

Chapter 2

Introduction: Describing Impacts at the Local Level

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Climate change is expected to have severe physical, social, environmental and economic impacts on both developed and developing cities across the globe. Current global climate projections indicate that changes are likely to result in increased temperatures, sea level rise (temporary and permanent inundation), changes in rainfall and precipitation patterns (flooding and drought), changes in wind speed, and changes in the severity and frequency of extreme events. The risks and impacts associated with these climatic changes pose a serious threat to the reputations of cities as service providers and their ability to meet their own targets for growth and development.

These impacts may not always occur as a direct result of climate change, but can often emerge from a complex chain of events. Many governments and communities have strategies in place to deal with routine climate variability, however, in light of projected climate change, cities cannot simply rely on the assumption that conditions will continue as they have for the last 50–100 years. For developing and developed cities worldwide, increasing climate variability will raise new challenges that will require sound management in order to ensure resilience and enable economic growth into the future.

Many cities are set for rapid urban expansion from rural-urban in-migration. Presently, many of these cities, particularly those in the developing world, suffer from insufficient and unsustainable growth. Populations from rural hinterlands settling in and around cities in pursuit of better livelihoods need access to basic services such as housing, clean water and sanitation, transport, education, and health services. How cities manage both short- and long-term impacts of climate change will have consequences for communities working and living in these urban centres, most notably for the rapidly expanding poor communities that are often located at urban edges with little access to infrastructure and other services. Integrating climate change adaptation considerations into development planning, then, is considered critical in meeting this challenge. Mainstreaming climate change by integrating

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the risks and opportunities it poses can also help enhance the adaptive capacity and resilience of cities and the communities that fall within their jurisdiction presently and in the future.

Globally, there is limited information available at the city level about sustainable, effective and efficient development alternatives for cities. This deficit increases the reliance of cities on carbon fuels and their vulnerability to the immediate and long-term impacts of climate change. Empowering cities to accommodate these changes requires an awareness of the risks associated with projected climate change and an understanding of the relative significance of these risks and impacts.

Within this context, the following chapters focus on the identification and understanding of the most immediate and compounding impacts of climate change in cities in Africa, Asia and Europe in an effort to identify what adaptation measures should be adopted to assist the most vulnerable sectors and communities within these urban centres. Detailed descriptions of the methods used to arrive at these findings are also offered.

Climate change is shown to have significant impacts on the development and economic base of local regions by reducing their ability to grow and thus maintain carrying capacity. Cities may also face a reduction in their ability to generate and/or raise income. This is likely to be accompanied by an increase in demand for service provision; e.g., measures to combat rising temperatures and flooding (in the case of local governments) or addressing the increased vulnerability of women to drought (at a community level).

In the following chapters, the links between climate driven phenomena and their current and future impacts within cities are offered through a variety of interdisciplinary approaches, often drawing from social research and data gathered from respondents. Several chapters also demonstrate the importance of establishing and maintaining cross-sectoral, multi-dimensional relationships for sharing knowledge and experiences relating to extreme climate events. We hope that readers find these writings informative in the range of innovative methodologies and measures that they present. Building knowledge in this direction, both qualitatively and quantitatively, is an important step for enabling cities to respond to climate change, and forms the ongoing challenge of research into resilient cities.

Resilient Cities

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