
Preface

This book was inspired by the observation that climate change and urbanization are two ongoing and interwoven processes. Given this strong interlinkage, cities around the world have begun to design regional and local climate change strategies with mitigation and adaptation elements to address the adverse effects of climate change. Megacities and large agglomerations play a significant role here as they tend to be key emitters of greenhouse gases and are heavily affected by the consequences of climate change. Many of these same cities have developed innovative strategies and transition options in response to climate change impacts. It is the complexity and diversity of ongoing processes and governance structures, as well as of social and economic heterogeneity that makes these cities an exceptionally challenging research object. A reasonable response to climate change that is also feasible calls for multi-dimensional, multi-level and multi-scale approaches leading to a greater understanding of the complexity of such processes.

This is the fundamental principle of the book. It describes the integrative inter- and transdisciplinary (IIT) approach used in the development of a Regional Climate Change Adaptation Plan for the Metropolitan Region of Santiago de Chile, including concrete adaptation measures and the evaluation and implementation of such a plan at the science-policy interface. The topics addressed are regional climate change, climate change impacts, adaptation needs and measures, and the implementation of these measures at the urban-regional level. The entire “chain” of analysis is exemplified for one case city. It builds on scientific analyses undertaken during a process initiated by social and natural scientists—an intensive participatory process that embraced a wide range of actors and stakeholders from the public and private sectors, civil society and academia, and a mutual learning network across megacities in Latin America.

The book draws on the international research project ClimateAdaptation-Santiago (CAS) (<http://www.ufz.de/climate-adaptation-santiago>), a combined enterprise of two German research institutes of the Helmholtz Association (Karlsruhe Institute of Technology (KIT) and Helmholtz Centre for Environmental Research—UFZ), three partner organizations in Latin America (Universidad de Chile, Pontificia Universidad Católica de Chile, Economic Commission for Latin America and the Caribbean of the United Nations—ECLAC/CEPAL), and the two

main climate change decision-making entities in Santiago de Chile (Regional Government of the Metropolitan Region of Santiago de Chile and Regional Secretary of the Ministry of the Environment). The project involved about twenty-five researchers in Germany and Chile and sixty local stakeholders representing approximately forty different Chilean organizations. Researchers and decision-makers from the cities of Bogotá, Buenos Aires, Lima, Mexico and Sao Paulo also contributed to this inter- and transdisciplinary project, which was carried out between 2009 and 2013.

This book presents the overall results of the enterprise. Although an edited volume, it differs considerably from a collection of papers, since the chapters follow an overarching structure and analysis. Each of the 12 chapters builds on the previous one, providing a coherent picture of climate change impacts and adaptation analysis in urban areas. It develops transferable solution and acts as an incentive to other cities that still face the challenge of designing comprehensive climate change response strategies.

Climate Adaptation Santiago

Krellenberg, K.; Hansjürgens, B. (Eds.)

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