

A POLICY ARRANGEMENT ANALYSIS FOR WATER SENSITIVE URBAN DESIGN

BENCHMARKING BEST PRACTICES FROM MELBOURNE
AND DHAKA

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WATER SENSITIVE URBAN DESIGN (WSUD)

Integrates the water cycle with the urban environment

Pillars of WSUD (Wong and Brown, 2009)

- Cities providing ecosystem services
- Cities as water supply catchments
- Cities comprising of water sensitive communities

SOCIETAL AND SCIENTIFIC RELEVANCE

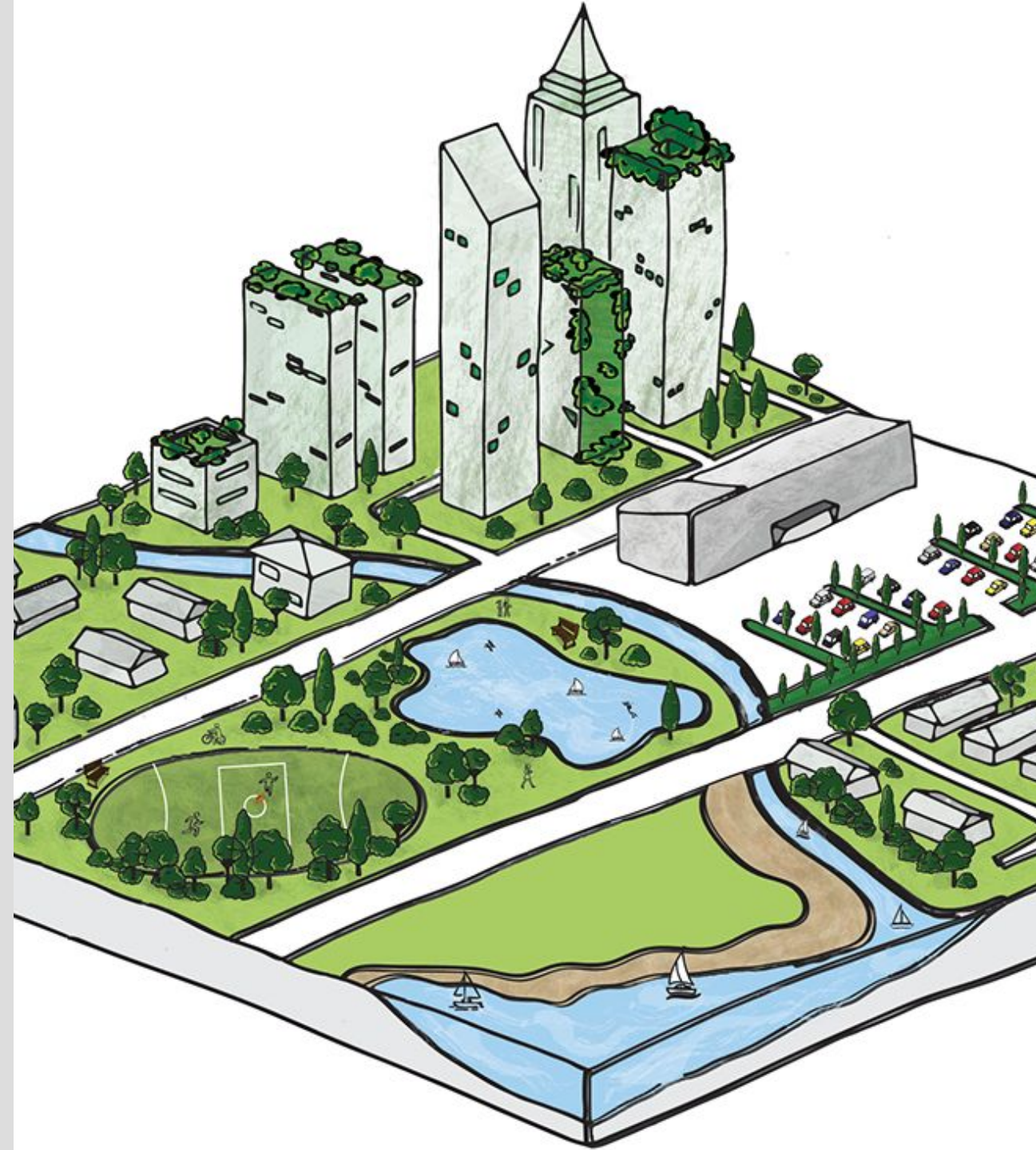
Research on water management has been and is technocentric

