

# **Flood Risk Assessment and Management**

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# **Safety & Security Engineering Series**

**Series Editor: S. Mambretti, *Politecnico di Milano, Italy***

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Flood Risk Assessment and Management  
Landslides

# Flood Risk Assessment and Management

Edited by

**S. Mambretti**

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**WIT**PRESS Southampton, Boston



# Safety & Security Engineering Series

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# Preface

This volume is the first of a series the Publisher decided to launch to cover different aspects related to Safety and Security Engineering in order to reach a comprehensive view on risk mitigation.

The volume is devoted to floods, as one-third of the annual natural disasters and economic losses, and more than half of the respective victims are flood-related. A burgeoning global population and growing wealth, particularly in the last two or three decades, have increased the risk and the demand for protection from flooding. These features, together with climate change predictions and urban development, are affecting the way flood risk is managed.

Knowledge and scientific tools play a role of paramount importance in the strain of coping with flooding problems, along with the capacity building in the context of political and administrative framework. Therefore, governments need to establish clear institutional, financial and social mechanisms and processes for flood risk management in order to ensure the safety of people and property and, thereby, contribute to both flood defence and sustainable development.

The present volume contains selected papers presented at the Conferences organized by the Wessex Institute of Technology. The papers have been revised by the Authors, in order to be up-to-date and integrated in the book, which covers different topics:

- Risk assessment
- Mathematical models for flood propagation
- Effect of topographic data resolution
- Social and psychological aspects
- Decision making and management
- Legislations and directives

- Alternatives in flood protection
- Response and recovery
- Damages and economic – related problems
- Case studies

The Editor is very grateful to the Authors for their excellent contribution, and to the WIT Press for the availability in publishing a new Series in these very important subjects. The quality of the material makes the volume a most valuable and up-to-date tool for professionals, scientists, and managers to appreciate the state-of-the-art in this important field of knowledge.

The Editor  
Milano, Italy  
2012

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