

# Green infrastructure must be part of our spatial planning for the future

By **Liteboho Makhele**

Cities can help fight ravages of intensifying climate change

If we are to deliver the type of cities we talk about in growth and development strategies – cities that are liveable, inclusive, sustainable and resilient – then we need to take a step back and take a critical look at the spatial planning and infrastructure we are perpetuating.

If we are to juxtapose the envisaged outcomes of strategies with guaranteed outcomes of current land use patterns and infrastructure that we so heavily rely on and continually invest in, the picture that emerges is one of stark contrasts and contradictions that cannot be ignored, or rather ignored at our peril.

Green infrastructure can be the lens used to begin to bring into focus these contrasting visions and help us take steps to align green infrastructure to mainstream spatial planning and infrastructure approaches.

However, integrating green infrastructure into spatial planning in city contexts where land use decision-making must address the demand for housing, water and sanitation, transport and other infrastructure services is a huge challenge, but so is the opportunity for restoring and regenerating urban ecosystems as an integral part of infrastructure investment, increasing resilience and adapting cities to climate change effects.

Nature has systemically been engineered out of and removed from the urban fabric and what remains are

hard, lifeless concrete jungles. This makes cities more vulnerable to the effects of climate change – floods, droughts and to all the cascading effects that follow.

Now there are movements for rewriting the city, bringing nature back, and the UN Decade on Ecosystem Restoration is a rallying call for the protection and revival of ecosystems all around the world, for the benefit of people and nature. Launched in June it runs from 2021 to

2030, the deadline for the sustainable development goals and the timeline that scientists have identified as the last chance to prevent catastrophic climate change.

SA cities urgently need to invest differently in urban infrastructure and place green infrastructure firmly on the local urban policy agenda as a critical and essential climate change adaptation measure.

The Integrated Urban Development Framework

(IUDF) is intended to address the conditions and challenges facing SA's cities and towns, by advocating effective management of urbanisation, underpinned by a growth model of compact, connected and co-ordinated urban areas driven by integrated infrastructure investments.

The benefits of green infrastructure not only address the effects of climate change, which poses threats to food security, water resources, infrastructure,

biodiversity, health and ecosystem services, but also covers the economic and governance aspects of climate adaptation.

The intergovernmental panel on climate change (IPCC) working group I sixth assessment report released in August has been described as a "code red" for humanity and makes it clear climate change is widespread, rapid, intensifying and unprecedented. It calls for strong and drastic action to reduce greenhouse gas emissions.

The outlook for Southern Africa is bleak. The climate will become drier with more frequent and prolonged droughts, as the region is warming at twice the global average. SA is already water-stressed and the water future is precarious. Across the country we have experienced devastating droughts, such as the Day Zero disaster in Cape Town in 2018 and more recently in Gqeberha.

There is a very real and tangible argument for the direct and indirect financial benefits of investing in green infrastructure, including minimising the cost of maintenance, stormwater management and pollution.

Indirectly, it contributes to urban renewal and liveability, enhances wellbeing and stress relief, uplifts community cohesion and establishes a sense of place while offering recreational value among its key benefits.

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The jacaranda trees bring beauty to the cities of Pretoria and Joburg when in bloom. Though the tree is native to South America, it has played a big part in city forestation in SA. /LEFTY SHIVAMBU/GALLO IMAGES