

Natural Hazards and the Mitigation of their Impact

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Under a changing climate and an intensifying human impact on the environment, managing and mitigating natural hazards are increasingly important for our society to tackle the serious challenges of the future concerning population and economic growth, food safety, preservation of ecosystem services and biodiversity; moreover, this task should be accomplished in a sustainable and eco-friendly way. Therefore, it is not enough to realise natural hazards and study their geographical aspects, but we need to learn and share the multitude of practices applied worldwide among specific conditions.

There have been numerous books dealing with the issue of natural hazards and risks from a wide variety of perspectives; thus, the reader might ask what novelty this compilation can add to the discourse. One answer is partly hidden in the first paragraph of this review; namely, the book contains not only the description of different types of natural hazards and information on their spatial occurrence, but just as indicated in the title, it attempts to outline the set of potential actions by which hazards can be managed, and their impact can be reduced. Another major strength of the book is that it describes hazards and mitigation strategies by bringing examples not only from developed countries with high prevention and recovery potential but also from less developed regions, such as Eastern Europe or Eastern and Central Asia. This way,

the reader gets information on problems and solutions underlined in the international literature.

The book is comprised of 7 Chapters. The first is a general introduction to the definition, typification, and human and economic aspects of natural hazards but also touching some practical management issues using a rather global perspective. In the following chapters, different classes of hazards are discussed in the following order: geophysical hazards, meteorological hazards, hydrological hazards, biosphere-related natural hazards, extraterrestrial hazards and finally, climate change and its impacts. Within the main chapters, several subchapters detail individual hazards; thus, for example, the chapter on geophysical hazards includes volcanic, earthquake, tsunami and landslide hazards. The chapters' and subchapters' structure is similar, providing a coherent image for the book. Necessarily, each chapter starts by explaining the formation and physical background of the hazard, followed by an assessment of associated damages and risks and their geographical occurrence. Subsequently, where relevant, the reader gets an overview of existing forecast systems; finally, potential actions for management and mitigation are introduced. The two strongest chapters, covering more than 40% of the 260-page book, are geophysical and hydrological hazards. The dominance of the later is understandable due to the high



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Professor Gábor Mezősi,
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relevance of hydrological hazards in the geographical regions covered by the book and due to the diverse background of the author in this field.

In summary, the book provides a systematic synthesis of natural hazards from both physical and human geographical aspects and, therefore, can serve as a reference textbook for students in geography, environmental sciences and related disciplines. By including a wide collection of hazard-related digitally accessible information, the book can also be a useful resource for professionals and decision-makers.

Finally, a few words on the author himself: Professor Gábor Mezősi, 70, former head of the Department of Geoinformatics, Physical and Environmental Geography, and former dean of the Faculty of Sciences and Informatics, University of Szeged, devoted his life and career to finding and initiating new and relevant directions within Hungarian geographical research. Starting with geomorphology and landscape ecology, he was among the first to apply computer-aided quantitative methods in physical geography in the mid-1980s. As he recognised the growing potential in spatial data analysis, he became one of the pi-

oneers in introducing GIS techniques in Hungary as early as the beginning of the 1990s. Later, he turned to the development and application of complex environmental models to reveal processes in landscape evolution and already emphasised the significance of climate change. From the mid-2000s, he has focused on environmental hazards, conflicts and risks, with special respect to landscape sensitivity and hydrological hazards, such as inland excess water inundations and droughts. More recently, he has dealt with forecasting changes in different elements of the environment at different climate scenarios. The present book, therefore, fits very well to the oeuvre of Professor Mezősi, since it synthesises his broad knowledge and experience in many of his previous research topics. Moreover, this compilation, just as numerous of his previous works, can also be a trend-setting publication for geographical research in the region. Nothing proves this better than the present special issue of *Geographica Pannonica*, which is, on the one hand, dedicated to him and, on the other hand, attempts to provide a cross-section of the versatile work his colleagues do concerning the assessment of natural hazards.