Although policies exist – none for framework on WSUD and exact application

AIM: bridge the gap between policy and implementation

Why urban areas?

- Host dense population
- Reduced levels of infiltration
- Future – cities are only growing



RESEARCH QUESTIONS

What framework can be created for the governance elements necessary for the effective approach and implementation of WSUD in a city?

1. *What is the policy arrangement of Water Sensitive Urban Design in this urban area?*
2. *What are the barriers to the implementation of water sensitive urban management in the city?*
3. *What are the facilitators of water sensitivity governance in this urban area?*

Governance: economic, social, political and administrative systems that control decision making around water resource management and development, formally and informally (Enqvist & Ziervogl, 2019)



CASE STUDIES

Australia: Melbourne

Forefront of WSUD

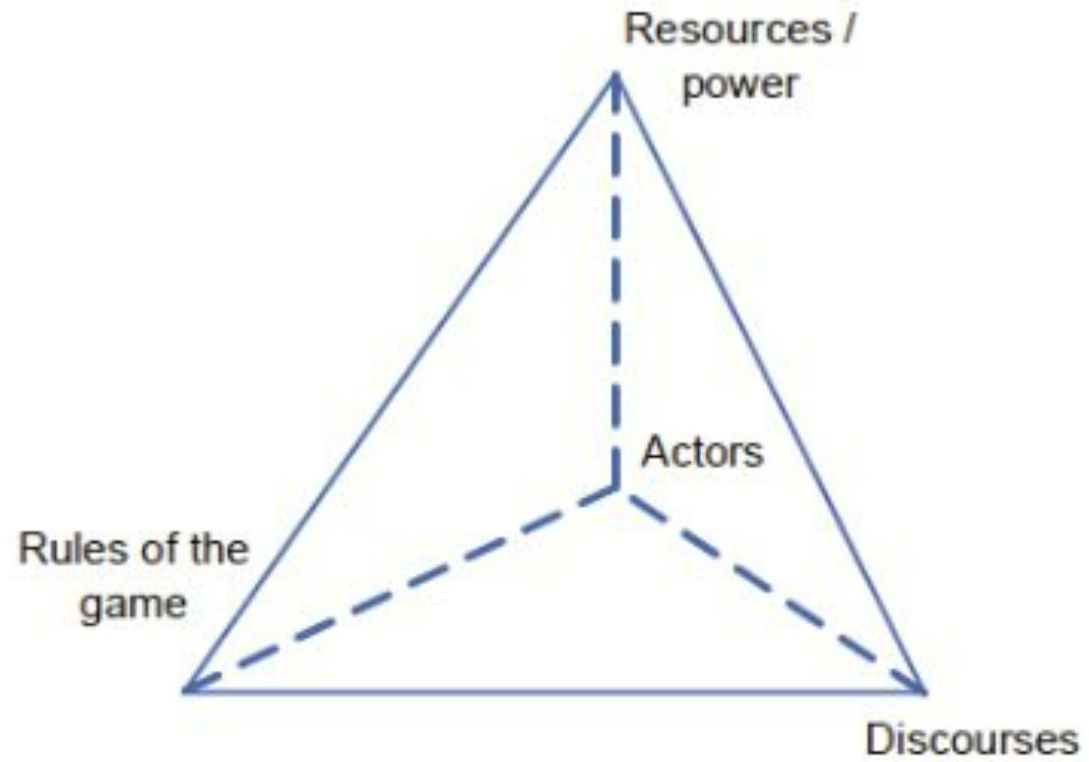
Vision for WSUD emerges in many policies such as Living Victoria Ministerial Advisory Report (framework for transforming water management)

