

Global South Water Sensitive Framing

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Frameworks

- **Discourse** – narrative, descriptive

“To talk about something, especially for a long time”

- **Framework** - deliberate selection of certain facts to formulate an analytical position. Strength of a framework is its analytical position and not its descriptive breadth.

“A set of ideas or facts that provide support for something”

Water Sensitive Cities (WSC)

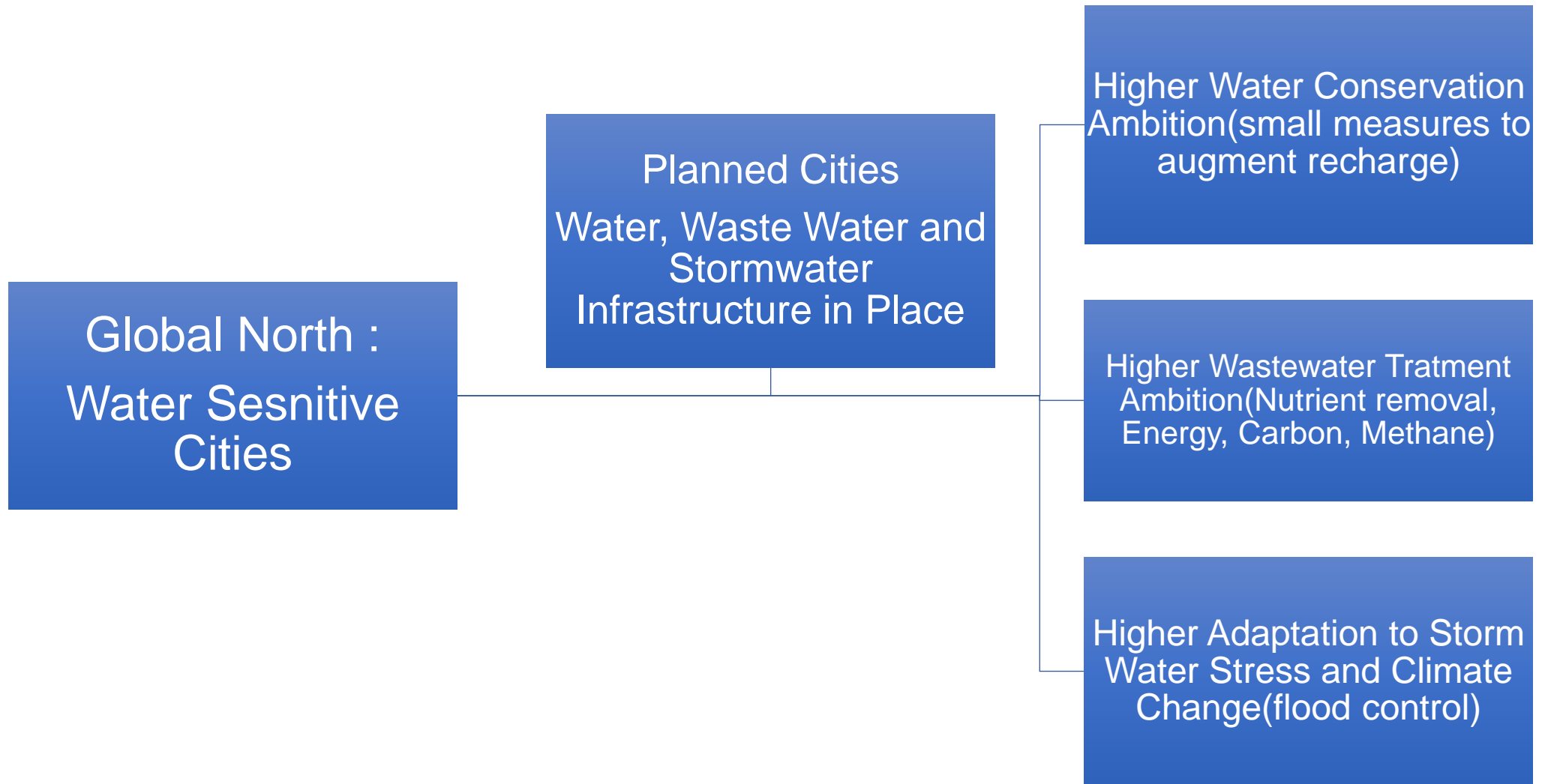
- Is WSC – a Discourse or a Framework?
- Is City Wide Inclusive Sanitation(CWIS) a Framework?
- What does a Framework need to be more effective from an analytical and action perspective?
 - Focused goal
 - Focused scope
 - Focused Indicators

A Global South Water Sensitive Cities Framing – why?

