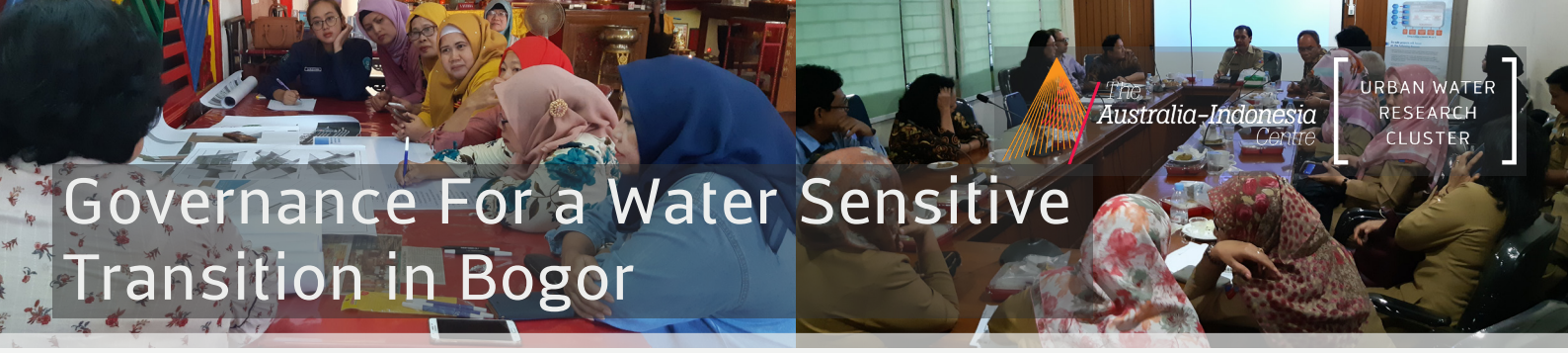
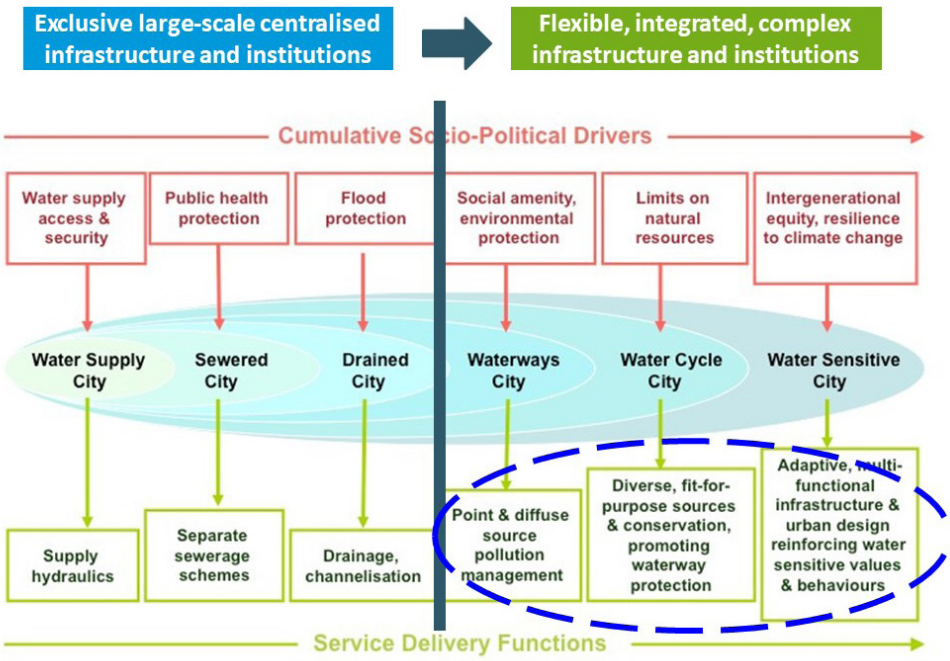


Governance For a Water Sensitive Transition in Bogor

Transforming urban water practices to more sustainable systems is widely regarded as a water governance challenge, which involves working within and across the different social, political and economic frameworks where urban water management takes place. Achieving a Water Sensitive City requires a rethink in the way urban water governance is conceived of and delivered – moving beyond traditional single-service delivery models, to incorporate more flexible, integrated and complex institutional designs to respond to and accommodate multi-functional and adaptive infrastructures.

