

Urban Green Transitioning in The Face of Current Global Change: The Management Role of the Local Government and Residents

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Abstract : In the face of fast-growing urbanization in most of the world's developing countries, there is a need to understand and address the risk and consequences involved in the indiscriminate use of urban green space. Tshwane city in South Africa has the potential to become one of the world's top biodiversity cities as South Africa is ranked one of the mega countries in biodiversity conservation, and Tshwane metropolitan municipality is the city with the wealthiest biodiversity with grassland biomes. In this study, we focus on the potentials and challenges of urban green transitioning from the Global South perspective with Tshwane city as the case study. We also address the issue of management conflicts that have resulted in informal and illegal activities in and around green spaces, with consequences such as land degradation, loss of livelihoods and biodiversity, and socio-ecological imbalances. A desk study review of eight policy frameworks related to green urban planning and development was done based on four GI principles: multifunctionality, connectivity, interdisciplinary and social inclusion. We interviewed 15 key informants in related departments in the city and administered 200 survey questionnaires among residents. We also had several workshops the other researchers and experts on biodiversity and ecosystem. We found out there is no specific document dedicated to green space management, and where green infrastructure was mentioned, it was focused on as an approach to climate mitigation and adaptation. Also, residents perceive green and open spaces as extra land that could be developed at will. We demonstrated the use of collaborative learning approaches in ecological and development research and the tying research to the existing frameworks, programs, and strategies. Based on this understanding. We outlined the need to incorporate principles of green infrastructure in policy frameworks on spatial planning and environmental development. Furthermore, we develop a model for co-management of green infrastructures by stakeholders, such as residents, developers, policymakers, and decision-makers, to maximize benefits. Our collaborative, interdisciplinary projects pursue SDG multifunctionality of goals 11 and 15 by simultaneously addressing issues around Sustainable Cities and Communities, Climate Action, Life on Land, and Strong Institutions, and halt and reverse land degradation and biodiversity.

Keywords : governance, green infrastructure, South Africa, sustainable development, urban planning, Tshwane

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