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ACTION BRIEF

Accelerating Climate Action:

Building Resilient Cities through Improved Water Governance

Water is fundamental to inclusive, safe, resilient and sustainable cities. Whilst water acts as a connector across sectors and stakeholders in an urban system, water governance is the ultimate catalyst and driver to enhancing resilience.

Cities are on the front line of the consequences of climate change. Whether through the recent historic floods in Venice or water shortages in Cape Town, cities across the globe are facing severe challenges. Building resilience at city and municipal levels and adapting to the threat of climate change are becoming higher priorities on urban agendas. However, translating these priorities into tangible and practical actions remains a central concern. Cities are facing significant hurdles in building resilience, due to financial and temporal constraints, a lack of political will and awareness, and a lack of guidance on how best to transform the concept of resilience into a reality. There is a clear demand, and a strong need, to guide and support cities through the process of building resilience.

Water serves as an entry point for building resilient cities – as water systems are the lifeblood of a city and constitute a complex ecosystem whose health and balance are key to the resilience of cities and their residents. While water acts as a connector across sectors and stakeholders in an urban system, water governance is the catalyst and ultimate driver for enhancing urban resilience. Given the uncertainty of climate change and its impacts on cities, building the adaptive capacity of cities through water governance is becoming even more critical. Improved water governance presents a transformative opportunity to convert risk to resilience, poverty to wellbeing, and environmental degradation to rejuvenated ecosystems.

Cities are a key unit of socio-economic organization and can serve as a laboratory for implementing innovations and translating resilience concepts to reality.

City Water Risks

Twenty-one of the world's thirty-three megacities are built on the coast, while others are located in and around flood plains, making them the most susceptible to floods, rising sea-levels, and other natural disasters. According to the Global Facility for Disaster Reduction and Recovery (GFDRR), by 2030, natural disasters could cost cities up to USD 314 billion annually, and climate change could push almost 77 million urban residents into poverty. Amongst these natural disasters, water related hazards account for nearly 90 per cent – they include flood risk, drought, storm surge and sea-level rise. The United Nations Office for Disaster Risk Reduction (UNISDR) report on 'The Human Cost of Weather Related Disaster' highlighted that between 1995 and 2015, floods accounted for 43 per cent of the natural disasters that were documented, causing 157,000 deaths, affecting nearly 2.3 billion people and causing an estimated USD 662 billion in damages. In that same period, droughts accounted for five per cent of the natural disasters, leading to 22,000 deaths and further affecting 1.1 billion with damages in excess of USD 100 billion.

The risks faced by global cities are further exacerbated by the additional complexities of rapid urbanization, rising resource consumption and population growth. By 2050 it is estimated that two billion more people will live in cities, which will further accelerate urban as well as peri-urban water stress levels. We need innovative, holistic, and inclusive approaches to water management that will enable cities to improve their water resilience capacity and provide essential services to residents both in cities and surrounding communities.

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From Risk to Resilience

A water resilient city is one that can cope, survive and thrive in the face of water-related shocks and stresses, and stresses, and at the same time, adequately mitigate the impact on the urban system. It needs to also ensure consistent, adequate and high-quality water services for all its inhabitants and protect their wellbeing. To this end, the City Water Resilience Approach (CWRA) was jointly developed by partners including Arup, the Stockholm International Water Institute (SIWI) and the World Bank, supported by the Rockefeller Foundation and the Resilience Shift. The CWRA emphasizes not only the need to provide the basic conditions conducive to sustaining human life and protecting well-being – in terms of access to quality water, sanitation, healthcare, and protection from disasters – but its methodology also points to opportunities found in creating safe, healthy and attractive urban spaces through water.

A water-resilient city is one that can cope, survive, anticipate and thrive in the face of water-related shocks and stresses while ensuring consistent, adequate and high-quality water services for all its residents and protects their well-being.

Building water-resilient cities is crucial for resilient societies, as water underpins all natural and human systems. Adopting an integrated and holistic approach with water at the heart of policies, planning and investments can provide the foundation for transformation towards sustainable and resilient societies and must form the basis of our response to the increasing challenges posed by a changing climate.

The global water community has embraced the resilience concept as the most appropriate planning paradigm to address the current situation of urban water stress, as evidenced by the launch of new initiatives and coalitions working together to advance resilient, smart and sustainable cities. The Global Commission on Adaptation's Water Action Track, a global platform launched in September 2019 to accelerate climate change adaptation action in water and water-related sectors, calls for a resilience approach to tackle the climate disaster, prioritizing three Water Action areas: Water Resilience Preparedness, Resilient Basin Future and City Water Resilience. The goal for the action area on City Water Resilience stipulates that by 2030, support should be provided to at least 100 cities to develop and implement integrated urban water resilience planning and investment to address critical vulnerabilities in water-related infrastructure and management, building water security for growing urban populations and increasingly water-stressed cities. At a City Water Resilience Approach event at the 2019 Stockholm World Water Week, a global 'Call to Action' for organizations to join a community of practice on urban water resilience was announced by the Resilience Shift and its partners. The C40 Cities' World Mayors Summit in Copenhagen in October 2019 gathered city leaders to persuade them to take bold climate actions and build a resilient and more sustainable future and urged its national governments to join the endeavor. Despite these efforts at the global level, city planners and practitioners are facing significant hurdles in translating resilience concepts into tangible and practical actions.