A **normative thinking** dominates the origin of the water sensitive cities discourse/framework emerging from developed north countries. It see population growth, economic development and climate change as driving forces that require us to move **beyond an infrastructure focussed “conventional” approach** of water and waste water management of the last century

While there is nothing wrong in a normative – what comes from this framing – the **goals, interventions/actions** – flowing from the framing must to **be contextualised and defined** for cities/rural areas of global south

Global North Cities : Context and Ambition

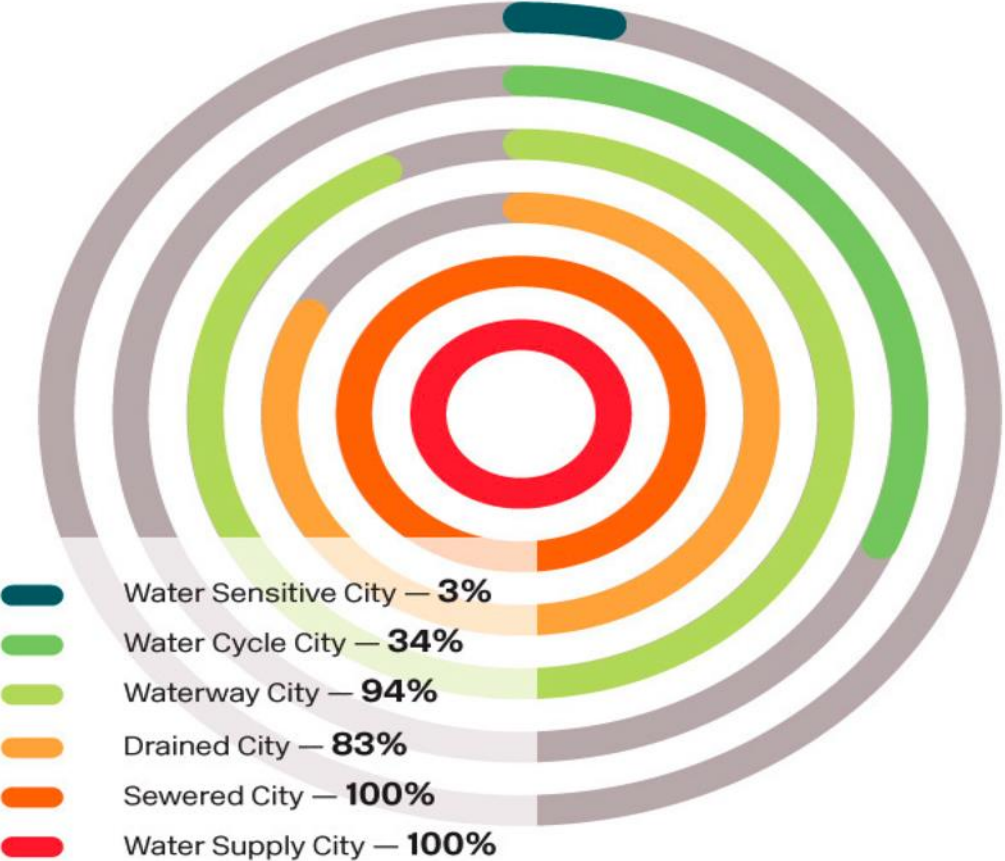


Linear imagination of a Water Sensitive City



Cities of global north are planned cities with basic infrastructure and service outcomes

