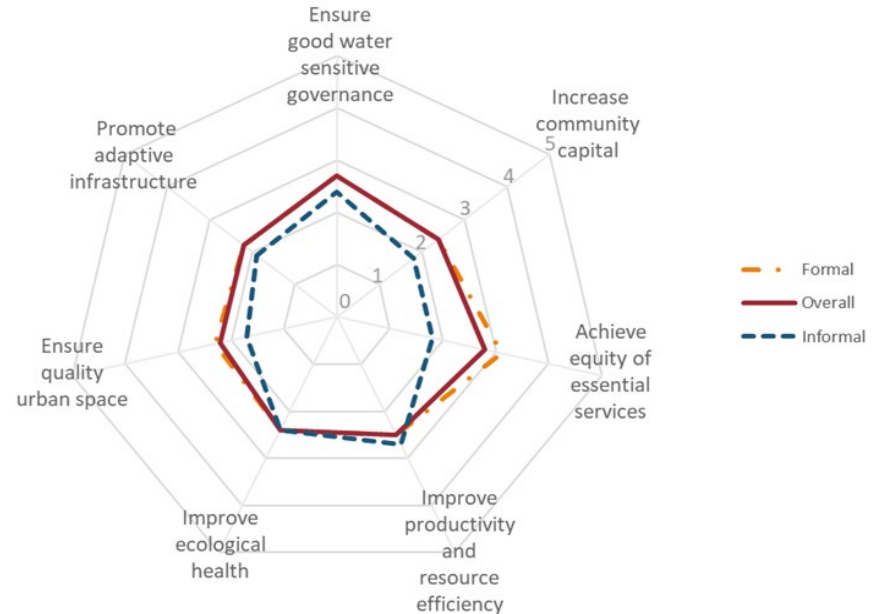
- Liveable neighbourhoods with water as foremost priority
- GDARD SuDS implementation – skills audit and training
- Benchmarking the transition to a water sensitive Cape Town
- City of Johannesburg - Benchmarking indicators for urban water security
- Pathways to water resilient South African cities (PaWS)

Benchmarking indicators for urban water security - CoJ



Benchmarking outcomes - CoJ

- Develop a holistic Water Sensitive City (WSC) vision
- Engage with other sectors/stakeholders on critical water related issues & identify champions
- Align water strategy with other policy - urban design, sustainable development, biodiversity, ecological infrastructure, climate change.
- Improve water literacy and understanding of the water system for CoJ
- Reduce average per capita water usage
- Improve monitoring of water usage, access to sanitation and urban stormwater
- Benchmark at sub-city level & identify specific targets



Key elements – PaWS project

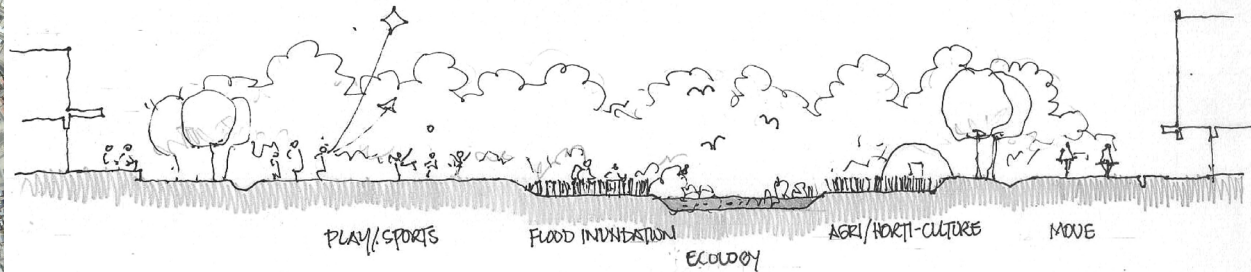
- Nature-based approaches that link storm runoff and wastewater to water supply
- Water sensitive urban design elements and landscape based solutions
- Integration of built water infrastructure with green infrastructure in a decentralised manner
- Physical and institutional integration pathways (planning, policy)



Multifunctional design



Ponds as part of urban landscape, activating 'vacant' land; e.g. blue-green infrastructure as productive, multi-functional landscape spaces



Initial findings - PaWS

What does an enabling governance environment for increased water resilience entail and how can it be supported?