To overcome these hurdles, governments and local authorities, supported by the global community, must recognize the following:

Water Governance is the driver for enhancing resilience | The capacity of the ecosystem to manage risks and cope with changes is largely determined and shaped by human action and governance systems. Deficiencies in governance can result in the failure of water interventions, further exacerbating the effects of water scarcity. Since 2014, the United Nations World Water Development Report and the OECD Water Governance Principles have highlighted that the global water crisis is essentially a crisis of governance. Therefore, understanding a city's current governance capacity is critical, i.e. who makes the decisions, how are those decisions made, who gets to participate in decision-making, and who benefits or is affected as a result. It is important that this understanding informs resilience related city water governance functions such as planning and preparedness, policy and strategies, post-disaster management, response and recovery measures, coordination, capacity development, financing, regulations, and monitoring.

The urban water system and stakeholder complexities often results in inadequate governance and an inability to respond to sudden shocks. CWRA helps cities to reveal both the lack of existing coordination within urban water stakeholders and with other critical urban systems (energy, food supply, forest, land, transportation, etc.) and understand where new connections are needed, leading to improved local governance and decision-making.

Building water resilience requires the creation of an enabling environment, i.e. fostering the characteristics and qualities of good and adaptive water governance that can facilitate how these functions should be performed in order to achieve an intended outcome to support resilience. This includes multi-level governance systems that have the following attributes: collaborative and coordinated; participatory; inclusive; adaptive; evidence-based; accountable; and transparency mechanisms in place to achieve as a prerequisite to effectively implement governance functions to achieve resilience outcomes. For instance, improving accountability and transparency across different governance functions can assist in enhancing the ability to plan, coordinate and communicate efficiently during emergency and disasters, further building resilience capacity by bringing in credibility and legitimacy, access to reliable information, increasing clarity on roles and responsibilities of key actors and building trust amongst stakeholders. Improved capacity through inclusive and participatory processes can also facilitate different stakeholders in the system when it comes to exchanging

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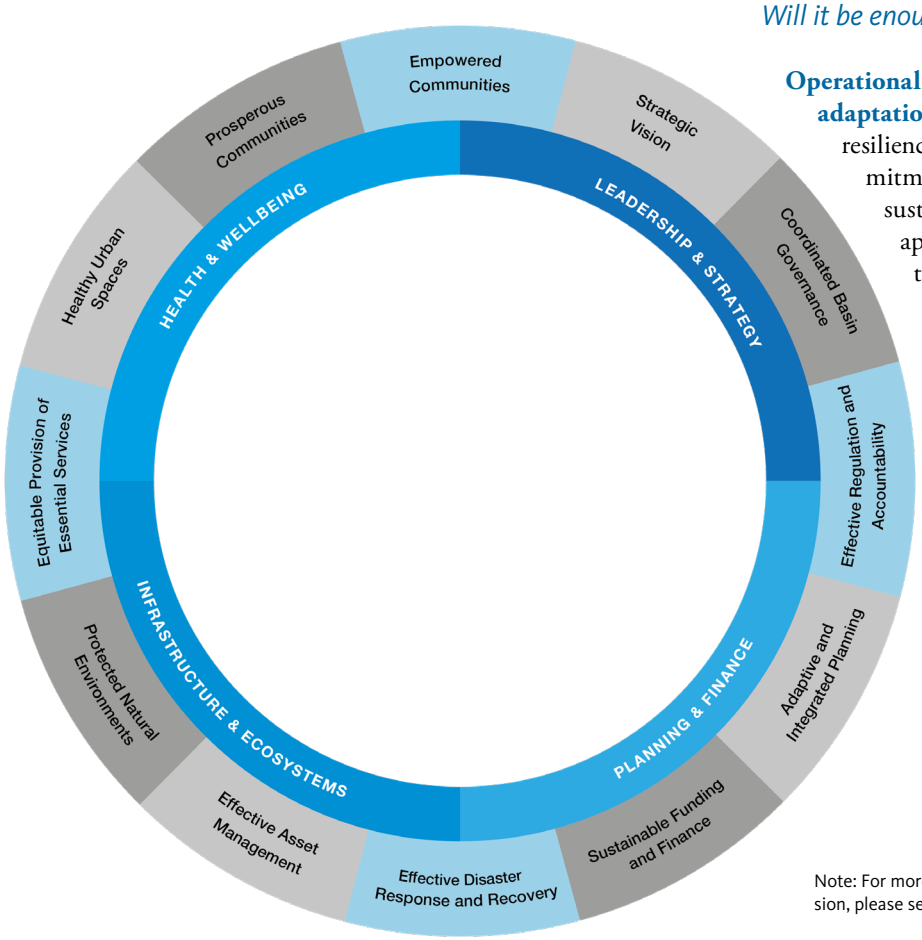
knowledge, learning, self-organizing, adapting, and enhancing preparedness plans and responses to better deal with water related shocks and stresses.