City-state position



River of Arhaus town : Denmark

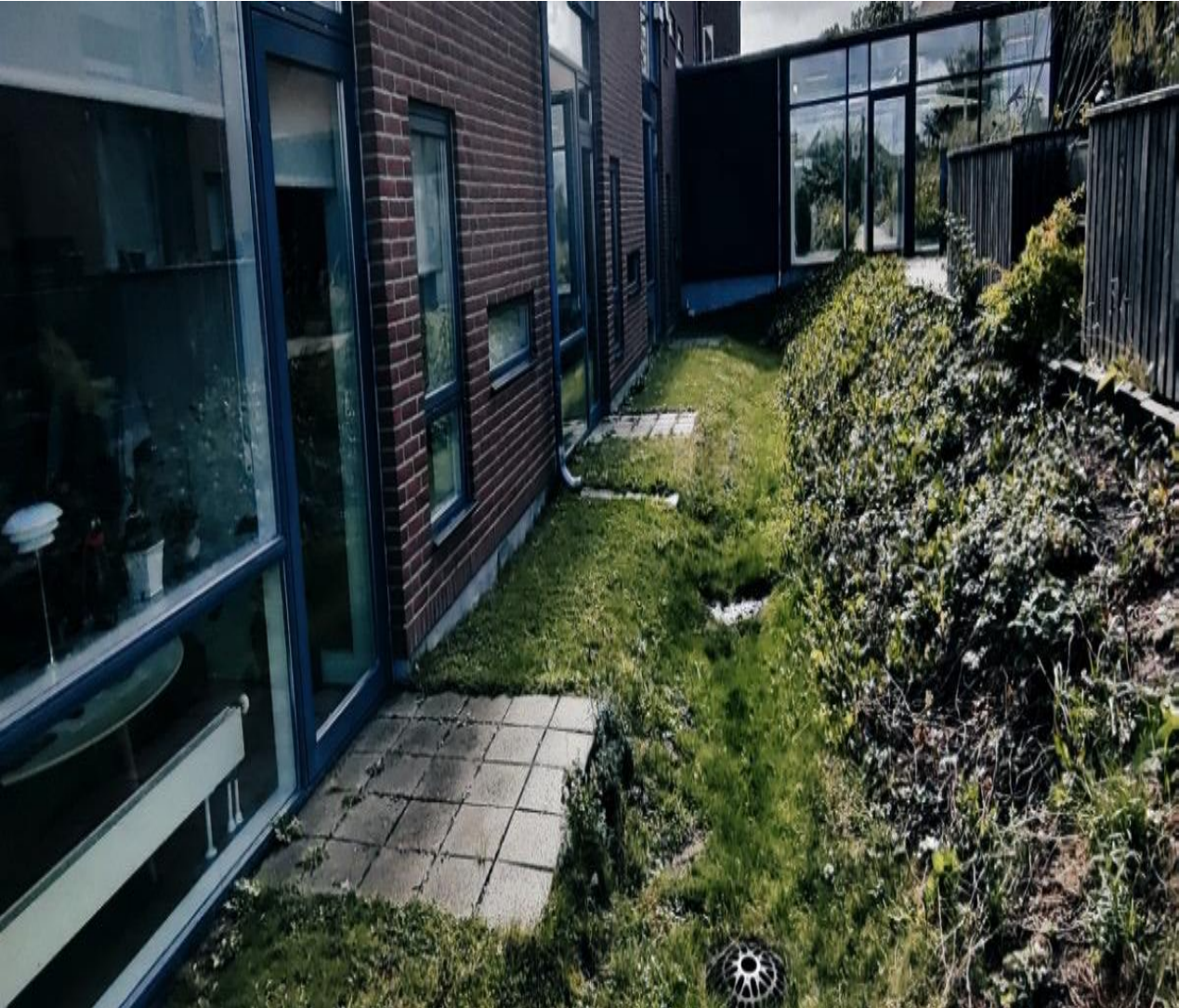


City Layout – Grey infrastructure also added



Middelfart Town: Denmark

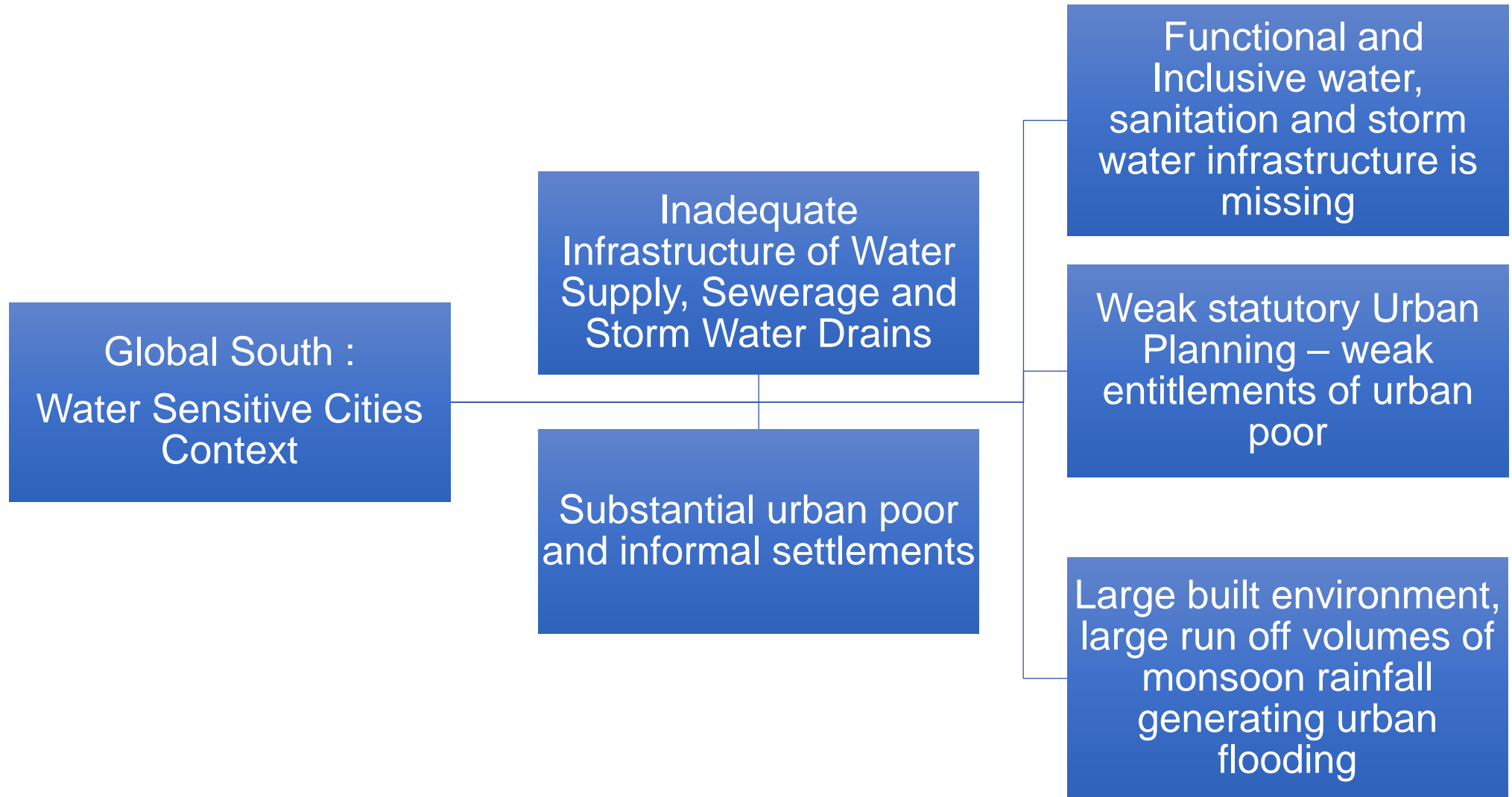
Individual and Neighborhood level WSUDP



Middelfart: Storm water drainage



Global South Cities : Context and Ambition



Dense Informal Settlements

What should be our Aim?





