

Table 1: Water Sensitive Cities Index: goals, indicators and indicator objectives

Ensure Good Water Sensitive Governance						
Knowledge, skills and organisational capacity	Water is key element in city planning and design	Sound institutional arrangements and processes	Public engagement, participation and transparency	Leadership, long-term vision and commitment	Water resourcing and funding to deliver broad societal value	Equitable representation of perspectives
<p>Science influence To foster meaningful engagement between research and industry whereby robust partnerships generate reliable, trusted and interdisciplinary outcomes and form the basis for adapting existing industry practice.</p> <p>Capacity To strengthen practitioners skills and knowledge to enable cross-sectoral, multidisciplinary and inter-organisational project planning and delivery.</p> <p>Learning culture To create an active learning culture within organisations that embraces learning through experimentation and reflexivity with new insights actively shared and discussed across multiple sectors.</p>	<p>Water system planning To equip planning processes to deal with uncertainty through cross-sectoral initiatives and contingency planning.</p> <p>Monitoring and evaluation To actively monitor and evaluate urban planning decisions and practices to improve planning processes and water sensitive outcomes.</p> <p>Evaluation frameworks To develop comprehensive evaluation framework that incorporates different priorities and trade-offs as part of scenario planning, robust decision making and exploratory modelling.</p> <p>Policy and strategy To develop policy that supports cross-sectoral collaboration, provides flexibility to deal with uncertainty and guides contingency planning for water system planning.</p> <p>Legislation and regulation To mandate water sensitive land use planning requirements in statutory planning regulation that are outcome oriented, flexible and coordinated between sectors.</p>	<p>Monitoring and evaluation To actively monitor and evaluate relevant institutional processes that support robust, effective, transparent and stable cross sectoral arrangements.</p> <p>Policy and strategy To develop policy that coordinates and provides joint accountability between all sectors and levels of government on how water sensitive goals should be achieved.</p> <p>Networks To develop strong, responsive and active networks that are highly valued and exist across different sectors, organisations and levels.</p>	<p>Citizen engagement To actively pursue meaningful involvement and empowerment of citizens in decision making processes.</p> <p>Policy and strategy To develop policy that supports communication and engagement activities with citizens.</p>	<p>Vision and narrative To articulate a water sensitive vision and narrative that endorses the liveability, sustainability and resilience water agenda and is embed across sectors and linked to broader city aspirations.</p> <p>Policy and strategy To develop policy that is coherently aligned to the water sensitive vision and underpins a widely shared understanding of the role of water in a city which embraces all principles of water sensitivity in a locally contextual way.</p> <p>Incentives To establish an awards and recognition program for excellence in water leadership.</p> <p>Revenue, funding & investment To provide commitment to a water sensitive vision through dedicated funding initiatives.</p> <p>Leadership To drive innovation and water sensitive practices across all sectors and government levels.</p>	<p>Cost-benefit analyses To direct investment towards the highest value option that considers and quantifies externalities and non-market values of water services.</p> <p>Revenue, funding and investment To create revenue, funding and investment models to drive dedicated investments in water sensitive practices.</p>	<p>Policy and strategy To develop policy that requires equitable representation in senior positions and boards.</p> <p>Leadership To ensure inclusiveness and representation of relevant different perspectives in the governance arrangements and decision making in the water sector (including, gender, race, age, mental or physical disability, minority groups, etc.).</p>
Increase Community Capital						
Water Literacy	Connection with water	Shared ownership, management & responsibility	Community preparedness and response to extreme events	Indigenous involvement in water planning		
<p>Citizen engagement To improve citizens knowledge of the water cycle, the water sector and the current state of water affairs so they can actively participate in decision making.</p>	<p>Community connection To foster pride and connectedness of people with water through improved understanding of water's role in landscape.</p>	<p>Operation and maintenance To increase the extent to which the community is an active participant in creating, operating and maintaining the water system and its infrastructures.</p>	<p>Citizen engagement To empower citizens to cope with impacts associated with a water related disaster (such as, storm, flood, drought, heatwave, etc.) and minimise the severity and duration of extreme event</p>	<p>Water system planning To recognise indigenous economic, cultural and/or spiritual interests are considered in the planning and management of water systems</p>		

