

Contents

Part I Introduction

1	Identification and Mapping of Landslides	3
	Hiromitsu Yamagishi	

Part II Data Analysis and Method Development

2	Spatial Comparison of Two High-resolution Landslide Inventory Maps Using GIS—A Case Study of the August 1961 and July 2004 Landslides Caused by Heavy Rainfalls in the Izumozaki Area, Niigata Prefecture, Japan	13
	Junko Iwahashi and Hiromitsu Yamagishi	
3	Landslide Surface Deformation Detected by Synthetic Aperture Radar (SAR) Interferometry in Shizu Area on the Southern Foot of Mt. Gassan, Japan	31
	Hiroshi P. Sato and Akira Suzuki	
4	Modelling a Landslide Probability Through Time as a Basis for the Landslide Hazard Forecast System	45
	Marko Komac and Mateja Jemec Auflič	
5	Development of a GIS-Based 3D Slope Stability Analysis System for Rainfall-Induced Landslide Hazard Assessment.	71
	Cheng Qiu and Yasuhiro Mitani	

Part III Mapping

6	Large-Scale Landslide Inventory Mapping in Lesser Himalaya of Nepal Using Geographic Information System	97
	Manita Timilsina, Netra Prakash Bhandary, Ranjan Kumar Dahal and Ryuichi Yatabe	

- 7 A Joint Regional Slope Mass Movement Susceptibility Map 113**
Marko Komac
- 8 Landslide Inventory: Challenge for Landslide Hazard
Assessment in Indonesia 135**
Ngadisih, Guruh Samodra, Netra Prakash Bhandary
and Ryuichi Yatabe

Part IV Application and Case Studies

- 9 Landslide Susceptibility Mapping Based on Aerial
Photograph Interpretation Inventory for Tegucigalpa,
Honduras: An Application of the Matrix Method. 163**
Elias Garcia-Urquia and Hiromitsu Yamagishi
- 10 An Assessment of the Effective Geofactors of Landslide
Susceptibility: Case Study Cibeber, Cianjur, Indonesia 183**
Yukni Arifianti and Fitriani Agustin
- 11 GIS Approach to Landslide Hazard Mapping: A Case
Study of Syangja District in Western Nepal 197**
Vishnu Dangol
- 12 GIS Application in Landslide Susceptibility Mapping
of Indian Himalayas 211**
Shantanu Sarkar and Debi Prasanna Kanungo
- 13 Characteristics of the Torrential Rainfall-Induced Shallow
Landslides by Typhoon Bilis, in July 2006, Using Remote
Sensing and GIS 221**
Jie Dou, Hiromitsu Yamagishi, Yueren Xu, Zhongfan Zhu
and Ali P. Yunus