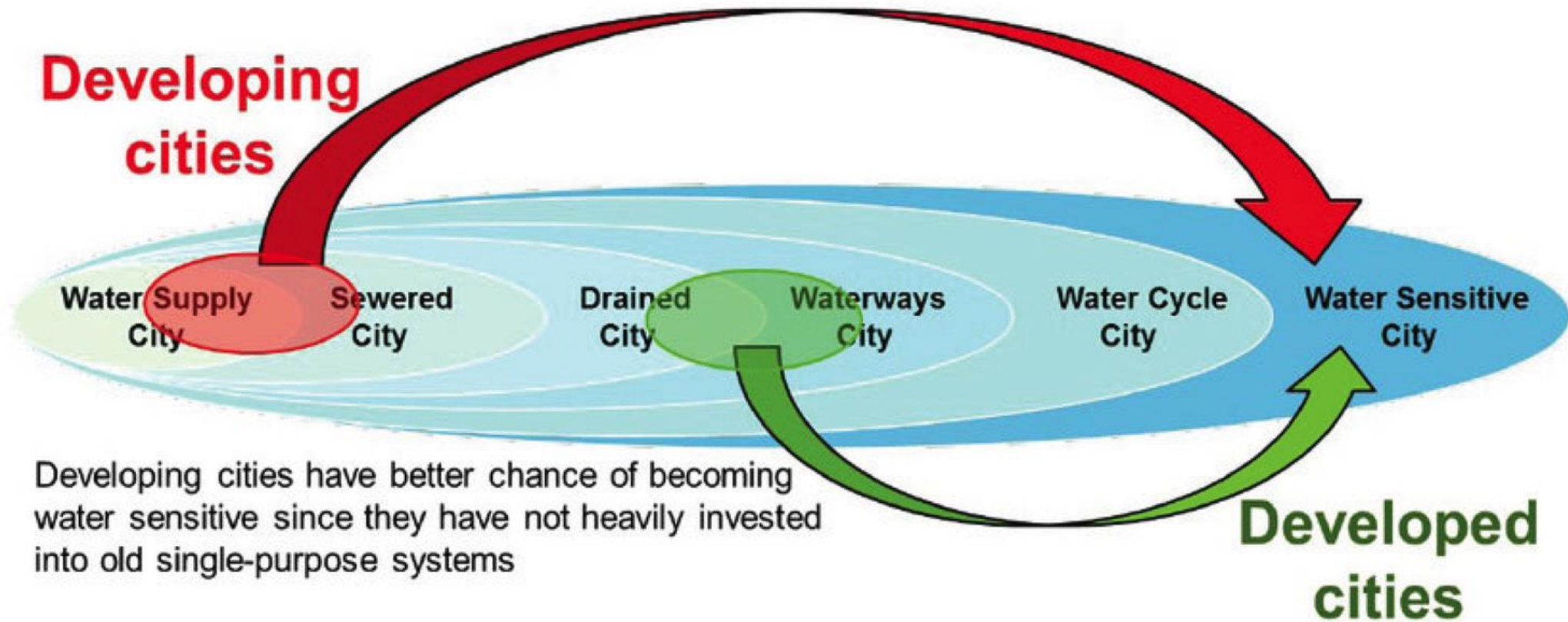
Grey Infrastructure augmentation



Water supply



Leap frogging: Theory vs. Reality



Global South Water Sensitive Cities Framework – its framing

Goal

Cities commit to a “Just and Equitable Access, Use, Re use” of water supply, to sewerage/septage and storm water management.

- ***Inequity*** in urban settlements is recognised as the basis of planning for and designing interventions for water sensitive cities.
- There is no “leap frogging” possible without addressing **infrastructure deficiencies**, specially for the less privileged residents of our cities.
- That **climate change** impacts everyone, yet the less privileged may get impacted more severely. That we need to strengthen urban planning and not look for only design interventions, place making and beautification as outcomes of water sensitive cities.

Guiding Principles

Larger and long term vision(firmly rooted in the equity, rights and justice goals). Not just in projects. Inter city and urban-rural contextualisation of interventions.

Climate change exacerbates already existing water scarcity and flooding risks of cities. Mitigation measures should not further inequity.

“Design” consciously for Equity and Justice. Abandon a normative, techno managerial approach to “design” interventions for water sensitive cities.

Reducing conflicts. Recognise existing and future conflicts around water and waste. Address them to the extent possible in programs and policy.

Improving functionality and efficiency grey and green infrastructure.