As a result, broad urban water governance transitions involve conceptualising change as a coordinated, multi-staged set of processes. To work towards a common vision, in this case a water sensitive Bogor in 2045, those processes must involve engaging:

- with multiple actors
- across multiple scales (e.g. local and catchment), and
- across multiple sectors (e.g. planning, environment, health, agricultural, urban design, among others).



Governance in a water sensitive city would involve establishing core structures (e.g. regulatory and policy frameworks) and processes (e.g. leadership and facilitated platforms for interaction). These can be used to guide and steer the formal and informal engagement and cooperation among government and non-government actors involved in implementation, service delivery partnerships and/or research collaborations.

Our governance research

To generate guidance for future water governance reforms the UWC's governance research team examined the historical and contemporary governance structures and processes of urban water systems in Greater Bogor. This involved a series of focus group discussions and research interviews with key urban decision-makers to gain insight into the current water system structure and into how the system works, to identify opportunities to improve current interventions.

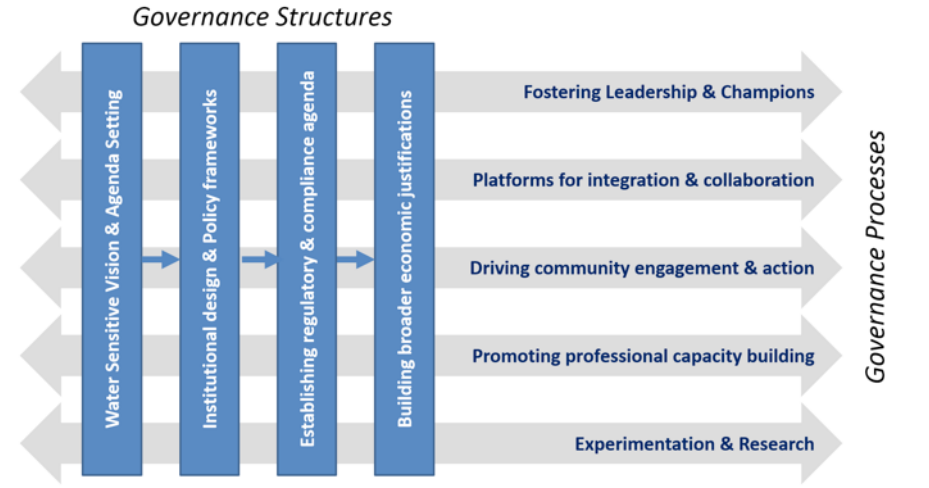
The Transition Dynamics Framework was used to guide group discussions and interviews to unpack the key structures and processes at play. This is a useful approach when examining contemporary practices while also identifying structural, agency and learning opportunities for future governance interventions.

Transition Dynamics Framework: domains of change[1]

Domain of change	Actors	Bridges	Knowledge	Projects	Tools
	Key networks of individuals (vertically and horizontally) Engage both leaders and practice champions Support multiple networks including technical, policy and multi-agency networks	(semi) formalised organisations, structures and processes for coordination and alignment Aim to bring science, industry, policy and capacity building efforts together. Foster social capital	Conduct research into the physical and social sciences to generate localised, contextualised knowledge to inform decision-making. Translate to capacity building efforts	Generate multiple experiments (at varying scales) to build technical feasibility and confidence. Frame experiments as dedicated learning opportunities Generate profile and connect to science	Generate, disseminate and train practitioners on best-practice guidelines (e.g. engaging with community, co-design, flood modelling, etc.) Create legislative amendments, appropriate regulatory modes

[1]Modified from Brown, R., Farrelly, M.A. and Loorbach, D. (2013) Actors working the institutions in Sustainability Transitions: The Case of Melbourne's Stormwater Management, Global Environmental Change 23(4), pp. 701-718; Brown, R., Rogers, B.C., and Werbeloff, L. (2016) Moving toward Water Sensitive Cities: A guidance manual for strategists and policy makers. Melbourne, Australia: Cooperative Research Centre for Water Sensitive Cities.

