Examining the Efficacy of spatial plans towards mitigating climate change at the local level: a case of Polokwane local municipality, South Africa

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Abstract

The purpose of this study is to examine the efficacy of local spatial plans towards mitigating climate change in Polokwane Local Municipality. Globally, spatial planning has been playing a pivotal role in shaping the growth of many cities and addressing environmental issues such as climate change. This is due to the notion that the pursuit of climate change mitigation requires different responses at the international, national, and local scales. However, the local level remains the core scale within which the climate change mitigation agreements, frameworks and policies should be intensified. This is because local spatial plans provide cities with the potential to reduce the increasing GHG emissions and mitigate climate change through the process of urban renewal. In South Africa, spatial plans such as, *inter alia*, the Municipal Spatial Development Framework (MSDF), Integrated Urban Development Framework (IUDF) and Spatial Planning and Land Use Management Act (SPLUMA) have the potency to mitigate climate change through the provision of sustainable transport modes, energy efficient settlements and the usage of renewable resources. These plans advocate for the integration of the transport system and the use of renewable energies such as solar system to reduce traffic congestion, greenhouse gases (GHG) emission and intensive energy consumption. The paper has used a combination of theoretical and empirical data to probe the efficacy of spatial plans towards mitigating climate change in Polokwane Local Municipality. The former data was collected through literature review while the latter was solicited through questionnaires and interview schedules. The study reveals that the municipality is confronted with multifarious challenges that impede the efficacy of spatial plans in integrating the transport system and reducing the traffic congestion, GHG emissions, intensive energy consumption and other components associated with climate change mitigation. The study concludes that plans such as the MSDF, IUDF and SPLUMA fail to effectively mitigate climate change as it is recognised within the broad environmental management. It is therefore recommended that there is a need to restructure SPLUMA and recognise climate change as a separate entity. It is further recommended that the municipality should consider installing and providing solar systems to areas that are within the urban core as this will significantly reduce the intensive electricity consumption.

Keywords: Spatial plans; Climate change mitigation; GHG emissions; Spatial Planning.

Full Text: PDF

European Journal of Economics, Law and Social Sciences ISSN 2519-1284 (print) ISSN 2510-0429 (online)