Applying the Framework

- **Equity and Inclusion**
 - **Those parts of the city that are densely populated and unplanned**, and cannot conserve water, should not be expected to undertake ground water recharge. They are supplied piped water. They are also served with sewerage/septage infrastructure and services that are affordable and inclusive.
 - **Economically better off settlements** that are usually planned and have the means to undertake recharge measures, do so, and reduce their dependence on piped water supply. They also manage their septage in a decentralised manner, without loading the sewerage system to the extent possible.
- **Habitat, bio diversity and environmental impacts** are also important. However for the purpose of a Water Sensitive Cities Framework, as a planning and design guide for action by urban local bodies, these are too large domains to incorporate into one framework and hence not included.
- **Measuring impact within and beyond the city.** Cities must aim for reducing the urban water and waste water footprint on rural areas in India and elsewhere, where still a large population depends on agriculture, is important purpose of water sensitive cities of global south. Considering most large Indian cities are drawing water from far away rivers and reservoirs, often impacting rural areas and their claim on groundwater and rivers.

Index for Ranking of Cities

Functional Infrastructure and services. Fix all existing non functional water, sanitation and storm water infrastructure and services. To improve efficacy and treatment outcomes.

Functional and Inclusive Infrastructure for unserved areas. Additional grey infrastructure and services will be needed for unserved informal urban settlements, that now dominate the urban landscape of cities of global south.

Substantial Re Use of treated waste water and bio solid. Reduced waste water footprint and Re use of treated bio solids(for agriculture) and treated waste water. This may include all measures for re use and recharge of ground water and prevention of pollution of ground water, lakes and rivers. Inside or outside the city limits.

Mitigating in-situ urban flooding. Conserving rain water wherever possible, as contamination free as possible.

Enhanced storm water drainage dimensions/norms, to address in-situ urban flooding in cities(where built up area has reduced ground water recharge potential) that is witnessed in normal rainfall periods as well as in high intensity climate change induced episodes.

Planning & Design Considerations

- **Water Sensitive Urban Planning and Design.** Statutory city development plans (Regional and City Master Plans) need to have water sensitive city planning with clear aims and objectives.
- **Fixing responsibility and accountability.** Water supply, storm water and waste water management (including septage management) cannot be entirely left to the market
- **Both grey and green infrastructure provisioning is needed.**
- **Adapting to Climate change.** City grey infrastructure needs to plan for both floods and droughts, that impact our cities with intensification of water cycle as a result of climate change.
- **Look beyond urban “place making” and “beautification”.**
- **Monitor city level gains.** Electricity pumping cost of transporting water and waste water over hundreds of kilometers to the cities and to treatment plants – reduction.

How to Visualise Water Sensitive Cities in Global South context

- Type of City – large metro, state capital, Tiers of cities – what city you choose
 - Whole city or parts of it?
- Only storm water management?
- Unplanned and/or informal settlements as a priority WSC framing?
 - Or just projects within a city?

Water Sensitive Cities Framing: Sangam Vihar Research Aims

Water : What is the existing water availability status and what needs to be done to improve it to make it water secure

Sanitation : What is the existing status of sanitation systems, what are the challenges on an ongoing sewerage systems augmentation

Storm water : What is the existing status fo storm water drainage, what is the flooding threat and what is the potential for in-situ rain water conservation/drainage augmentation