Working towards achieving 'water sensitive' governance



Adapted from: Farrelly, M.A., Brown, R.R and Rijke, J. (2012) Exploring operational attributes of governance for change. Proceedings of the 7th International Water Sensitive Urban Design Conference, February 21-23 2012 Melbourne, Australia

Urban water governance in Indonesia is complex and traditionally fragmented on a number of levels: bureaucratically, socially, politically and spatially. Combined, this poses significant challenges to key institutional structures and dynamics. Furthermore, it is important to recognise that there is no one-size-fits-all approach to governance or institutional design, rather these need to relate to the relevant social, environmental and development contexts.

The recommendations outlined here (and further developed in the full report) are derived following reflections arising from numerous detailed discussions with urban water practitioners. The recommendations are delineated as 'governance structures' – which may be relatively stable over longer timeframes but remain subject to ongoing reinterpretation through 'governance process' – which can adapt more readily to changing circumstances. It should be noted that the recommendations of our governance research are designed to be interrelated and not stand alone.

Recommendations For Water Sensitive Governance

Water Sensitive Vision & Agenda Setting

A significant first step in achieving water sensitive governance involves generating a collective vision across all actors and multiple scales, regarding what is possible/desired for Greater Bogor and also in Bogor Regency and Bogor City individually. Efforts in this space are underway, but require alignment.

The process of creating the vision is, in itself, an important intervention in bringing a broad range of actors together to build a common understanding of what is desired and what is possible within a water sensitive scenario. A major component of establishing this vision would be to align core political, organisational and community agendas, and to inform an agreed-upon trans-disciplinary, co-designed research agenda to guide future developments. Generating 'water sensitive insights' like this would involve experts in law, policy, geography, sociology, community development, engineering, economics, urban design and other fields.

Institutional Design & Policy Frameworks

While conventional command-and-control approaches will continue to suit certain scenarios (e.g. regulating groundwater extraction or controlling effluent discharge into waterways), looking ahead to water sensitive governance requires a more cooperative and coordinated approach to institutional design. The contemporary water governance system is relatively decentralised and has multiple centres of decision making. While this approach is supported, it is further recommended that the roles and responsibilities amongst the multitude of organisations (including the provincial government) which play a part in the functioning of Greater Bogor's urban water systems be further clarified. For example, having the provincial government engage in discussions with city and regency governments prior to key decision-making (e.g. issuing permits).

In addition, it is recommended that:

- the formal and informal organisational routines, practices and assumptions used to shape current and emerging water initiatives be studied to identify possible future interventions and redesigns.
- actors promote engagement and cooperation (formal and informal) within geographic areas of mutual interest across relevant organisations (e.g. through MoUs or project partnership agreements) – here it is wise to utilise and adapt (where necessary) existing arrangements.

> "The challenge for us is that the one who really understands and knows exactly the condition is in the city/regency; yet, the permit and regulations are issued under the provincial government. There should be consultation with the city or regency government prior to determining the outcome of these permit applications, and also notification of permits issued by the provincial government to facilitate our decision-making."
> [Bogor City representative]

Establishing Regulatory & Compliance Agendas

At present, the national water legislation does not provide a contemporary framework for guiding decision-making authorities towards delivering more water sensitive systems. National leadership for advancing more sustainable urban water servicing is an important element in generating more formalised authority for decentralised decision-makers, freeing them to act to create change. Aspirational targets are useful for illustrating what water sensitive initiatives can deliver, but to be effective in driving on-ground action, the targets should be locally-relevant, realistic, clear, measurable and scientifically-derived. Targets should also be guided and monitored by dedicated, trained staff.

