Progress in Landslide Research and Technology

The Inaugural Issue of the Open Access Book Series from the International Consortium on Landslides

Cover illustration: The Aranayaka landslide in Kagelle District, Sri Lanka. Occurring in May 2016 after prolonged rainfall, it resulted in 127 fatalities and the destruction of 75 houses.

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The Growing Imperative to Address Global Landslide Risk

The Awareness Gap

"*There is still not a greater **public understanding and awareness of landslide risk...** This is in spite of the fact that **global warming** has led to a dramatic **increase in extreme weather events...** which in turn increases the likelihood of landslides.*"

— Mami Mizutori, UN Special Representative for Disaster Risk Reduction

A Manageable Threat, Not an Inevitable Fate

"*When we think of landslides, we tend to think of them as acts of God, which we can't really prepare for. That's actually dead wrong... Landslides can be managed.*"

Haiti, 2010
Magnitude 7.3

300,000 lives lost

Chile, 2010
Magnitude 8.8

435 lives lost

The difference? Investment in Disaster Reduction technologies.

— David Malone, Rector of United Nations University

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A Coordinated Global Response: The Kyoto Landslide Commitment 2020

International Consortium on Landslides (ICL)

Established in 2002, this non-governmental scientific organization promotes landslide research and integrates geosciences with technology.
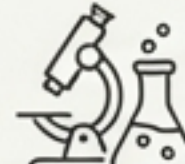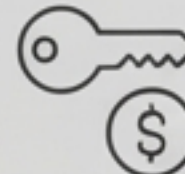
Kyoto Landslide Commitment 2020 (KLC2020)

A global initiative proposed by the ICL, signed by 90 partners, committing to the Sendai Framework, SDGs, New Urban Agenda, and the Paris Climate Agreement.

ICL **KLC2020**

Introducing 'Progress in Landslide Research and Technology' (P-LRT)

The Open Access book series of the ICL, serving as the **common platform** for **publishing** recent progress in landslide research and technology for **practical applications** and the **benefit of society**.

P-LRT Book Series	Landslides Journal
Promotion of *reducing* landslide disaster risk.	Promotion of *understanding* landslide disaster risk.
Original articles for *practice and society.*	Original research for *landslide science.*
Open Access (Free)	Charged Access

Bridging the gap between advanced science and effective action

A Unified Vision from Global Geoscience Leaders
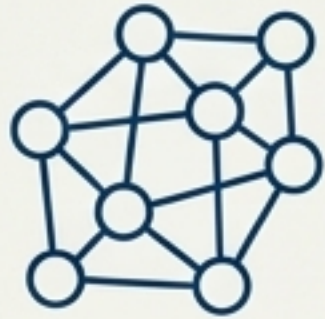
Nicola Casagli
President, ICL

P-LRT was launched as the flagship tool to promote the KLC2020. Its purpose is to create a common platform for landslide risk reduction on a global scale.

John Ludden
President, IUGS

This publication is timely. Climate drivers are affecting our planet… All key drivers for geoscience—from decarbonization to big data—are linked to landslide research.

Kathy Whaler
President, IUGG

Landslides are understudied compared to the geophysical processes that cause them. This Open Access series is a valuable resource, especially as the impacts are widely felt in the world's less developed nations.

A Framework for Contribution: Eight Pathways for Publication

P-LRT welcomes a broad range of contributions across eight distinct categories, designed to capture the full spectrum of landslide research and application.

1 Original Articles
Reporting progress of landslide research and technology.

2 Review Articles
Thematic reviews integrating a series of research.

3 ICL Landslide Lessons
Lessons from global experts with distinguished achievements.

4 IPL/WCoE/KLC Activities
Progress reports from key international programs and projects.

5 Teaching Tools
User-friendly tools with online extras (videos, manuals) to bridge science and practice.

6 Technical Notes & Case Studies
Practical notes on landslide disaster risk reduction practice.

7 World Landslide Reports
Reports from landslide-prone developing countries.

8 KLC2020 Official Promoters
Introduction to the organizations supporting the commitment.

Inside Volume 1
Foundations and Strategic Frameworks
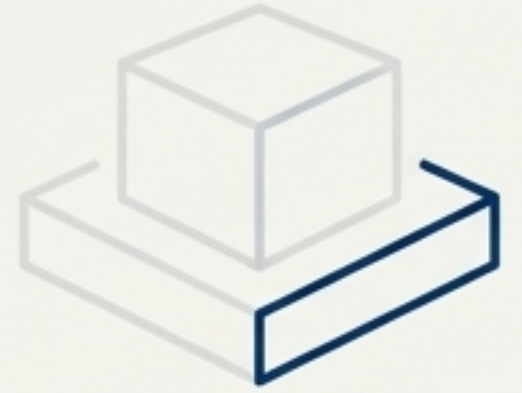
The inaugural issue begins by establishing the history and mission of the core international bodies dedicated to landslide risk reduction.

