

PROCEEDINGS OF THE INTERNATIONAL WORKSHOP ON LANDSLIDE RISK
ASSESSMENT/HONOLULU/HAWAII/USA/19-21 FEBRUARY 1997

Landslide Risk Assessment

Edited by

DAVID M. CRUDEN

*Department of Civil and Environmental Engineering, University of Alberta,
Edmonton, Canada*

ROBIN FELL

*School of Civil and Environmental Engineering, University of New South Wales,
Sydney, Australia*



A.A. BALKEMA/ROTTERDAM/BROOKFIELD/1997



Table of contents

Preface	IX
---------	----

Overview paper

Quantitative risk assessment for slopes and landslides – The state of the art <i>IUGS Working Group on Landslides, Committee on Risk Assessment</i>	3
--	---

Theme papers

Toward landslide risk assessment in practice	15
--	----

N.R. Morgenstern

Landslide risk – Systematic approaches to assessment and management	25
---	----

H.H. Einstein

Landslide risk management	51
---------------------------	----

R. Fell & D. Hartford

Assessment of consequence of landslides	111
---	-----

H.N. Wong, K.K.S. Ho & Y.C. Chan

Submitted papers

Problems associated with geological characterisation for quantitative landslide risk assessment	153
---	-----

F. Baynes

Land-use and climate-change impacts on landslide hazards in SE Britain	165
--	-----

E.N. Bromhead & M.L. Ibsen

Estimating the risks from landslides using historical data	177
--	-----

D.M. Cruden

Fatal landslides and landslide risk in Canada	185
---	-----

S.G. Evans

BC Hydro's approach to evaluating reservoir slope stability from a risk perspective <i>A.S.Imrie & D.P.Moore</i>	197
Landslide hazard and risk: Current and future directions for the United States Geological Survey's Landslide Program <i>L.M.Highland</i>	207
Some methods of landslide hazard intensity mapping <i>O.Hungr</i>	215
Landslide risk management: Key issues from a British perspective <i>E.M.Lee</i>	227
Landslide risk mapping: Problems, limitations and developments <i>E.Leroi</i>	239
Challenges in applying landslide risk management to housing developments in Hong Kong <i>K.W.Leung, J.H.W.Yau & W.Roberds</i>	251
Landslide stages and risk assessment issues in sensitive clays and other soft sediments <i>J.Locat & S.Leroueil</i>	261
Management of rock slopes on the Canadian Pacific Railway <i>C.H.Mackay</i>	271
Predicting low probability rapid landslides at Roxburgh Gorge, New Zealand <i>A.Moon</i>	277
A regulatory perspective on slope hazards and associated risks to life <i>G.C.Morgan</i>	285
Quantitative and semiquantitative estimation of the probability of landsliding <i>G.R.Mostyn & R.Fell</i>	297
Integrating risk and crisis management: Meeting the needs of a sophisticated society <i>F.Oboni & G.Oldendorff</i>	317
Landslide hazard maps analogues to probabilistic earthquake ground motion hazard maps <i>D.M.Perkins</i>	327
An integrated methodology for risk assessment and risk management for development below potential natural terrain landslides <i>W.J.Roberds, K.Ho & K.W.Leung</i>	333
Mechanism and risk assessment of landslide-triggered-debris flows: Lesson from the 1996.12.6 Otari debris flow disaster, Nagano, Japan <i>K.Sassa, H.Fukuoka & W.Fawu</i>	347

Reliability and performance based design of slopes <i>W.H.Tang, T.D.Stark & M.Angulo</i>	357
Landslide hazard and risk assessments for small projects, preliminary studies and emergency response <i>D.F.VanDine</i>	365
Author index	371