Building Broader Awareness Of The Multiple Benefits Of Green Infrastructure

Diverse and integrated urban water systems can deliver multiple benefits to communities and their environments. However, our research found there is limited awareness and appreciation of the many social and environmental functions and services provided by multifunctional green infrastructure (such as rainwater tanks and raingardens). Awareness of and the financial value of these outcomes needs to be embedded across the multiple layers of decision-making, for example, in national and regional strategic priorities, planning requirements and within the various budget allocations.

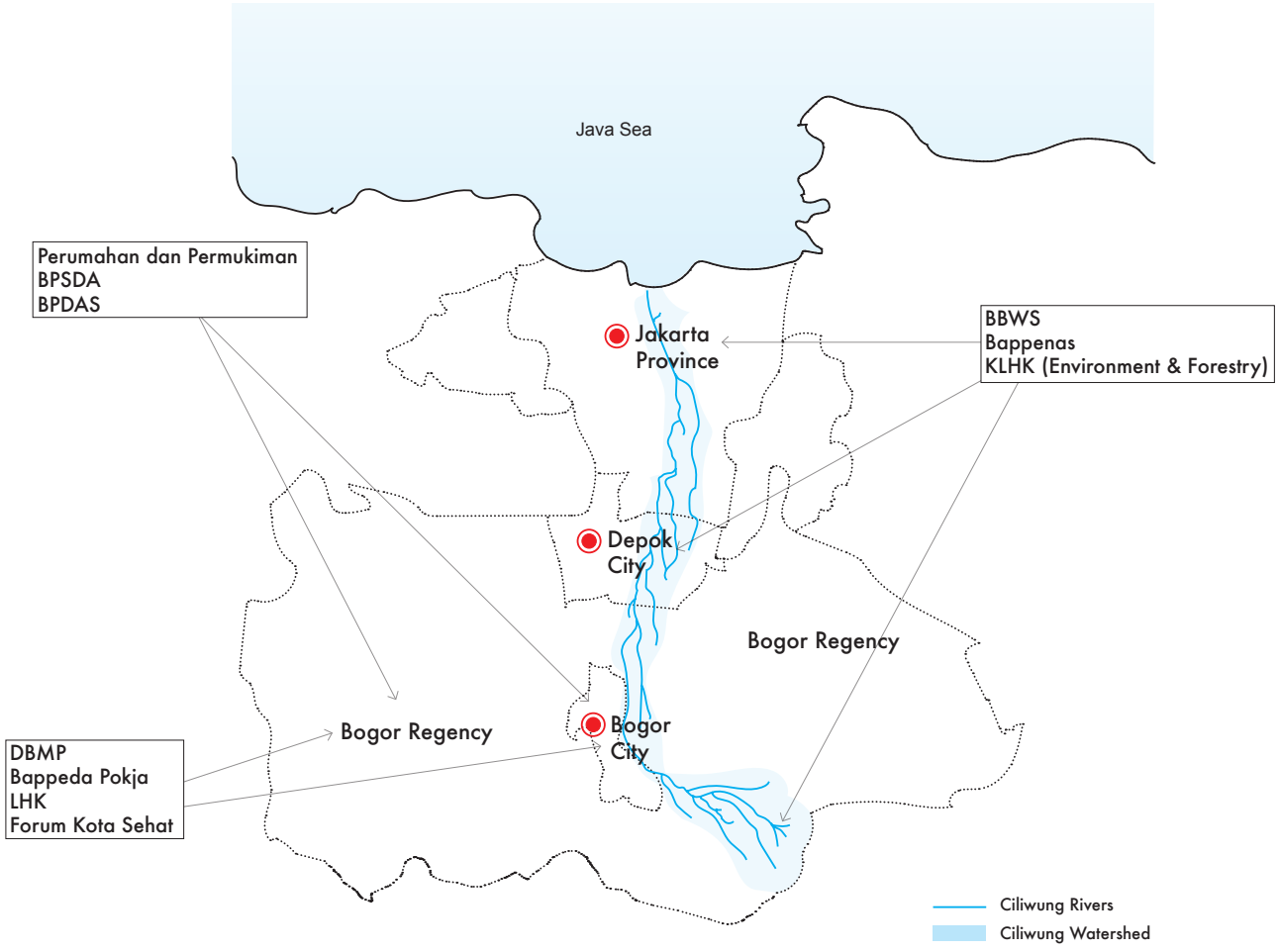
Fostering Leadership And 'Water Champions'

