


Chapter 9

Consequences of the COVID–19 Pandemic on Declining Cities, Urban Vacant Land Uses, Green Infrastructure, and Their Impact on Climate Change Hazards

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ABSTRACT

This chapter aims to analyze the implications between the declining and shrinking cities, urban vacant lands, urban land uses, green infrastructures, urban green areas, and their impact on climate hazards change. The analysis departs from the basic assumption that urban vacant land sites and spaces have a negative connotation, but supported by the appropriate policies and programs of incentives, can turn around and develop the essential green infrastructure to enable the mitigation of climate change hazards, economic growth, and socio ecological development. The method used is the analytical-descriptive base on the theoretical and empirical literature review. It is concluded that the land uses of vacant land sites more vacationed towards urban green innovation infrastructure and forest areas contribute to mitigate the climate change hazards.

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INTRODUCTION

Urban processes linked to shrinking cities feature characteristics including economic decline associated to urban land uses, and other socio-economic dimensions that may lead to the adaptive capacity building which in turn increases the urban green infrastructure and moderates the impact of climate hazards change. The vacant land is used as green infrastructure to improve the health of urban ecosystems.

City regions experiencing economic growth and increases in urban population are subject to the adversity of losing green infrastructure resources leading towards a disequilibrium in adaptive capacity to climate change hazards and the quality-of-life goals.

The objective of this analysis is to find the relationships of the implications between the declining and shrinking cities, urban vacant lands, urban land uses, green infrastructures, urban green areas, and their impact on climate hazards change. First, it begins analyzing the processes of declining and shrinking cities to establish the relevance of the major urban vacant land sites and the land uses derived. The land uses of vacant land sites more vacationed towards urban green innovation infrastructure and forest areas are the ones that lead to mitigate the climate change hazards.

RESEARCH METHODOLOGY

A bibliometric review was used, through which a quantitative analysis of publications related to declining cities, urban vacant land uses, green infrastructure and its impact on climate change risks was carried out. The bibliometric indicators taken as indicators were the quality of the publications, the contexts analyzed in the documents, the relevance of the topic and the temporality.

To carry out this bibliometric review, literary and scientific sources on declining cities, urban vacant land uses, green infrastructure and its impact on climate change risks were used as a basis. Eighty-five documents were used for the research. This was done in two stages. In the first stage, the search criteria to be used in the different databases were defined, which included temporality, date of consultation, type of document and journal, topic and key words. The second stage consisted of classifying and analyzing the documents based on the identification criteria; these were grouped to identify the connections between the documents, selecting the most relevant ones.

DECLINING AND SHRINKING CITIES

City-regions and urban areas develop, expand or decline, remaining sensitive to environmental and climate change agendas guided by spatial planning regulations. Cities that are experiencing shrinkage and decline facing different challenges. Around the globe, cities are either growing and expanding or shrinking and declining because some dynamic processes such as deindustrialization, globalization, demographic change (Martinez-Fernandez, Audirac, Fol, & Cunningham-Sabot, 2012; McKinsey and Company, 2016; Sassen, 2001; Hall, 1993). Besides the complexity of these challenges, there are the global warming and climate change affecting urban settings (Ruth and Coelho, 2007).

The economic growth processes of cities that benefited from the development of some comparative and competitive advantages in the past, have led to the corresponding deindustrialization processes while unplugged from the global value chain and resulting in urban population and economic decline

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