- Coordination and network building remains challenging
- Water and sanitation deficits remain a priority
- Lack of integrated water planning and management approach
- WSD-specific skills and confidence lacking in an approach with limited proof of concept
- Apprehension about practical implementation (asset management and maintenance)

WSD Community of Practice

Phase 1: 2015 – 2019 (5 years)

- Develop and manage a WSD CoP to facilitate the implementation of WSD in South Africa – specifically focused on **knowledge sharing and capacity development**
- WSD / SuDS training workshops, seminars / information sessions and research

Phase 2: 2020 – 2022 (3 years)

- Strengthening the WSD CoP in terms of its online presence
- Developing a stronger narrative on the impacts of the CoP programme **(impact narrative)**

Phase 1 training

- **2015:** 'Sustainable Drainage Systems (SuDS) / Water Sensitive Design (WSD) – implementation, operation and management' (with international expert, Prof Bill Hunt). **550** people for seminar series in Jhb, Tshwane, eThekweni, Cape Town, Buffalo City.
- **2017/2018:** Four training sessions on 'Water Sensitive Urban Design & Planning' (co-hosted with CSE, India). **120** participants in Cape Town, Durban, Port Elizabeth, Pretoria. One lead by UCT in Windhoek, Namibia (**30** participants).
- **2019:** 'Permeable pavements (PICP) and bio-retention cells' (with international expert, Prof Ryan Winston). **430** participants in Jhb, Tshwane, George, Cape Town, Buffalo City, Durban and Pietermaritzburg

Total reach ~1100 people



Phase 2 training

2019: Two training sessions on 'Water Sensitive Urban Design & Planning (with CSE India). **52** participants in Potchefstroom and Modimolle

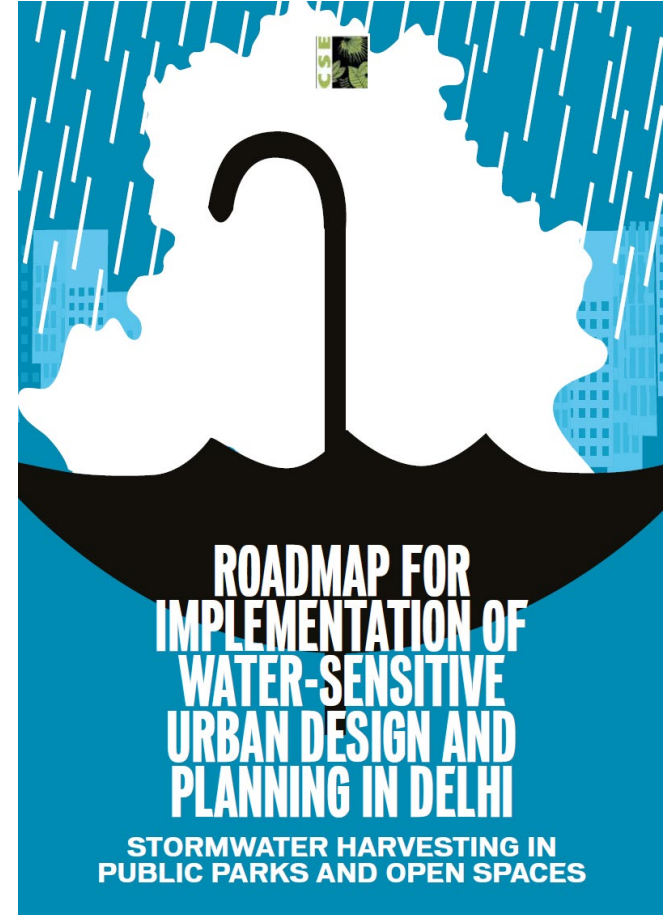
2020: Training seminar on 'Water Sensitive Spatial Planning (co-hosted with i@Consulting). **82** participants in Cape Town.

2020: Online training sessions on 'Water Sensitive Urban Design & Planning' (with CSE India). **44** participants



Ongoing initiatives

- Website development, highlighting impact of training and showcasing best practice
- Targeted training for District Planning processes
- Affiliated research – stormwater harvesting, biofilter performance, permeable pavements etc.
- WSD / Stormwater harvesting roadmaps, together with CSE



COMMUNITY OF PRACTICE

WATER SENSITIVE DESIGN

Facilitating the implementation of Water Sensitive Design in South Africa

What is Water Sensitive Design?

Water Sensitive Design is a process and a philosophy that brings 'sensitivity to water' into urban areas, placing water at the top of the agenda.

It encompasses all aspects of integrated urban water cycle management and aims to create water sensitive cities through physical infrastructure, governance arrangements and social engagement.

[Read more](#)

[WSD in South Africa](#)

What we do

We facilitate the widespread implementation of Water Sensitive Design in South Africa through knowledge sharing, capacity development and stakeholder engagement activities.

Since 2014, we have contributed to a paradigm shift towards water sensitivity through the Community of Practice.

[WSD training](#)