Over the course of the research, water leaders were located in all decision-making hierarchies, from community leaders through to city, regency, provincial and national governments. Fostering distributed leadership, i.e. shared, collective and extended leadership practice, is important for building capacity for change and needs to be reinforcing and aligned towards a common agenda. Within and across organisations, executive level support is key to distributing decision-making authority for 'advancing water sensitive practices'. There are also key roles for 'water champions' within various organisations. If supported appropriately, these champions could drive internal organisational change and foster inter-organisational relationships and on-ground delivery of alternative systems.

Platforms For Administrative Integration And Collaboration

The research workshops themselves were a useful platform for bringing together multiple actors involved in urban water decision-making in a structured but open discussion regarding current and future water practices. Looking ahead, similar coordinated, facilitated, formal and informal processes are required, whereby actors from different organisations can come together to shape innovative and alternative water practices. Here decision-makers from planning, urban development and water resources, among others, should be involved in tailored and facilitated discussions to share data, build trust and ultimately build (and improve) decision-making capacities. When designed well, this can generate networks capable of promoting a cohesive plan for change within future urban developments.

Many excellent platforms already exist, but may require a reconfiguration around roles, responsibilities and working towards a common catchment-wide agenda. For example, initiating an 'integrated water forum' could be instrumental in beginning the conversation to develop an alternative water narrative and vision. In addition, identifying and designing demonstrations can be opportunities to work collaboratively to a common end-point and can bring multiple actors together to share experience and insights.



Deep engagement among many water-related actors during a facilitated Focus Group in Kota Bogor (July 2018)

Capacity Building

Having multiple actors (individuals and organisations) involved in delivering a water sensitive vision for Greater Bogor will require a dedicated and tailored capacity building program. This will require building on existing opportunities and developing new knowledge-sharing programs (e.g. learning alliances, study tours, seminars and workshops). These should be made for different scales and actors, and be aimed at shaping their professional knowledge in relation to delivering water sensitive technologies and practices.

Driving Community Engagement & Action

The research identified many excellent initiatives already underway across the diverse local community structures within Greater Bogor that could be leveraged and expanded (e.g. environmentally-friendly communities and eco-villages). These programs warrant further study to understand how best to continue raising community awareness and gaining individual and community commitments to 'cleaner, healthier environs' (by maintaining drainage channels and septic tanks, paying for piped drinking water, reducing rubbish output, etc.) which are key components of driving water sensitive change. Careful attention is required to ensure there is broad community participation, not just community elites. Indeed, the Pulo Geulis community co-design process developed by UWC researchers is a key example of fostering and building community capacity.

Our research has also revealed there is great scope for key decision-making actors to engage with and promote the growing work of existing water-based social entrepreneurs through co-designing future projects and programs aimed at improving community equity within water servicing.

Experimentation & Research

Co-designing a joint industry, community and academic research agenda that is policy relevant is a key step to developing and testing new innovative, place-based approaches and technologies. Water sensitive demonstration projects would create a platform for showcasing not only new technologies, but also governance processes and mechanisms needed to facilitate stakeholder integration and collaboration. When designing experiments it is important to embed a dedicated learning agenda that looks at how to manage delivery and maintenance of the experiment (particularly if new interventions are trialled), alongside technical feasibility and confidence building.

Additionally, research-designed evaluations of contemporary water-related innovations are required to develop sound, empirical insights regarding their efficacy.