Research Objectives

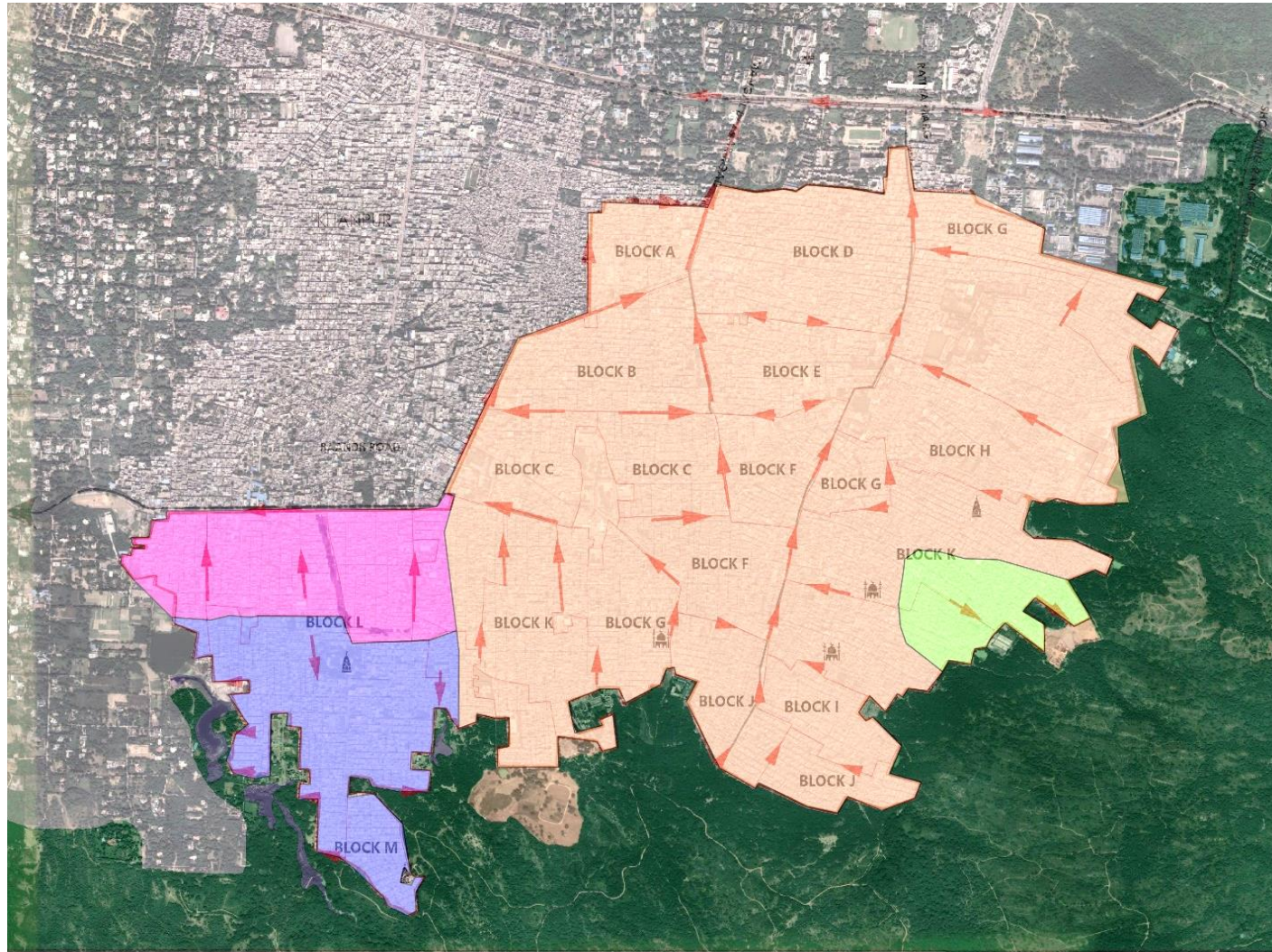
1. Understanding the water, used water and storm water challenges of dense unplanned urban settlements

- Develop a disaggregated understanding of urban water, sanitation and storm water management challenges, with a focus on dense unplanned settlements of large metro cities. This is largely missing in Urban Planning – in the Regional Plans, the City Master Plans (Delhi Master Plan 2041) and even Zonal Plans, besides Development Plans.
- The study analyses the existing status of water supply, sanitation and storm water issues in Sangam Vihar, based on a household survey. Bringing in community perspective alongwith an assessment of the potential success or otherwise, of the ongoing sanitation/sewerage infrastructure being installed in Sangam Vihar.

Research Objectives

2. Contribute to the Global South water sensitive cities framing

- The research is a follow up of the CSE framing of a global south water sensitive cities that defined what water sensitive cities should be in the context of global south. To test the framework developed by CSE for strengthening the case for moving away from a normative and techno managerial application of what a water sensitive city can be.
- The study explores **if retrofitting solutions for water supply, sanitation and storm water, is possible for dense unplanned settlements**. If not then what is required in terms of grey infrastructure.
 - Build a case for the more planned parts of a city must compliment water conservation, waste water treatment and re use measures.
 - The need for cross subsidizing through both grey infrastructure augmentation. And governance measures, under the larger aim of equity and justice.



Storm watershed and Sewerage shed:
Umra Anees will share the findings tomorrow

Thank You

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