

## **Municipal Action Against Urbanisation-Induced Warming: Case Studies from Jordan, Zambia, and Germany**

**Authors :** Muna Shalan

**Abstract :** Climate change is a systemic challenge for cities, with its impacts not happening in isolation but rather intertwined, thus increasing hazards and the vulnerability of the exposed population. The increase in the frequency and intensity of heat waves, for example, is associated with multiple repercussions on the quality of life of city inhabitants, including health discomfort, a rise in mortality and morbidity, increasing energy demand for cooling, and shrinking of green areas due to drought. To address the multi-faceted impact of urbanisation-induced warming, municipalities and local governments are challenged with devising strategies and implementing effective response measures. Municipalities are recognising the importance of guiding urban concepts to drive climate action in the urban environment. An example is climate proofing, which refers to a process of mainstreaming climate change into development strategies and programs, i.e., urban planning is viewed through a climate change lens. There is a multitude of interconnected aspects that are critical to paving the path toward climate-proofing of urban areas and avoiding poor planning of layouts and spatial arrangements. Navigating these aspects through an analysis of the overarching practices governing municipal planning processes, which is the focus of this research, will highlight entry points to improve procedures, methods, and data availability for optimising planning processes and municipal actions. By employing a case study approach, the research investigates how municipalities in different contexts, namely in the city of Sahab in Jordan, Chililabombwe in Zambia, and the city of Dortmund in Germany, are integrating guiding urban concepts to shrink the deficit in adaptation and mitigation and achieve climate proofing goals in their respective local contexts. The analysis revealed municipal strategies and measures undertaken to optimize existing building and urban design regulations by introducing key performance indicators and improving in-house capacity. Furthermore, the analysis revealed that establishing or optimising interdepartmental communication frameworks or platforms is key to strengthening the steering structures governing local climate action. The most common challenge faced by municipalities is related to their role as a regulator and implementers, particularly in budget analysis and instruments for cost recovery of climate action measures. By leading organisational changes related to improving procedures and methods, municipalities can mitigate the various challenges that may emanate from uncoordinated planning and thus promote action against urbanisation-induced warming.

**Keywords :** urbanisation-induced warming, response measures, municipal planning processes, key performance indicators, interdepartmental communication frameworks, cost recovery

**Conference Title :** ICCAUP 2023 : International Conference on Climate Analysis for Urban Planning

**Conference Location :** Doha, Qatar

**Conference Dates :** March 20-21, 2023