Bangladesh: Dhaka

Most vulnerable country to cyclones and 6th to floods

Planning for extreme weather events since the 1960's: Master Plans have improved over the years

POLICY
ANALYSIS
APPROACH
(PAA)



Conditions and barriers for WSUD

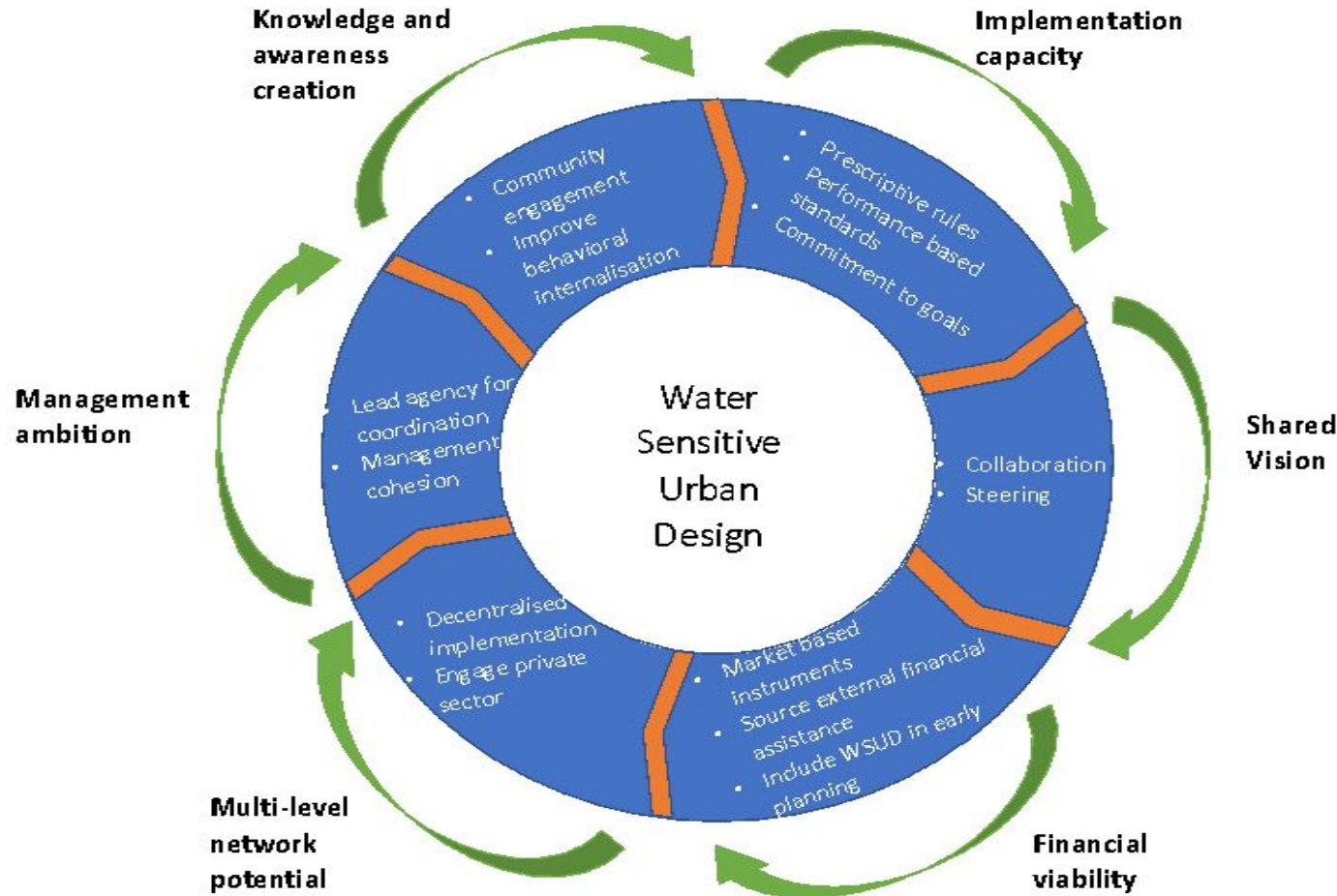
RESULTS MELBOURNE

Dimension	Conditions	Barriers
Actors	Collaboration	Blurred division of responsibility Limited interaction between actors
Resources	Continued research (National Water Commission) Water quality offset schemes Economic regulators Dispersed funding responsibility Encouraging investment from private sector	Low levels of autonomy: government regulation limiting local governance funding
Rules of the game	Acts and legally binding agreements Coordinated procedures Information sharing	Lack of statewide policy challenge for policy navigation Lack of mandatory policy for developers Fragmentation among sectors (water sector and engineering)
Discourses	Same problem definitions Creativity and experimentation Knowledge sharing	Lack of governmental steering (due to no statutory framework)

Conditions and barriers for WSUD

RESULTS DHAKA

Dimension	Conditions	Barriers
Actors	International actors (World Bank, UN) NGO's and CBO: innovation and community responsibility	Blurred division of responsibility (39+ in water management) Lack of steering by government Vague patterns of interaction
Resources	Continued research and knowledge Donors and international investment	Limited state funds Limited access to technology
Rules of the game	Acts and legally binding agreements (none for WSUD but for IWRM) - BCCSAP Public participation in policy drafting and review	Complex actor networks Lack of accountability & transparency from government Mistrust of government by local community
