Chapter 2
Geoinformation Technologies in Land Use Monitoring of Fast-Growing Cities for Sustainable Urban Development:
Maputo as a Laboratory for Research and Action

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ABSTRACT

To understand the territory of fast-growing cities, where there are multiple stakeholders involved, the observation of such dynamics seems indispensable to formulate and implement policies and actions based on a better understanding of these territorial systems. This chapter offers a perspective on how urban territories should be observed through geoinformation technologies that can provide a means for creating monitoring indicators concerning land use of fast-growing cities. The city of Maputo was used as an experimental laboratory for the use of geoinformation technologies in the observation, discussion, and reflection on methods for sustainable urbanism. The discussion includes the implications of the case study and possible developments to take a step forward in land use planning processes to achieve the desired socio-spatial equality.

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INTRODUCTION

Despite countless good intentions and urban development agendas, there are still many persistent issues playing an important role in the urban expansion process in developing countries, which can lead to spatial inequities and social deprivation.

At the same time, emerging issues such as climate change and migration are extending this issue and hampering the process of reconciling urbanization and sustainable development.

The United Nations World Cities Report 2016 (United Nations Human Settlements Programme, 2016) refers to specific policies and actions that can drive transformation change to leverage a New Urban Agenda. Of particular note among these is a global monitoring framework to increase the availability and usefulness of data to support decision-making, accountability mechanisms, and the capacity of countries/cities to deliver and report on the New Urban Agenda and SDGs (Sustainable Development Goals).

Moreover, the New Urban Agenda supports

"the role and enhanced capacity of national, subnational and local governments in data collection, mapping, analysis and dissemination and in promoting evidence-based governance, building on a shared knowledge base using both globally comparable as well as locally generated data, including through censuses, household surveys, population registers, community-based monitoring processes and other relevant sources."

In addition, it fosters

"the creation, promotion and enhancement of open, user-friendly and participatory data platforms using technological and social tools available to transfer and share knowledge among national, subnational and local governments and relevant stakeholders, including non-State actors and people, to enhance effective urban planning and management, efficiency and transparency through e-governance, approaches assisted by information and communications technologies, and geospatial information management." (United Nations, 2017: 40).

Concerning urban territorial planning and policymaking in general, and in fast-growing cities in particular, spatial information management through geoinformation technologies is of vital importance in the monitoring and evaluation of the planning process. The determination of ratios and indicators through spatial data makes it possible, among other operations, to quantify needs and to understand

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