Understand the interconnectedness of the urban water system | Urban water systems are complex systems, connected to other interdependent critical urban systems, infrastructure assets, and decision-making bodies with divergent interests and priorities. Moreover, cities draw upon larger catchment areas extending beyond administrative boundaries that are connected to one or more water basins that cross cities, states or even international boundaries that often are outside the city's control. This can lead to spatial-scale misalignment between the boundaries of urban water governance and the wider water systems on which the water system depends. Given these complexities, planning and implementing a water resilience action is neither simple nor straightforward. It must be grounded in the existing decision-making processes related to the larger socio-political, economical, and hydrological urban context. A holistic and multi-stakeholder approach is therefore essential, rather than operating in silos and/or on a sector-based approach. In order to achieve this, one must understand the basin extent in which the city sits, and the stakeholders that are located within. The City Water Resilience Approach prioritizes this in its methodology as the fundamental step to assessing and building water resilience. It has developed a digital tool, 'OurWater', that supports organizations and individuals to better understand their city's water system and how it sits in the context of a broader catchment or basin.

Assess today's water resilience to inform future decisions | What cities need are tools, frameworks, and indicators that enable them to diagnose their current resilience capacity and inform decision makers to enable them to take the necessary steps and actions to build a resilient future. This could include assessing which elements constitute obstacles and what is required in building resilience for the city. The CWRA's City Water Resilience Framework (CWRF) helps in guiding cities to build resilience through four dimensions: leadership and strategy, planning and finance, infrastructure and ecosystems, and health and well-being – with a set of resilience goals and indicators that allow cities to measure performance and assess the overall resilience of their current water system. Cities need to know what steps are required so they can achieve these resilience and sustainable development goals. The CWRA aims to fill that gap, by taking city water stakeholders through the key stages, ranging from system mapping (through the OurWater digital tool), resilience assessment (with the CWRF) to identify gaps and opportunities, prioritize resilience actions, and to collectively develop and implement a water resilience action plan.

Implement a multi-stakeholder approach towards a shared City Water Resilience vision | Given the complexities surrounding urban systems, building consensus and prioritization is critical to enabling collaborative development and the implementation of a water resilience action plan on a city-wide scale. Such processes also assist in building inclusiveness in planning and action development through the generation of a common vision as well as managing complexities within a city system. Navigating the complexity of multiple goals and priorities, competing demands, and uncertainties requires a coherent approach, focused on a common priority and shared vision among city stakeholders that can guide decisions on building holistic city water resilience. To achieve this, city authorities must also engage the people of the city as well as the business community, including upstream and downstream actors and other sectors to better assess water risks, resilience and sustainable water use.



Will it be enough if cities act but countries do not?

Operationalize Water Resilience in local and national adaptation policies and strategies | Actions for water resilience must be taken at the local level. Political commitments from a city's leadership are critical for the sustainability and success of such resilience building approaches and processes. However, it is important to bridge the divide between mere commitments and acknowledgements and concrete actions by extending resilience conversations beyond political cycles. This would require operationalizing and institutionalizing water resilience in urban policies and strategies through an inclusive, accountable, and transparent process, and ensuring that it is factored into the daily operations at all levels of city government. This must also be acknowledged and integrated at the national level as well, where water resilience is manifested in national adaptation plans and strategies.

Note: For more information about the various indicators across the four dimension, please see https://www.resilienceshift.org/publication/cwra-methodology/

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About SIWI

SIWI is a leading water institute, focused on water governance and capacity building in order to reach a just, prosperous and sustainable water wise world. It is well-known for its research, knowledge generation, and applied science, which helps to develop policy recommendations and supports the implementation of programmes. In addition, SIWI uses its trusted convening power to facilitate multi-stakeholder dialogues, most evident in its annual event, World Water Week.

About this publication

This action brief draws inspiration from the Open Letter "Water as a Catalyst for Collection Action in the Next Decisive Decade" which was submitted to leading United Nations agencies and bodies, Member States and the General assembly in September 2019 as an outcome of the High Level Dialogue on "Building a Resilient Future through Water", co-convened by the Stockholm International Water Institute (SIWI) and the Resilience Shift at the 2019 World Water Week in Stockholm. The brief is a contribution to the discussions and activities at the Conference of the Parties (COP25), 2–13 December 2019, Madrid, Spain. It was produced as part of a project financed by the Government of Sweden and the GIZ, commissioned by the Government of the Federal Republic of Germany.

For more information about SIWI's activities and events during COP, please visit www.siwi.org/siwi-at-cop/.

The City Water Resilience Approach (CWRA) was developed by Arup and the Stockholm International Water Institute (SIWI) with support by the Rockefeller Foundation and Resilience Shift. CWRA helps cities understand the risks they face, and improve the way they plan, manage and maintain their water system by collectively developing a water resilience actions. SIWI is grateful to Arup, the Resilience Shift and the Alliance for Global Water Adaptation (AGWA) for contributing to this action brief.

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