Joint Commitment to Action

Building Urban Resilience to Water-Related Disaster Risk through Inclusive Design Adaptation Action

Wetlands International is the only global non-profit foundation dedicated to the conservation and restoration of wetland ecosystems for people and nature. It works from 20 offices in the world with a global office in the Netherlands, through partnerships with governments, humanitarian and private sector as well local communities to reach its goals.

ONE Architecture & Urbanism is an award-winning design and planning firm with offices in Amsterdam and New York that specializes in resilience and climate adaptation. It has an expert team working at a variety of scales, from urban design to national planning, from quick interventions and pilots to long-term visions.

Jointly, Wetlands International and One Architecture & Urbanism **recognize** that:

1.1 Climate change is a fact of life of most of the world's population and a modern day phenomenon whose impacts will only increase in frequency and intensity affecting the poor in a disproportionate way.

1.2 Cities are growing in size and production, but at the same time disaster risks of populations and assets are increasing further fueled by climate change. By 2050, 70% of the world population is projected to live in an urban environment, and the 600 major cities in the world are expected to provide 60% of global GDP.

1.3 Reducing vulnerability to water-related disasters is paramount, as roughly 90% of the 1,000 most severe disasters since 1990 have been water-related[1]. Wetland loss and degradation due to urban development is a driver of urban flood risk. In 2010, around 1 billion people around the world were living in flood-prone areas, potentially exposed to either river or coastal flooding. By 2050, this number is projected to increase to over 1.6 billion.[2]

1.4 This increase in flood risk is a major challenge in achieving Sustainable Development Goal 11 Sustainable Cities and Communities, especially targets 11.5 Reduce the adverse

[1] Adikari, Y, and J Yoshitani. 2009. Global Trends in Water-Related Disasters: An Insight for Policymakers. Paris: UNESCO, ICHARM.

[2] The Geography of Future Water Challenges. PBL Netherlands Environmental Assessment Agency, 2018. www.pbl.nl/future-water-challenges

effects of natural disasters[3], implementing UN Habitat's New Urban Agenda, while also working towards achieving the CBD Aichi Targets, the Paris Agreement, Sendia Framework on Disaster Risk Reduction and Ramsar Convention on Wetlands of International Importance.

1.5 This challenge cannot be overcome by a siloed approach and fragmented efforts by single sectors, especially in urban areas where space is limited, sectors overlap, interlinkages and impacts are shared.

2. Wetlands International and ONE **believe** that:

2.1 Achieving SDG 11 and especially Target 11.5 is possible, through working to achieve SDG11 Targets 11.6 Reduce the environmental impact of cities[4], and target 11.7 Provide access to safe and inclusive green and public spaces[5], considering them as green-blue infrastructure[6].

2.2 Densification and agglomeration can go hand in hand with an increase of green and blue space, thereby achieving and surpassing the WHO minimum of $9m^2$ of green space per inhabitant/capita ratio[7]. Thereby, the agglomeration advantages can work in collaboration with nature, recognising that ecosystems form the foundation for urban social and economic activity[8].

2.3 The network characteristic of blue-green infrastructure is crucial, as water can flow and be stored, biodiversity can move along; when well incorporated in the city fabric, people can recreate, travel or commute similarly (e.g. cycling or walking paths along water courses, wetland parks) in healthy and sustainable ways as well as recreate (biodiversity habitat, cultural and health co-benefits).

2.4 As key components of this blue-green infrastructure, floodplains, riverbeds, mangroves and other natural and constructed wetlands are crucial in developing a flood- and climate-resilient city, while contributing to the reduced flood risk these ecosystems also provide many key ecosystem services and co-benefits of biodiversity habitat, cultural importance and contribute to the health of urban populations.

2.5 To form a green-blue infrastructure network, these key wetland components need to be connected by blue-green elements such as creeks, green roofs and linear parks and integrated into the urban fabric by combining them with walkways, cycle lanes and other low-impact transport and recreational elements.

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[3] SDG11 Target 11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations.

[4] SDG11 Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

[5] SDG11 Target 11.7: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.

[6] blue-green infrastructure is defined as "planned interconnected networks of natural and semi-natural areas, including water bodies and green and open spaces, that provide different ecosystem services

[7] According to the World Health Organisation (WHO), every city is recommended to provide a minimum of 9 square metres of urban green space for each person [7, 8], provided that it should be accessible [9], safe [10] and functional [11].

[8] Mcinnes, Robert. (2014). Recognising wetland ecosystem services within urban case studies. Marine and Freshwater Research. 65. 575. 10.1071/MF13006.

2.6 Due to the complexity of cities and of the challenge, we need multi-disciplinary teams and inclusive decision-making and design of solutions, founded on a strong systems analysis where wetlands are recognized as key elements[9]. Environmental NGOs teaming up with knowledge institutes as well as architects/urban designers can help city planners comprehensively overcome the adaptation challenges cities face. These actors all play a key role as urban flood risk is only solved looking at the wider watershed (environmental NGOs) while taking climate change predictions into account (knowledge institutes), and incorporating adaptation measures into the urban system (architects and urban designers).

2.7 Design is a proven method to integrate the requirements of different sectors and stakeholders in dense urban areas, if based on hydrology, hydraulic necessities as well as climatic extreme events scenarios. Design tools drive the maximization of urban benefits, address climate change adaptation complexity, link natural and urban systems and break a conventional siloed approach by design's ability to integrate, communicate and facilitate conversations and collaborations.

3. Recognizing and considering the above, Wetlands International and ONE Architecture & Urbanism **commit** to the following **action ambition**:

3.1 Work together to create well-planned cities[10], that incorporate blue-green infrastructure as part of their climate change adaptation and disaster risk reduction strategies, that maximize their services for disaster risk including water storage, storm surge and wave energy reduction, as well as water provision services, in combination with urban co-benefits for recreation, health as well as ecological services such as biodiversity habitat.

3.2 Scaling up and reaching out the Tacloban work, to establish a country wide urban resilience program including the cities of Tacloban, Manila, Cebu with partners PRA, Cordaid, NEDA and others to reduce water-related disaster risk for at **least one million people.**

3.3 Replicating and accelerating implementation of Water as Leverage for Resilient Cities: Asia work in Semarang, to establish a multi-city program in Indonesia allowing the adaptation of **at least one million people**, including the city of Semarang.

3.4 Accompany and guide the City of Panama in its flood risk reduction work in the watershed of Juan Diaz river, improving flood resilience **of 200,000 people**.

3.5 Lead the urban component of the Accelerating Adaptation through Building with Nature in Asia initiative, its incorporation in the full-fledged commitment during the Adaptation Action Summit in Amsterdam in 2020 and roll out a work program for its implementation.

3.6 Widely share the experiences of these innovative, cross-sectoral and multi-stakeholder inclusive approaches, to catalyze action and new partnerships across sectors.

3.7 Help educate the next generation of climate leaders.

[9] Aversively, wetland destruction by landfilling increases flood risk, reduces biodiversity habitat and causes greenhouse gas emissions.

[10] Well planned cities can provide distinct advantages through agglomeration and densification driving economic development, increasing wealth generation and enhancing quality of life within a smaller footprint at lower per capita resource use and emissions than any other settlement pattern (UN-Habitat 2012).