			impact.	<p>Legislation and regulation To mandate indigenous representation in governance activities and that cultural associations with water systems are protected.</p> <p>Policy and strategy To develop policy that requires indigenous economic, cultural and/or spiritual interest are considered in planning and management of water systems.</p>		
Achieve Equity of Essential Services						
Equitable access to safe and secure water supply	Equitable access to safe and reliable sanitation	Equitable access to flood protection	Equitable and affordable access to amenity values of water-related assets			
<p>Water system design To provide secure water supply services that is accessible to all households, educational institutions, health institutions and businesses.</p> <p>Monitoring and evaluation To provide safe water supply services (and therefore free from micro-organisms, chemical substances and radiological hazards) that is of an acceptable colour, odour and taste for domestic use.</p> <p>Legislation and regulation To develop national and/or local standards for drinking-water quality that are based on measures of drinking-water safety defined by the World Health Organization (WHO) Guidelines for drinking-water quality.</p> <p>Revenue, funding and investment To deliver affordable water supply services to all households, educational institutions, health institutions and business.</p>	<p>Water system design To provide reliable sanitation services that is accessible to all households, educational institutions, health institutions and businesses.</p> <p>Monitoring and evaluation To provide safe sanitation services that ensures the protection of human health.</p> <p>Legislation and regulation To establish and maintain national and/or local standards for sanitation that are based on measures of sanitation safety defined by WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP).</p> <p>Revenue, funding and investment To deliver affordable sanitation services to all households, educational institutions, health institutions and business.</p>	<p>Water system design To reduce nuisance flooding and protect citizens and infrastructure from flood waters.</p> <p>Revenue, funding and investment To deliver affordable protection against flood risk to everyone.</p>	<p>Urban landscape design To enhance amenity values associated with urban landscapes.</p> <p>Revenue, funding and investment To provide affordable access to water related assets with high amenity values to everyone.</p>			
Improve productivity and resource efficiency						
Maximised resource recovery	Low GHG emission in water	Water-related business	Low end-user potable water	Benefits across other sectors		

	sector	opportunities	demand	because of water-related services		
Water system design To maximise resource recovery through innovative water system design.	Water system design To maximise the use of alternatives to high carbon emitting energy sources to supply water infrastructure.	Revenue, funding & investment To stimulate investment in new business opportunities through innovation in the water sector.	Water system planning To support low end users potable water demand relative to the local scarcity or abundance of water.	Cost-benefit analysis To stimulate beneficial outcomes across other sectors beyond those attained through essential services.		
Promote Adaptive Infrastructure						
Diversify self-sufficient fit-for-purpose water supply	Multi-functional water infrastructure system	Integration and intelligent control	Robust infrastructures	Infrastructure and ownership at multiple scales	Adequate maintenance	
Water system design To provide fit-for-purpose water supply appropriate to the quality water and demand requirements of the end user.	Water system design To provide multi-functional water infrastructure seamlessly integrated into the urban landscape.	Water system design To optimise water system network performance through the use of intelligent control systems.	Water system design To create a water system network that is virtually insensitive to stresses through the use of redundancy measures and by-pass systems.	Water system design To optimise water system performance through the integration of centralised and decentralised infrastructure.	Operation and maintenance To undertake appropriate maintenance practices ensuring the long term integrity of all water infrastructure (including green infrastructure). Policy and strategy To provide clear and transparent policies for the operation and maintenance of all water infrastructure.	
Improve Ecological Health						
Healthy and biodiverse habitat	Surface water quality and flows	Groundwater quality and replenishment	Protect existing areas of high ecological value			
Urban landscape design To protect, restore and create well-functioning ecosystems that contribute to ecological resilience.	Policy and strategy To improve and protect the quality of surface waters and marine environments.	Policy and strategy To improve and protect the quality of groundwater environments.	Policy and strategy To protect existing areas of high ecological value from the impacts of catchment urbanisation.			
Quality Urban Space						
Activating connected pleasant urban green and blue space	Urban elements functioning to mitigate heat impacts	Vegetation coverage				
Urban landscape design To establish and maintain a network of green spaces connected to waterways and other water bodies. Community connection To foster a strong connection between the urban landscape and the community with a high level of community willingness to be engaged in managing and protecting it.	Urban landscape design To maximise the extent to which the urban space and built form functions as an integral part of the water system.	Urban landscape design To maximise tree canopy coverage creating shaded, cool green urban landscapes.				