Discourses	Policies with clearly defined objectives (NWMP) Commitment to international agreements Creativity and experimentation in approaches	Fragmentation in applying solutions Varied objectives among actors Lack of steering from government



FRAMEWORK FOR WSUD

Framework to be applied flexibly and incorporate contextual variability

'Best is the enemy of good' – Voltaire
 Thus we aim for good/improved practice

QUESTIONS

- Are water quality offset schemes beneficial for the larger goal of sustainability?
- Should there be a mandatory framework for WSUD at state level?
- What other challenges do you foresee in applying the framework in a real life context?



*OPERATIONALIZATION OF THE
POLICY ARRANGEMENT
APPROACH*

DIMENSIONS	VARIABLES	INDICATORS (EXAMPLES)
ACTORS	ACTOR CONSTELLATIONS (INTERNAL AND EXTERNAL ACTORS)	KEY POLITICAL ACTORS
	INTERACTION PATTERS	HOW ACTORS INTERACT AMONG THEMSELVES
	COALITIONS AND OPPOSITIONS	COOPERATION LEVELS/OPPOSITIONS
RESOURCES/POWER	KNOWLEDGE CAPACITY AND DEVELOPMENT	SKILLS AND CAPABILITIES OF ACTORS
	FINANCIAL CAPACITY	BUDGETS SUBSIDIES
	TECHNOLOGICAL CAPACITY	CAPABILITY TO HAVE ACCESS TO EXPERIMENT WITH TECHNOLOGY
RULES OF THE GAME	FORMAL RULES	BINDING LAWS, LEGISLATION, POLICY PROCEDURES
	INFORMAL RULES	INFORMAL PROCEDURES: ORGANIZATIONAL, POLITICAL CULTURE, ROUTINES OF ACTION
DISCOURSES	DIAGNOSTIC FRAMES	HOW PROBLEMS ARE PERCEIVED, HOW CAUSAL FACTORS ARE PERCEIVED
	OBJECTIVES	SHARED VIEWS ON PROBLEM, LEADING TO COORDINATION AND INTEGRATION
	MOTIVATIONAL FRAMES	DRIVING FACTORS WHICH LEAD TO ACTION (RESPONSIBILITY AND SHARED POLITICAL URGENCY)