

New Frontiers in Regional Science: Asian Perspectives 4

Kiyoko Hagihara
Chisato Asahi *Editors*

Coping with Regional Vulnerability

Preventing and Mitigating Damages
from Environmental Disasters

Kiyoko Hagihara • Chisato Asahi
Editors

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Preventing and Mitigating Damages from
Environmental Disasters



Springer

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New Frontiers in Regional Science: Asian Perspectives

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New Frontiers in Regional Science: Asian Perspectives

This series is a constellation of works by scholars in the field of regional science and in related disciplines specifically focusing on dynamism in Asia.

Asia is the most dynamic part of the world. Japan, Korea, Taiwan, and Singapore experienced rapid and miracle economic growth in the 1970s. Malaysia, Indonesia, and Thailand followed in the 1980s. China, India, and Vietnam are now rising countries in Asia and are even leading the world economy. Due to their rapid economic development and growth, Asian countries continue to face a variety of urgent issues including regional and institutional unbalanced growth, environmental problems, poverty amidst prosperity, an ageing society, the collapse of the bubble economy, and deflation, among others.

Asian countries are diversified as they have their own cultural, historical, and geographical as well as political conditions. Due to this fact, scholars specializing in regional science as an inter- and multi-discipline have taken leading roles in providing mitigating policy proposals based on robust interdisciplinary analysis of multifaceted regional issues and subjects in Asia. This series not only will present unique research results from Asia that are unfamiliar in other parts of the world because of language barriers, but also will publish advanced research results from those regions that have focused on regional and urban issues in Asia from different perspectives.

The series aims to expand the frontiers of regional science through diffusion of intrinsically developed and advanced modern regional science methodologies in Asia and other areas of the world. Readers will be inspired to realize that regional and urban issues in the world are so vast that their established methodologies still have space for development and refinement, and to understand the importance of the interdisciplinary and multidisciplinary approach that is inherent in regional science for analyzing and resolving urgent regional and urban issues in Asia.

Topics under consideration in this series include the theory of social cost and benefit analysis and criteria of public investments, socio-economic vulnerability against disasters, food security and policy, agro-food systems in China, industrial clustering in Asia, comprehensive management of water environment and resources in a river basin, the international trade bloc and food security, migration and labor market in Asia, land policy and local property tax, Information and Communication Technology planning, consumer “shop-around” movements, and regeneration of downtowns, among others.

Preface

Although Japan has developed a relatively affluent society since the end of World War II from an economic perspective, it has also experienced several negative events including serious environmental pollution and disasters such as floods and earthquakes. In particular the recent Great East Japan Earthquake and Tsunami and the Fukushima nuclear power plant disaster have taught us to always be prepared to cope with such events. This is not limited to Japan. In many countries throughout Asia, people confront various kinds of natural events, including disasters, especially those caused by global climate change. Whether a natural event turns into a disaster depends on the severity of the hazard as well as the condition of the social sphere of its potential victims, that is, vulnerability.

In this book we focus on regional vulnerability considering the fact that regional socioeconomic conditions determine the nature of the damage and thus the risk management policy. We provide the theory and methodology to understand and cope with regional vulnerability through an interdisciplinary approach. The fields mainly included in this work are welfare and environmental economics, the planning and management area of civil engineering, risk management and conflict management. In particular, we focus on the hazards and vulnerability surrounding water issues and provide readers with an understanding of how regional analysis is incorporated into vulnerability analysis. Also considered is what risk management should be when the diversified regional background of the vulnerability is taken into account.

An important feature of this book is that it provides contrastive regional coverage: the vulnerability of a developed country—urban and regional areas of Japan—and that of a developing country, Bangladesh. The contents consist of three parts: (1) Socioeconomic Vulnerability in a Regional Perspective, (2) Evaluation of Regional Vulnerability and (3) Risk Management of Regional Vulnerability.

In order to accomplish the above-mentioned undertakings, we asked specialists who have been studying these issues in a range of related fields to contribute to this book. In particular, we are grateful towards Professor Keith W. Hipel, who kindly accepted writing Chap. 17 and discussing his leading-edge ideas in the area of conflict resolution.

We would like to thank all our contributors for their patience and dedication; they revised their contributions several times to implement our editorial guidance. Without the hard work of all of the authors, this book would have never seen the light of day.

We would also like to thank the editorial board at the Japan Section of the Regional Science Association for compiling this volume as one of the epochal series of *New Frontiers in Regional Science: Asian Perspectives*, in particular, Professor Yoshiro Higano, who kindly reviewed the contents of this book as editor in chief. It is our hope that this book contributes to an improvement of human well-being in areas suffering from the impacts of various kinds of disasters and vulnerabilities.

Kyoto, Japan
Hachioji, Japan
April 2015

Kiyoko Hagihara
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