Featured Articles

International Consortium on Landslides: From IDNDR, IGCP, UNITWIN, WCDRR 2 & 3 to Kyoto Landslide Commitment 2020

International Programme on Landslides—A Short Overview of Its Historical Development
Establishment of the Disaster Risk Reduction Unit in UNESCO and UNESCO's Contribution to Global Resilience

Inside Volume 1

Frontiers of Original Research

The issue presents a wide array of original articles exploring complex landslide phenomena and innovative assessment techniques.

Cascading Hazards

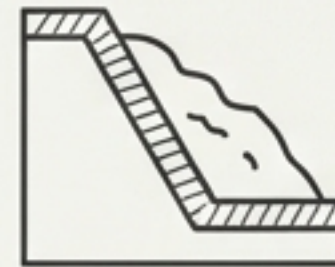Understanding and Reducing the Disaster Risk of Landslide-Induced Tsunamis

Climate & Environment

Mapping Post-fire Monthly Erosion Rates at the Catchment Scale
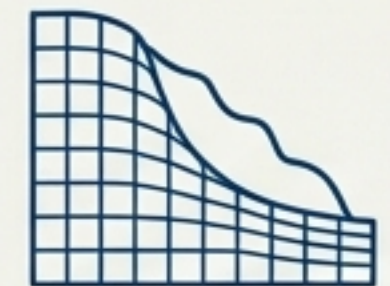
Warning & Resilience

Landslide Warning Systems in Low-And Lower-Middle-Income Countries

Engineering & Mitigation

Sustainability of Geosynthetics-Based Landslide Stabilization Solutions

Modeling & Analysis

Application of Spectral Element Method (SEM) in Slope Instability Analysis

Data & Observation

Natural-Hazard-Related Web Observatory as a Sustainable Development Tool

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Inside Volume 1
Translating Science into Action

A core focus of P-LRT is showcasing the direct application of research through international projects, Centres of Excellence, and practical teaching tools.

IPL Projects & World Centres of Excellence (WCoEs)

- Early Warning System Against Rainfall-Induced Landslide in Sri Lanka
- Advanced Technologies for Landslides—ATLaS (WCoE 2020–2023)
- Central Asia Rockslides Inventory: Compilation, Analysis and Training—Progress of the IPL WCoE
- A Global Database of Giant Landslides on Volcanic Islands

Topography · Rainfall → LS-RAPID Model → Hazard Maps · Risk Assessment

ICL Teaching Tools

- LS-RAPID Manual with Video Tutorials

Powered by a Global Coalition of Official Promoters

The Kyoto Landslide Commitment 2020 is supported by a diverse group of international **public institutions** and **private** sector leaders.

Public Sectors

International Unions, Governmental Organizations, Universities, Research Institutes

International Union of Geological Sciences

International Union of Geodesy and Geophysics

Geological Survey of Canada

University of Ljubljana, Slovenia

China University of Geosciences, Wuhan

National Taiwan University

The Czech Academy of Sciences

British Geological Survey

Private Sectors

Companies and Corporations

Nippon Koei Co., Ltd., Japan

IDS GeoRadar s.r.l., Italy

Ellegi Srl, Italy

Kiso-Jiban Consultants Co., Ltd., Japan

Kokusai Kogyo Co., Ltd., Japan

Golder Associates

Guided by a World-Class Editorial Team

The P-LRT series is managed by a distinguished team of internationally recognized experts in landslide research.

Editor-in-Chief

Kyoji Sassa

International Consortium on Landslides, Japan

Assistant Editors-in-Chief

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Supported by a distinguished Editorial Board, KLC2020 Managing Committee, and Advisory Members, including representatives from UNESCO, IUGS, and IUGG.

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An Essential, Open-Access Resource for a Resilient Future

'Progress in Landslide Research and Technology' is the definitive global platform for translating advanced landslide science into practical action. It is a vital tool for researchers, practitioners, and policymakers committed to reducing landslide disaster risk worldwide.

READ: Access the full inaugural issue free of charge.

APPLY: Use the insights, tools, and case studies in your work.

CONTRIBUTE: Submit your own research, case studies, or teaching tools to future issues.

[Access Volume 1, Issue 1 Here]

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