

IPL



International Programme on Landslides (IPL)



International Initiative of
International Consortium on Landslides (ICL)

<http://icl.dpri.kyoto-u.ac.jp/>

<http://www.unesco.org/science/earthsciences/disaster/ipl.htm>

IPPL

Outline of International Programme on Landslides (IPL)

The International Programme on Landslides (IPL) is an international initiative of the International Consortium on Landslides (ICL). IPL aims to conduct international cooperative research and capacity building on landslide risk mitigation, notably in developing countries. Protection of cultural and natural heritage is addressed for the benefit of society and the environment. The activities of IPL contributes to the International Strategy for Disaster Reduction (ISDR).

Each project can fall into one of two categories, 1) project proposed by an ICL member (Member project), 2) project proposed by the IPL review committee which covers topics of general interest of ICL (Coordinating project).

Proposals for new IPL projects as well as the follow up of existing projects are evaluated during the annual Board of Representatives (BOR) meeting of the ICL. The Board will allocate a budget for each project based on the consideration of significance and other financial resources.

The IPL committee of the ICL issues guidelines / recommendations for the new projects and the evaluation criteria for the on-going / new projects. These guidelines take into consideration the following points:

- The originality of the proposal
- The National / regional / international character of the proposed project
- Its relation to cultural heritage sites/sites of high societal value
- Capacity of fund raising

Projects Topics

The activities of IPL includes the following main topics:

1. Fundamental research on landslides.

- For example;
- Geological, geotechnical, and geophysical models;
 - Monitoring including remote sensing and non-invasive systems;
 - New technology, expert and intelligent systems;
 - Earthquake-triggered landslides and rain-induced landslides; and
 - Rapid and long-traveling flow phenomena.

2. Global data base and landslide hazard assessment.

- For example;
- Global database on landslide research;
 - Effects of meteorological and hydrological factors and global climatic change;
 - Assessment of landslide data; and
 - GIS applications to landslides.

3. Landslide Risk Mitigation.

- For example;
- Landslide risk evaluation: hazard assessment, hazard mapping and vulnerability assessment;
 - Early warning system;
 - Land development and land-use planning; and
 - Landslide remedial measures.

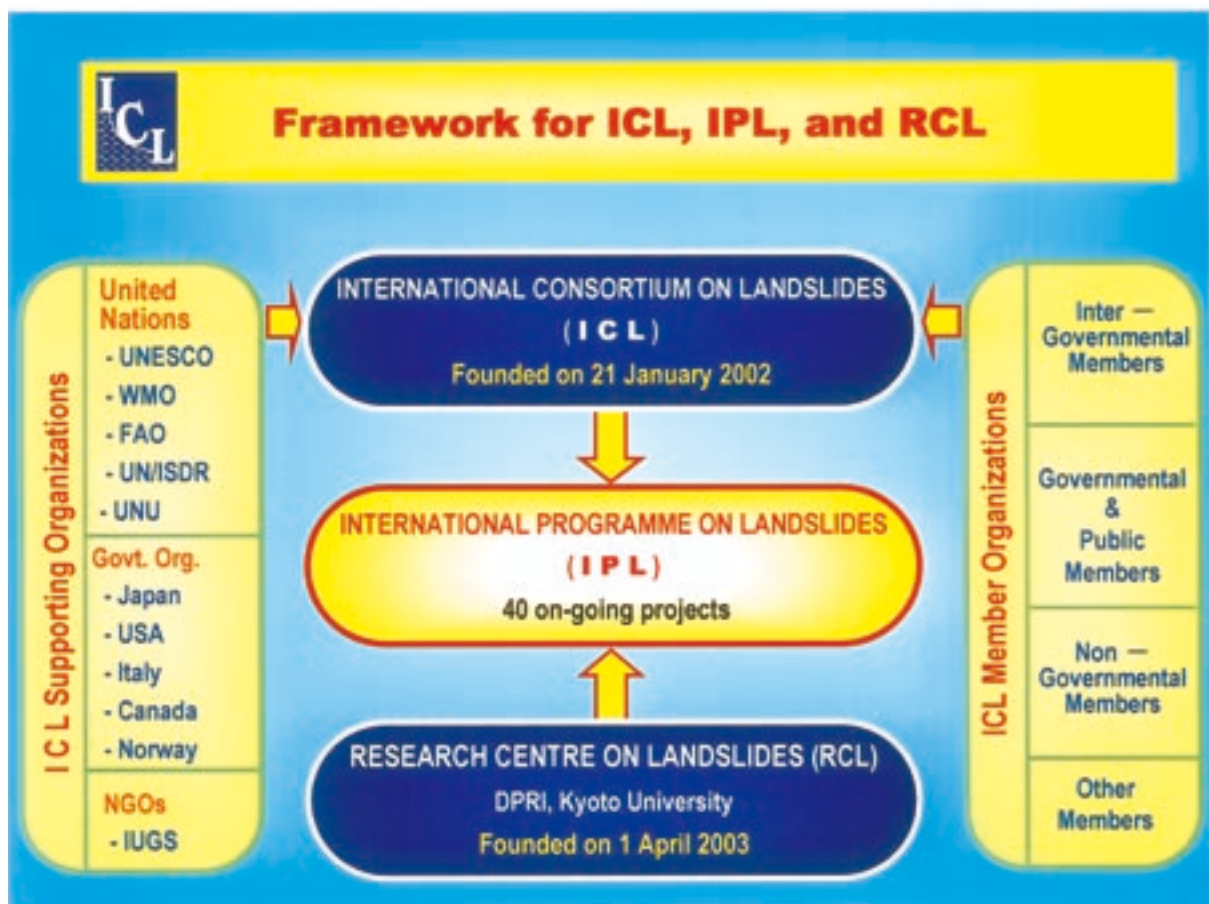
4. Cultural and Societal Application. For example;

- Cultural and natural heritage sites such as Machu Picchu World Heritage site in Peru and the Masoule case in Iran;
- Case studies in sites of high societal value;
- Joint investigations of catastrophic landslide disasters; and
- Special focus on case studies in developing countries.

5. Capacity Building, Communication and Information. For example;

- International co-ordination and networking with other organizations or international initiatives on landslides;
- Publication of the "Landslide" Journal, books and guidelines;
- Conference organization and sponsorship;
- Public awareness through press conferences and public seminars;
- Training courses in specific countries; and
- Supplying expert knowledge.

IPL is coordinated by the International Consortium on Landslides. The secretariat of IPL is located in the headquarter building of Kyoto University-UNESCO-ICL UNITIWN Programme in the Research Centre on Landslides (RCL) of the Disaster Prevention Research Institute of Kyoto University.

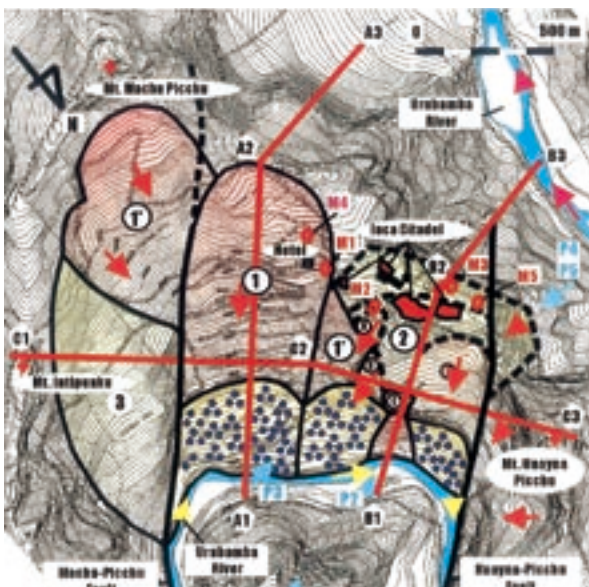


1. Landslide Investigation of Machu Picchu, Peru (IPL C101-1)

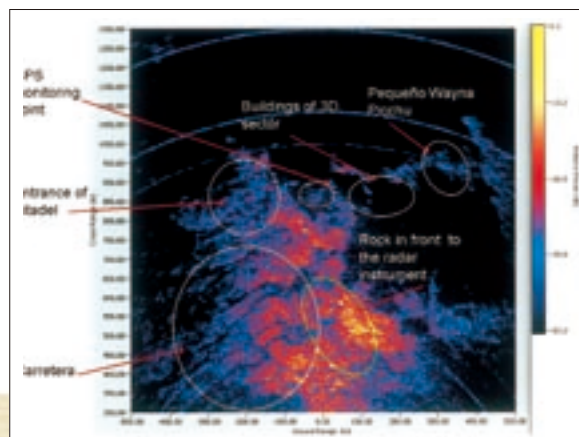
IPL Coordinating Project C101-1 "Landslide Investigation in Machu Picchu" was originally started by the Japanese researchers in the year 2000. This project aims to investigate the landslide risk in Machu Picchu area by the international expert teams. Now this project involves sub-project by the Canadian, Italian, Czech, and Slovak teams. These teams jointly organize field investigations, field monitoring and research on risk evaluation of landslides in Machu Picchu.



Photo of Machu Picchu and estimated landslide block boundaries passing through the monument.



Location of landslide blocks in Machu Picchu area.



Ground-based Interferometric Synthetic Aperture Radar (InSAR) installed in Peru Rail Station and obtained power distribution.

Examples of IPL projects



Technical Committee for investigation of landslides in Machu Picchu in Lima to examine the IPL-C-101-1 research plan and on-going achievements.



Long-span extensometer below the Sanctuary Lodge Hotel



Long-span extensometer



Long-span extensometer crossing the Plaza from below the Intihuatana to Residence block.

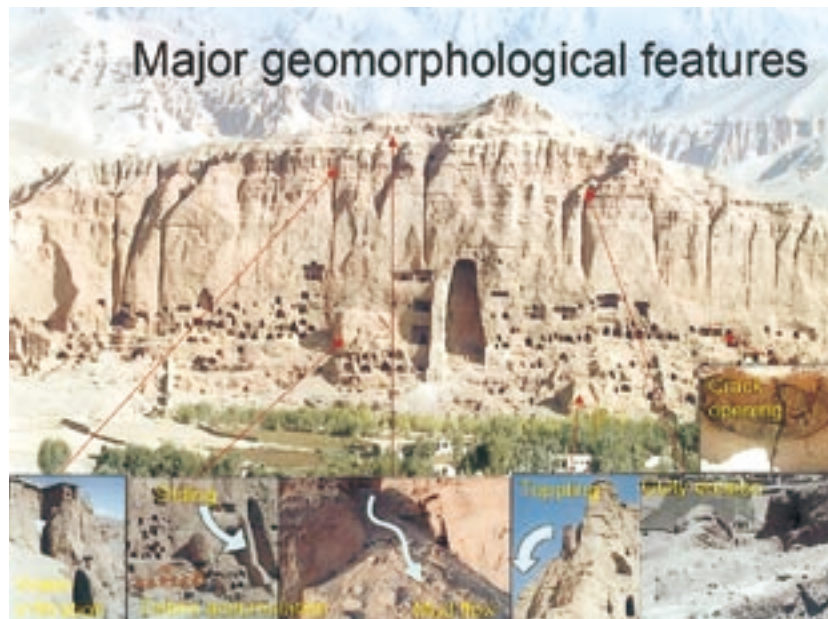
2. The Geomorphological instability of the Buddha niches and surrounding cliff in Bamiyan valley (Central Afganistan) (C101-3)

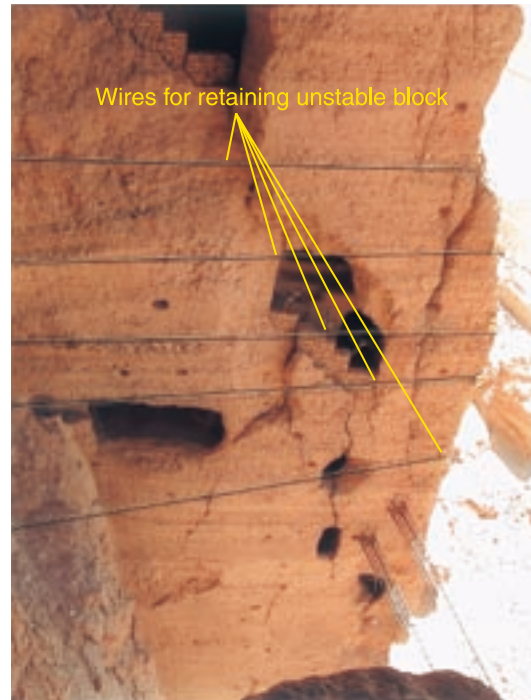
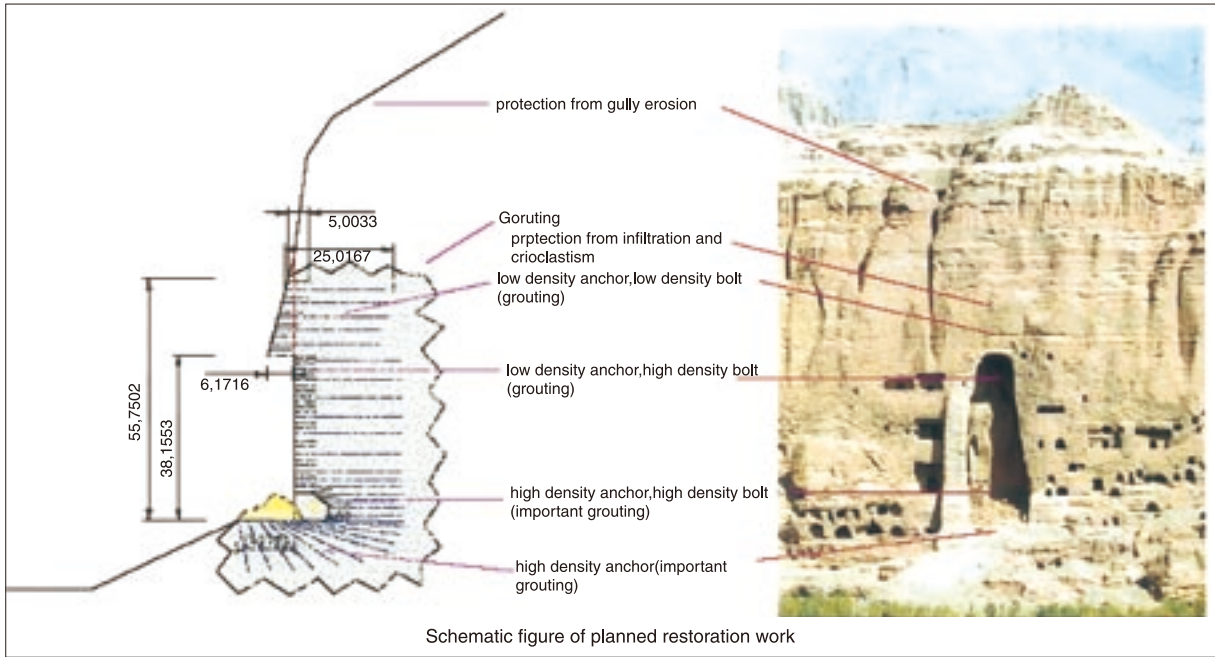
In March 2001 the two great Buddhist statues were destroyed by Talibans in the Bamiyan valley (Central Afghanistan), a high world wide attention was paid to the possible reconstruction/rehabilitation of the sites, in order not to lose these important cultural heritage features.

UNESCO was involved since the beginning, acting both before and after the destruction of the statues. The main goal of UNESCO is now to preserve and re-set in place as much as possible of the original features (anastilosis). Nevertheless, preliminary to any further decision, the first field inspections in October 2002 highlighted the critical situation of the cliff where the statues were carved and where, as a consequence of the explosion, the stability is becoming more and more precarious.

The general purpose of the present project is to contribute to the rehabilitation of one of the most important cultural heritage of Afghanistan, and then to contribute to the possible economic development of the area

This project aims to contribute to the possible restoration (anastylosis) of the two Buddha Statues destroyed by Talibans in March 2001 in Afghanistan. Presently, the major problem is the stability of the cliff where the statues were excavated. Before any intervention on the remains of the statues, it is essential to investigate the stability conditions of the cliff, and to propose a restoration work with the minimum environmental impact, in strict collaboration with experts of cultural heritage restoration and, possibly, to be realized by local workers.





Installed prevention work

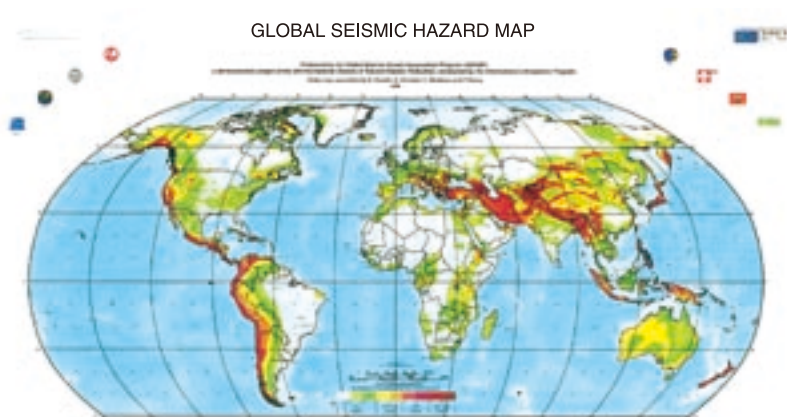


Conglomerate (left) and siltstone (right) after a few minutes of immersion in water. Siltstone is vulnerable to water intrusion.

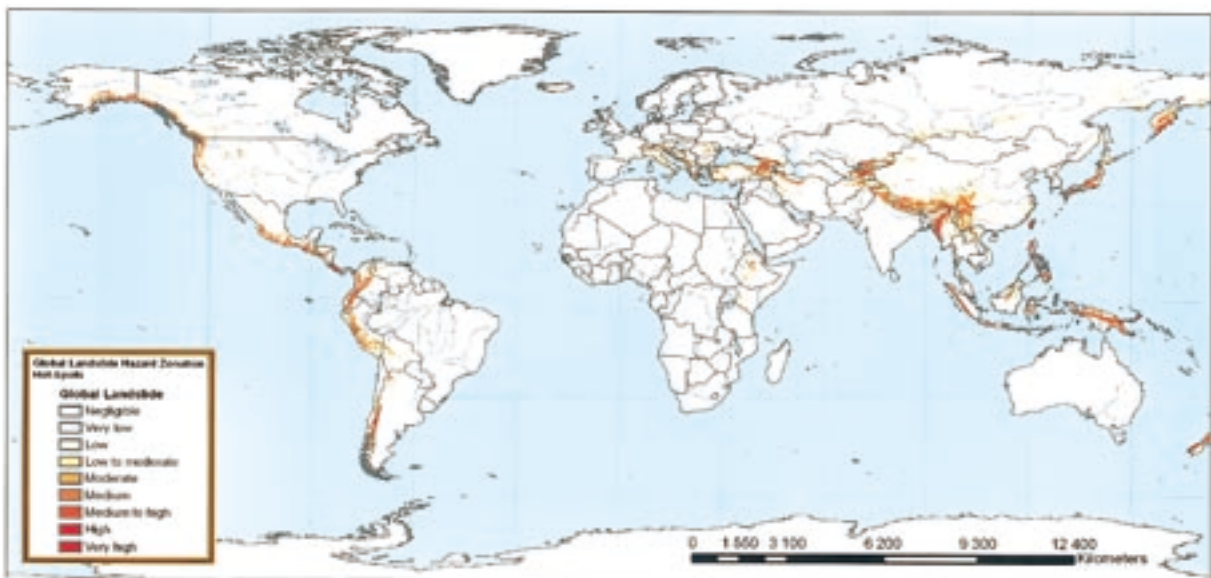
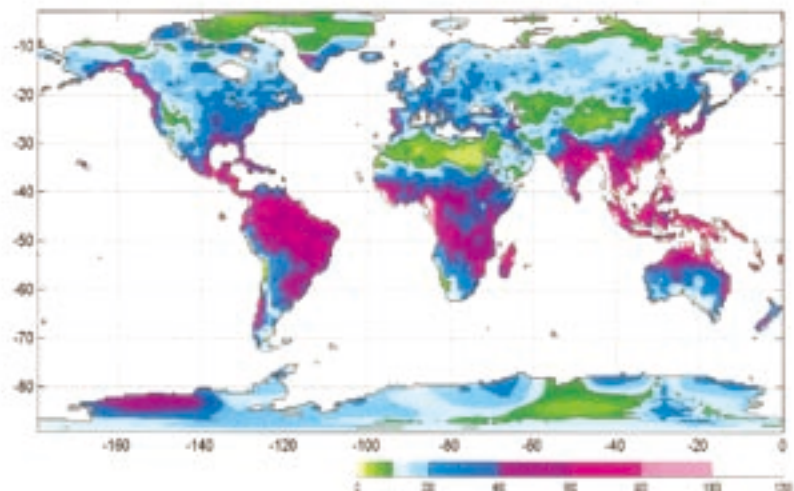
3. Assessment of global high risk landslide disaster hotspots (C102)

This project aims to develop a databased, first-order identification of geographic areas that form the global landslide risk disaster hot spots on a non- national scale with the main emphasis on developing countries. This includes combining the identified hazard with the vulnerability for people and infrastructure to obtain the risk. This project also intends to provide input to the decision-makers on where additional risk identification, risk reduction and risk transfer measures are especially warranted.

This project was completed successfully in 2004.



GLOBAL EXPECTED MONTHLY EXTREME PRECIPITATION(mm/month)



Global Landslide Hotspot Map

4. Areal prediction of earthquake and rain induced rapid and long-traveling flow phenomena (APERITIF) (M101)

Among various landslide types, the rapid, long run-out landslides, especially those which occur in urbanizing areas, often cause catastrophic damage and are essential for further study.

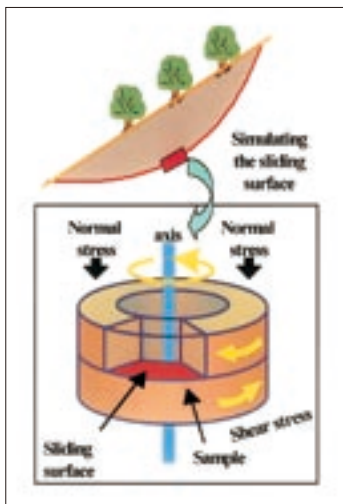
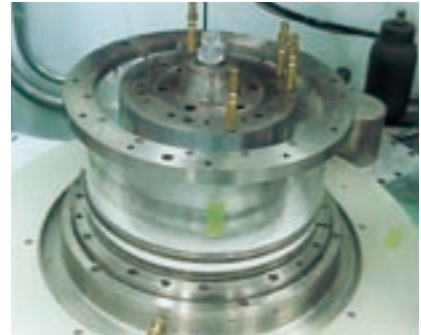
This project was funded the Special Coordination Fund for Promoting Science and Technology by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT) from 2001 - 2003 Fiscal Year.

This APERITIF project consists of the following 4 sub-projects.

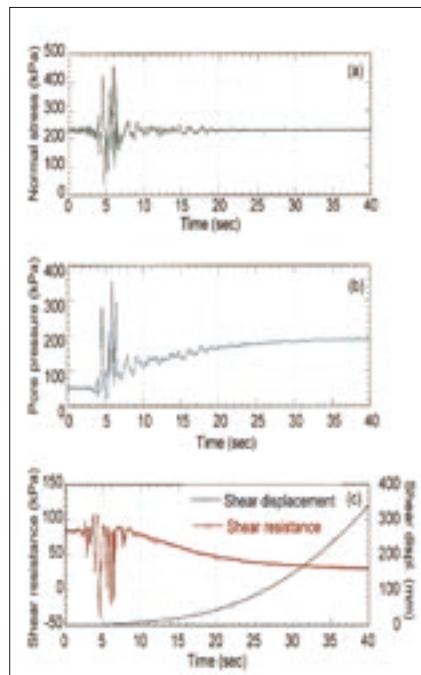
- 1) Mechanism of rapid long-runout landslides triggered by earthquakes and heavy rainfall
- 2) Development of remote sensing survey and analysis of micro-topography to identify locations at high landslide risk
- 3) Research on process and areal prediction of flowslides
- 4) Integrated study for prediction of landslide hazards in urbanized areas.



Nikawa Landslide triggered by January 1995 Kobe Earthquake which killed 34 persons



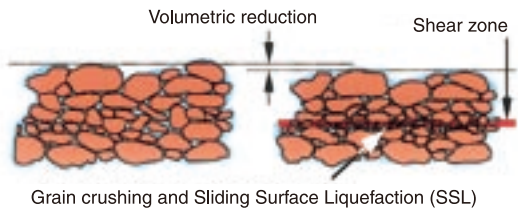
Schematic figure of ring shear test (above), example of sliding surface liquefaction (right)



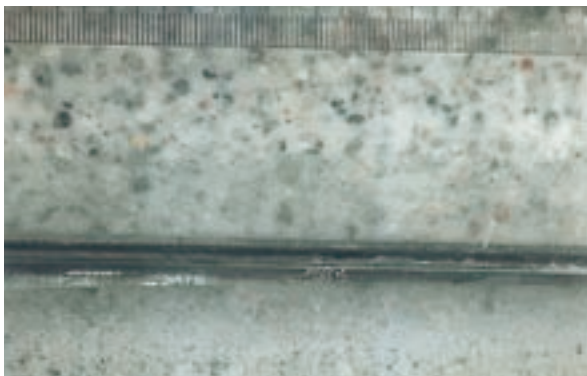
Geotechnical simulation of landslide triggering by applying actual earthquake waveform



Ring shear apparatus with transparent sample box



Before shearing



Shear Displacement: $L = 3000\text{cm}$. Fine grains were produced by grain crushing.



Real-scale landslide flume test

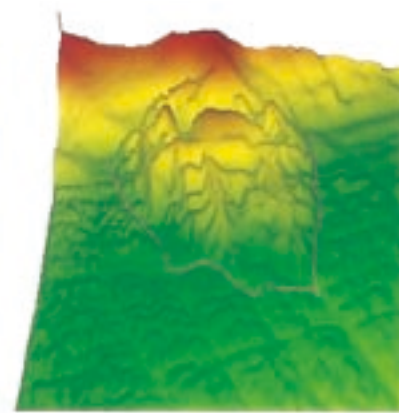
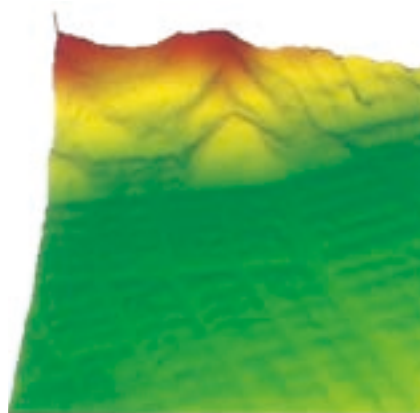


Artificial rainfall experiment site for triggering landslide on natural slope



Step: 0 Time: 0

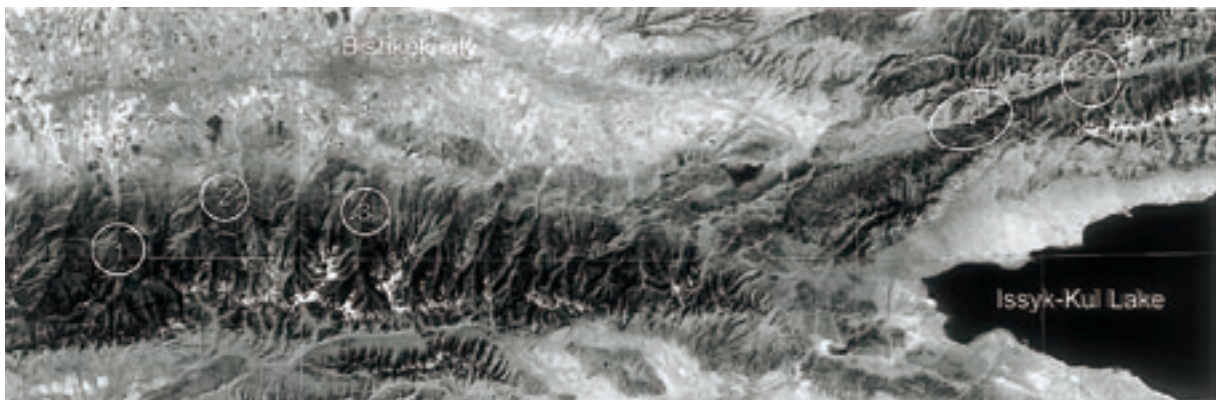
Step: 6000 Time: 74.669
 $U_{\text{max}}: 4.3 \text{ m/s}$ $V_{\text{max}}: 5.2 \text{ m/s}$



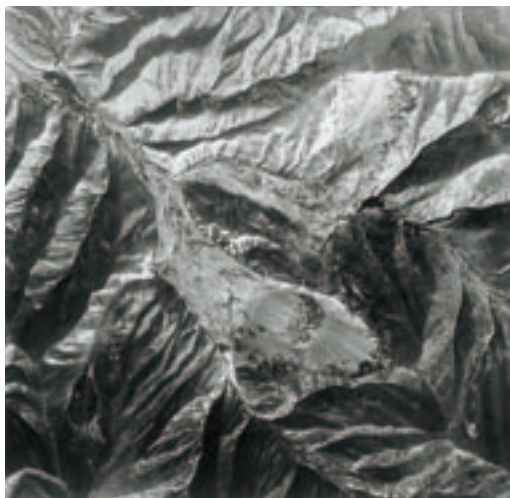
Left: residential area of suburb Tokyo (marked as B), for APERITIF application study of landslide hazard mapping. Middle and right: Simulation result of numerical simulation by Sassa's geotechnical model using parameters obtained by ring shear tests on borehole core samples.

5. Detailed study of the internal structure of large rockslide dams in the Tien Shan and international field mission: Internal structure of dissected rockslide dams in Kyrgyzstan (M111)

The IPL Project M111 aims for a better understanding of the mechanisms of rockslide formation and related hazard assessment in mountainous areas, by comparing the Tien Shan case studies with those in the Alps, New Zealand, the Great Caucasus, and other regions. This will be performed by a comparative study of large rockslides in different regions, especially those deeply dissected by subsequent erosion. This project is preparing to organize an ICL annual landslide summer school in Kokomeran, Kyrgyzstan from 2006.



Location of rockslides studied in Kyrgyzstan



Aerial photograph of the Belogorka "twins" rockslides in the Sokuluk River Basin



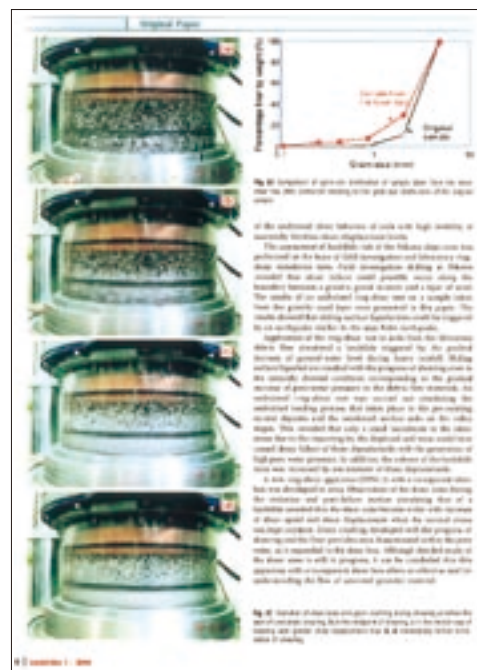
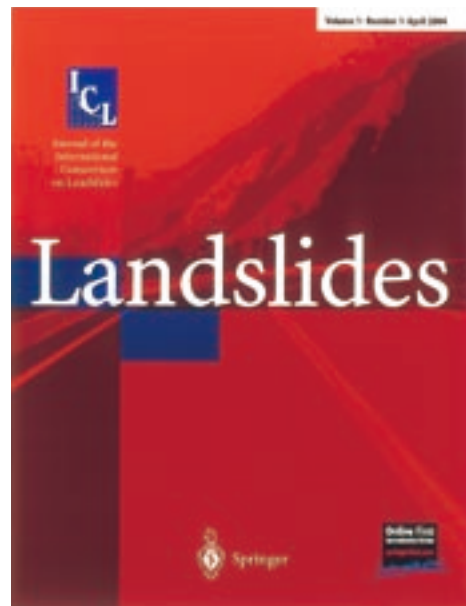
6. Publication of the International full color quarterly journal “Landslides” .

ICL launched a full-color, quarterly international journal “Landslides” in April 2004, which is owned by ICL. The journal is printed and distributed by Springer-Verlag, Heidelberg, Germany. The Springer website provides not only all of the articles, but also “Online-First” service which allows quick electric publication on the net.

Aims

Landslides are gravitational mass movements of rock, debris or earth. They may occur in conjunction with other major natural disasters such as floods, earthquakes and volcanic eruptions. Expanding urbanization and changing land-use practices have increased the incidence of landslide disasters. Landslides as catastrophic events include human injury, loss of life and economic devastation and are studied as part of the fields of earth, water and engineering sciences. The aim of the journal Landslides is to be the common platform for the publication of integrated research on landslide processes, hazards, risk analysis, mitigation, and the protection of our cultural heritage and the environment. The journal publishes research papers, news of recent landslide events and information on the activities of the International Consortium on Landslides.

- Landslide dynamics, mechanisms and processes
- Landslide risk evaluation: hazard assessment, hazard mapping, and vulnerability assessment
- Geological, Geotechnical, Hydrological and Geophysical modeling
- Effects of meteorological, hydrological and global climatic change factors
- Monitoring including remote sensing and other non-invasive systems
- New technology, expert and intelligent systems
- Application of GIS techniques
- Rock slides, rock falls, debris flows, earth flows, and lateral spreads
- Large-scale landslides, lahars and pyroclastic flows in volcanic zones
- Marine and reservoir related landslides
- Landslide related tsunamis and seiches
- Landslide disasters in urban areas and along critical infrastructure
- Landslides and natural resources
- Land development and land-use practices
- Landslide remedial measures / prevention works
- Temporal and spatial prediction of landslides
- Early warning and evacuation
- Global landslide database



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All articles can be viewed at Springer Verlag web page (www.springerlink.com).

List of On-going Projects in 2005

The initial projects were approved in the first session of Board of Representatives at UNESCO Headquarters in Paris, November 2002, and further projects were approved in the second session of Board of Representatives in Vancouver, October 2003, and the third session in Bratislava, October 2004. The on-going projects in 2005 are as follows:

Coordinating Projects

C100:

"Landslides": Journal of International Consortium on Landslides (2002-)

Four issues/year, full colour, both printed version and web version.

Contact: sassa@scl.kyoto-u.ac.jp

C101:

Landslide risk evaluation and mitigation in cultural and natural heritage sites (2002-)

Coordinators: Kyoji Sassa and Paolo Canuti

Contact: sassa@scl.kyoto-u.ac.jp

C101-1:

Landslide investigation in Machu Picchu (2002-)

Coordinator: Kyoji Sassa

Contact: sassa@scl.kyoto-u.ac.jp

C101-1-1:

Low environmental impact technologies for slope monitoring by radar interferometry: application to Machu Picchu site (2002-)

Office: ENEA (Italian Agency for New Technology Energy and Environment)

Proposer: Claudio Margottini

Contact: margottini@enea.casaccia.it

C101-1-2:

Expressions of risky geomorphologic processes in deformations of rock structures at Machu Picchu (2002-)

Office: Research Center of Earth Dynamic, Charles University, Czech Republic

Proposers: Vit Vilimek and Jiri Zvelebil

Contact: vilimek@natur.cuni.cz

C101-1-3:

Shallow geophysics and terrain stability mapping techniques applied to the Urubamba Valley, Peru: Landslide hazard evaluation (2002-)

Office: Instituto Geologico Minero y Metalurgico, Peru (INGEMMET)

Proposers: Romulo Mucho and Peter Bobrowsky

Contact: rmucho@ingemmet.gob.pe, pbobrows@NRCan.gc.ca

C101-1-4:

A proposal for an integrated geophysical study of the Cuzco region (2004-)

Office: Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS), Italy

Proposer: Daniel Nieto Yabar

Contact: dnieto@ogs.trieste.it

C101-2:

Landslides monitoring at selected historic sites in Slovakia (2002-)
Office: Faculty of Natural Science, Comenius University in Bratislava, Slovakia
Proposer: Jan Vlcko
Contact: vlcko@nic.fns.uniba.sk

C101-3:

The geomorphological instability of the Buddha niches and surrounding cliff in Bamiyan valley (Central Afghanistan) (2002-)
Office: Consorzio Civita, Italy
Proposer: Claudio Margottini
Contact: margottini@enea.casaccia.it

C101-4:

Stability assessment and prevention measurement of Lishan Landslide, Xian, China (2002-)
Office: Lishan Landslide Prevention and Control Office, Xian, China
Proposer: Qing-Jin Yang
Contact: QY213@163.com

C101-5:

Environment protection and disaster mitigation of rock avalanches and landslides in Tianchi Lake region and natural preservation area of Changbai Mountains, Northeast China (2002-)
Office: Environmental Geological Disaster Research Institute, Jilin University, China
Proposer: Binglan Cao
Contact: caobl@jlu.edu.cn

C101-6:

Conservation of Masouleh Town (2002-)
Office: Building and Housing Research Center, Iran
Proposer: S.H. Tabatabaei
Contact: s_tabatabaei@yahoo.com

C102:

Assessment of global high-risk landslide disaster hotspots (2002-2004)
Office: International Centre for Geohazards at Norwegian Geotechnical Institute (NGI), Oslo
Co-ordinator: Farrokh Nadim
Contact: FNa@ngi.no

C103:

Global landslide observation strategy (2004-)
Co-ordinators: Kauro Takara and Nicola Casagli
Contact: takara@rdp.dpri.kyoto-u.ac.jp

Member's Projects (approved during the 1st BOR/ICL in Paris, November 2002)**M101:**

Areal prediction of earthquake and rain induced rapid and long-travelling flow phenomena (APERITIF) (2002-)
Office: Disaster Prevention Research Institute, Kyoto University
Proposer: Kyoji Sassa
Contact: sassa@scl.kyoto-u.ac.jp

M102:

Disaster evaluation and mitigation of the giant Jinnosuke-dani Landslide in the Tedoru water reservoir area, Japan (2002-2004)
Office: Geotechnical Engineering Group, Kanazawa University, Japan
Proposer: Tatsunori Matsumoto
Contact: matsumot@t.kanazawa-u.ac.jp

M103:

Capacity building on management of risks caused by landslides in Central America countries (2002-)
Office: International Centre for Geohazards at Norwegian Geotechnical Institute (NGI), Oslo
Proposer: Farrokh Nadim
Contact: FNa@ngi.no

M104:

A global literature study on the use of critical rainfall intensity for warning against landslide disasters (2002-)
Office: International Centre for Geohazards at Norwegian Geotechnical Institute (NGI), Oslo
Proposer: Haakon Heyerdal
Contact: HHe@ngi.no

M105:

Hurricane-flood-landslide continuum: A forecast system (2002-)
Office: U.S. Geological Survey
Proposer: Randall Updike
Contact: updike@usgs.gov

M106:

A best practices handbook for landslide hazard mitigation (2002-)
Office: U.S. Geological Survey and Geological Survey of Canada
Proposers: Lynn Highland and Peter Bobrowsky
Contact: pbobrows@NRCan.gc.ca

M107:

Landslide risk assessment in landslide prone regions of Slovakia - modelling of climatic changes impact (2002-)
Office: Faculty of Natural Science, Comenius University in Bratislava, Slovakia
Proposer: Rudolf Holzer
Contact: updike@usgs.gov

M108:

Disaster evaluation and mitigation of landslides in the Three-Gorge water reservoir area, China (2002-)
Office: Chongqing Seismological Bureau, China
Proposer: Renjie Ding
Contact: hww161@sina.com

M109:

Recognition, mitigation and control of landslides of flow type in Greater Kingston and adjoining parishes in Eastern Jamaica, including public education on landslide hazard (2002-)

Office: Department of Geography and Geology, University of the West Indies, Jamaica

Proposer: Rafi Ahmad

Contact: rahmad@uwimona.edu.jm

M110:

Capacity building in landslide hazard management and control for mountainous developing countries in Asia (2002-)

Office: International Centre for Integrated Mountain Development (ICIMOD), Nepal and Research Institute for Hazards in Snowy Areas, Niigata University, Japan

Proposer: Tianchi Li and Hideaki Marui

Contact: maruihi@cc.niigata-u.ac.jp

M111:

Detail study of the internal structure of large rockslide dams in the Tien Shan and international field mission: <Internal structure of dissected rockslide dams in Kyrgyzstan> (2002-)

Office: Hydroproject Institute, Russia

Proposer: Alexander Strom

Contact: a.strom@g23.relcom.ru

M112:

Landslide mapping and risk mitigation planning in Thailand

Office: Land Development Department (LDD), Govt. of Thailand and the Japan Landslide Society (2002-)

Proposers: Chaiyasit Aneksamparm and Toyohiko Miyagi

Contact: ddgt@ldd.go.th.

M113:

Zone risk map: Towards harmonized, intercomparable landslide risk assessment and risk maps (2002-)

Office: Faculty of Engineering, Cairo University, Egypt

Proposer: Yasser Elshayeb

Contact: yasser.elshayeb@link.net

M114:

Landslide hazard assessment along Tehran-Caspian seaside corridors (2002-)

Office: Soil Conservation and Watershed Management Research Institute, Iran

Proposer: Zieaoddin Shoaei

Contact: shoaei@scwmrc.com

Member's Projects (approved during the 2nd BOR/ICL in Vancouver, Canada, October 2003)

M115:

Establishment of a regional network for disaster mitigation, disaster education, and disaster database system in Asia (2003-)

Office: Faculty of Engineering, Ehime University, Japan

Proposer: Ryuichi Yatabe

Contact: yatabe@dpc.ehime-u.ac.jp

M116:

Standardization of terminology, integration of information and the development of decision support software in the area of landslide hazards (2003-)

Office: Geological Survey of Canada

Proposer: Catherine Hickson

Contact: Chickson@nrcan.gc.ca

M117:

Geomorphic hazards from landslide dams (2003-)

Office: Swiss Federal Institute of Snow and Avalanche Research, Switzerland

Proposer: Oliver Korup

Contact: korup@slf.ch

M118:

Development of an expert DSS for assessing landscape impact mitigation works for cultural heritage at risk (VIP project) (2003-)

Office: ENEA Agency, Italy

Proposer: Giuseppe Delmonaco

Contact: delmonaco@casaccia.enea.it

M119:

Slope instability phenomena in Korinthos county (2003-)

Office: Institute of Geology and Mineral Exploration (IGME)

Proposer: Nikos Nikolaou

Contact: nikolaou@igme.gr

M120:

Landslide hazard zonation in Garhwal using GIS and geological attributes (2003-)

Office: Center of Disaster Mitigation- Earth Sciences, Indian Institute of Technology Roorkee, India

Proposer: Ashok Kumar Pachauri

Contact: ashokfes@iitr.ernet.in

M121:

Integrated system for a new generation of monitoring of dynamics of unstable rock slopes and rock fall early warning (2003-)

Office: Research Center of Earth Dynamic, Charles University, Czech Republic

Proposer: Jiri Zvelebil and Vit Vilimek

Contact: vilimek@natur.cuni.cz

Member's Projects (approved during the 3rd BOR/ICL in Bratislava, Slovakia, October 2004)

M122:

Inka cultural heritage and landslides: detailed studies in Cusco and Sacred Valleys (2004-)

Office: Grudec Ayar, Cusco, Peru

Proposer: Raul Carreno

Contact: raulcarreno@ayar.org.pe

M123:

Cusco regional landslide hazard mapping and preliminary assessment (2004-)

Office: Grudec Ayar, Cusco, Peru

Proposer: Raul Carreno

Contact: raulcarreno@ayar.org.pe

M124:

The influence of clay mineralogy and ground water chemistry on the mechanism of landslides (2004-)

Office: Institute of Environmental Geosciences, RAS, Russia

Proposer: Victor Ivanovich Osipov

Contact: direct@geoenvironment.ru

M125:

Landslide mechanisms on volcanic soils (2004-)

Office: Universidad Nacional de Colombia

Proposer: Carlos Edurdo Rodriguez

Contact: cerodriguezpi@unal.edu.co

M126:

Compilation of landslide / rockslide inventory of the Tien Shan Mountain System (2004-)

Office: Institute of Environmental Geospheres Dynamics, RAS, Russia

Proposer: Alexander Strom

Contact: a.strom@g23.relcom.ru

M127:

Development of low-cost detector of slope instability for individual use (2004-)

Office: University of Tokyo, Japan

Proposer: Ikuo Towhata

Contact: towhata@geot.t.u-tokyo.ac.jp

M128:

Development of sounding methodology for a root-reinforced landslide mass (2004-)

Office: University of Tokyo, Japan

Proposer: Kazuo Konagai

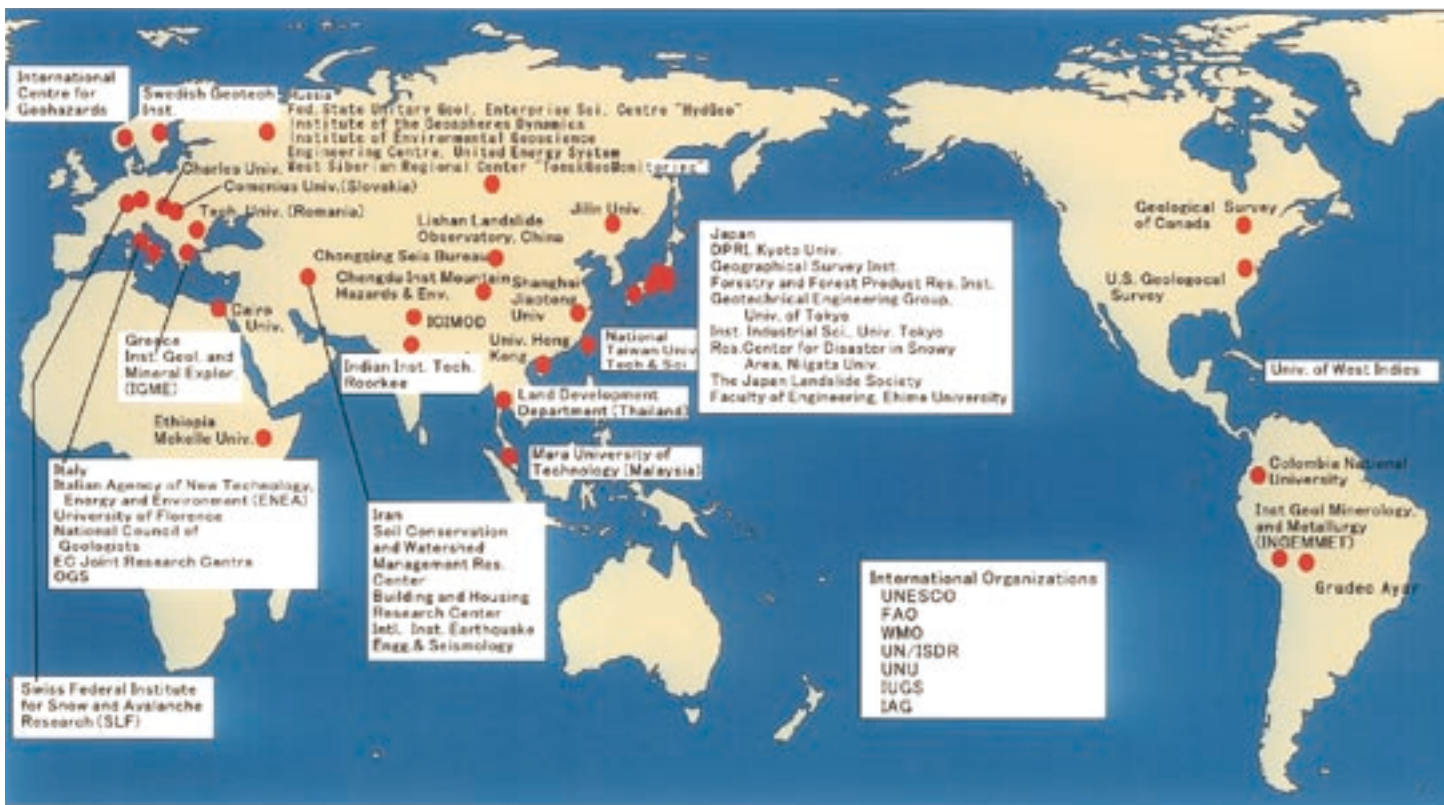
Contact: konagai@iis.u-tokyo.ac.jp

List of ICL member organizations (2005) (in the alphabetical order of country name)

1. Geological Survey of Canada, Peter BOBROWSKY/ Baolin WANG
2. Chengdu Institute of Mountain Hazards and Environment, Chinese Academy of Sciences, China, Tianchi LI / Peng CUI
3. Chongqing Seismological Bureau, China, Renjie DING
4. Jilin University, Environmental Geological Disaster Research Institute, China, Binglan CAO
5. Lishan Landslide Prevention and Control Office, Xian Municipal Government, China, Yong WANG / Yongjin TIAN
6. Northeast Forestry University, China, Wei SHAN / Yin-ge ZHANG
7. Shanghai Jiotong University, School of Civil Engineering and Mechanics, Geotechnical Engineering Group, China, Xingchun HUANG / Dexuan ZHANG / Souji DU
8. The University of Hong Kong, Department of Civil Engineering/Jockey Club Research and Information Center for Landslip Prevention and Land Development, China, C.F. LEE / J. YANG
9. National Taiwan University of Science and Technology, Ecological and Hazard Mitigation Engineering Research Center, China: Taipei, H.J. LIAO
10. Universidad Nacional de Columbia, Columbia, Carlos Eduardo RODRIGUEZ / Gonzalez GARCIA
11. Charles University, Research Center of Earth Dynamic, Czech Republic, Vit VILIMEK / Jiri ZVELEBIL
12. Cairo University, Faculty of Engineering, Rock Engineering Laboratory, Egypt, Yasser ELSHAYEB / Hany HELAL
13. Mekelle University, Ethiopia, Kurkura KABETO / Trufat HAILEMARIAM
14. Institute of Geology and Mineral Exploration (IGME), Greece, Nikos NIKOLAOU / Eleftheria POYIADJI
15. Indian Institute of Technology, Roorkee, India, A.K. PACHAURI
16. Building & Housing Research Center, Iran, S.H. TABATABAEI / M.H. Tofigh RAYHANI
17. International Institute of Earthquake Engineering and Seismology (IIEES), Iran, Mohammadreza MAHDAVIFAR / Ebrahim HAGHSHENAS
18. Soil Conservation and Watershed Management Research Institute (SCWMRI), Iran, Zieaoddin SHOAEI
19. Consiglio Nazionale dei Geologi, Italy, Pietro Antonio De PAOLA / Gerardo NOLLEDI
20. ENEA (Italian Agency for New Technologies Energy and Environment), Italy, Claudio MARGOTTINI / Guiseppe DELMONACO

- 21.** European Commission's Joint Research Centre, IPSC/HSU, Italy Alois SIEBER / Dario TARCHI
- 22.** University of Firenze, Earth Sciences Department, Italy, Paolo CANUTI / Nicola CASAGLI
- 23.** Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS, Italy, Daniel Nieto YABAR / Emanuele LODOLO
- 24.** International Association of Geomorphologists (IAG), Italy, Andrew GOUDIE / Mario PANIZZA
- 25.** University of the West Indies, Jamaica, Rafi AHMAD
- 26.** Ehime University, Faculty of Engineering, Japan, Ryuichi YATABE / Netra P. BHANDARY
- 27.** Forestry and Forest Product Research Institute, Japan, Kiyoshi TANAKA / Hirotaka OCHIAI
- 28.** Geographical Survey Institute, Japan, Masanori SUGIYAMA / Makoto IIDA
- 29.** Japan Landslide Society, Japan, Hiromitsu YAMAGISHI / Toyohiko MIYAGI
- 30.** Kyoto University, Disaster Prevention Research Institute, Research Centre on Landslides, Japan, Kyoji SASSA / Hiroshi FUKUOKA
- 31.** Kyoto University, Disaster Prevention Research Institute, Flood Section, Japan, Kaoru TAKARA / Roy SIDLE
- 32.** Niigata University, Research Institute for Hazards in Snowy Areas, Japan, Hideaki MARUI / Naoki WATANABE
- 33.** University of Tokyo, Department of Civil Engineering, Geotechnical Engineering Group, Japan, Ikuo TOWHATA
- 34.** University of Tokyo, Institute of Industrial Science, Japan, Kazuo KONAGAI
- 35.** Mara University of Technology, Malaysia, Roslan Zainal ABIDIN / Yusof ABD. RAHMAN
- 36.** International Centre for Integrated Mountain Development (ICIMOD), Nepal, Binayak BHADRA
- 37.** International Centre for Geohazards (ICG) in Oslo, Norway, Oddvar KJEKSTAD / Farrokh NADIM
- 38.** Grudec Ayar, Peru, Raul CARRENO
- 39.** Instituto Geologico Minero y Metalurgico (INGEMMET), Peru, Romulo MUCHO / Antonio GUZMAN
- 40.** Proexrom S.R.L. Technical University, Civil Engineering Faculty, Romania, Nicolae BOTU / Dan CARASTOIAN
- 41.** Federal State Unitary Geological Enterprise Scientific Centre "HydGeo", Russia, Oleg ZERKAL / Julia V. Frolova
- 42.** Institute of the Geospheres Dynamics, Russian Academy of Sciences, Russia, Alexander STROM / Nikolai SYRNIKOV
- 43.** Institute of Environmental Geoscience (IEG RAS), Russian Academy of Sciences, Russia, Victor OSIPOV / Svalova VALENTINA

- 44. Open Joint-Stock Company Engineering Centre, Unified Energy System of Russia, Alexander PIOTROVSKIY
- 45. West-Siberian Regional Center (RC "TomskGeoMonitoring"), SC HydGeo, Russia, Viktor A. LGOTIN
- 46. Comenius University, Faculty of Natural Sciences, Department of Engineering Geology, Slovakia, Rudolf HOLZER / Ján VLČKO
- 47. Swedish Geotechnical Institute, Sweden, Karin RANKKA / Bo BERGGREN
- 48. Swiss Federal Institute for Snow and Avalanche Research SLF, Switzerland, Walter AMMANN / Oliver KORUP
- 49. Ministry of Agriculture and Cooperatives, Land Development Department, Thailand, Parida KUNEEPONG / Aniruth POTICHAN
- 50. U.S. Geological Survey, USA, Peter T. LYTTLE / Randall G. UPDIKE



Map of ICL Member Organizations

IPL Secretariat

IPL secretariat is located in the UNITWIN Headquarter Building in DPRI, Kyoto University, Kyoto, Japan. Kyoto University, UNESCO and ICL has agreed to launch the UNITWIN (university twining and networking) Cooperation Programme “Landslide risk mitigation for society and the environment” in March 2003. