

# Cities cannot be resilient without integrating healthy wetlands in infrastructure asset management, planning

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Annually, on 2 February, the world over remembers the establishment of the Ramsar Convention which happened in 1971, (the same year that the Water Research Commission (WRC) was established), making it one of the oldest organisations to concern itself with the wellbeing of wetlands, society and the economy.



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Ramsar's definition of wetlands includes all water resources from mountain seeps through estuaries, up to six metres into the oceans. This definition allows for inclusivity of all authorities, regardless of legal mandate, such as the collaboration amongst departments of environmental affairs, water and sanitation, and agriculture, forestry and fisheries, City of Tshwane, South African National Biodiversity Institute (SANBI) etc.

## More resources needed to reduce wetlands destruction

The change brought about by awareness campaigns is slowly becoming visible. This is illustrated by the declining rate of wetlands destruction, as investment in wetlands restoration across the country has increased. Hundreds of green jobs in various villages have been created and improved the livelihoods in many homesteads. Indeed, more resources are still required in South Africa due to extensive wetland degradation - estimated beyond 60% of mapped wetlands so far).

The World Wetlands Day celebration theme for 2018 is focused on wetlands in urban areas: 'Wetlands for a sustainable urban future', which highlights the important role of wetlands for sustainable urbanisation.

Urban wetlands are essential and contribute to making cities liveable. In South Africa, we have witnessed dramatic flood disasters in Johannesburg and Durban, almost annually over the last few rainy seasons. While wetlands and river riparian vegetation alone cannot prevent destruction caused by such floods, integration of healthy ecological green infrastructure in planning and management of other urban infrastructure assets would have alleviated the costs to business, insurance firms, and people's properties. This is a living example that illustrates the value of wetlands which goes beyond the attenuation of flood energy, provided those wetland plants are maintained in a healthy condition.

## National Water and Sanitation Master Plan

The opposite of floods - drought - is currently being experienced in Cape Town and in the broader Western Cape province. Again, the retention and slow release of water from wetlands during droughts have been widely reported in literature. While these difficult times are underway and stressful, it is also an opportune time to review our relationship with nature and nature-based solutions.

To this extent, the Department of Water and Sanitation is leading a complete turn-around of its operations through the development of the National Water and Sanitation Master Plan. This huge exercise is aimed at shifting from business as usual to a 'new normal' that takes into account serious future projections of frequent droughts and floods - a situation that calls for future city resilience. The plan will see the merging of water supply and raw water resources management in planning developments and water demands, a plan which must be objective and contextualised.

Traditionally, water availability is assumed in business planning until later when it is realised that water assurance of good quantity and quality is a limiting factor! The master plan, in line with the World Economic Forum, has noted water as one of the top risks facing humanity now and into the future as population and other water demands escalate. The estimations are that by 2030, urbanisation will have driven more people towards cities, putting extra pressure on wetlands and rivers. Much of this is already reported through numerous WRC reports, a situation that demands speedy review of urban settlement/business/transport mechanism designs that are sensitive to nature.

Various international plans/strategies, such as Sustainable Development Goals 2030 (particularly Goal 6 as interlinked), African Agenda 2063, the National Development Plan, and city plans provide support to the realisation of a greener economy which promises a better life for all on targeted timeframes. Fortunately, wetlands and their restoration and maintenance as ecological infrastructure are prominently listed as priority resources to be given immediate attention. Indeed, water is life!

## **Generating new knowledge**

The WRC is one of the world leaders in generating new knowledge critical in policy decision-making. Most of the key reports already exist in managing wetlands. More work is underway. Just as an illustration, a framework report (TT 732/17) with special focus on Ramsar wetlands will be launched during the WWD 2018 celebrations. The framework provides for the collection of key biodiversity and biophysical information required by the Ramsar Convention. Many countries (including SA) who are signatories to the Ramsar Convention battle to generate and report on this aspect. In realising this gap through a WRC organised dialogue, the Department of Environmental Affairs agreed on producing this framework as an urgent matter. The framework will be launched in the City of Tshwane metro on 2 February during the celebration organised in a partnership with City of Tshwane, Department of Water and Sanitation, Department of Environmental Affairs and SANBI.

The WRC, in its research development and innovation strategy, is making a dedicated effort to focus on ecological infrastructure, resilience, governance, social and economic aspects of wetlands, emphasising research on the 'new normal'. Real water price, in the light of ecological infrastructure maintenance, demands attracting investment into environmental protection or ecosystem insurance value (a risk mitigation perspective), and many more avenues are

receiving direct attention.

It is therefore not enough to justify protection of wetlands by noting the importance of biodiversity. While that is critical, the change in language and approach, such as a focus on the beneficial services provided by wetlands is gaining momentum. The WRC is not only engaging partners within South Africa, but in the SADC region, African continent and beyond.

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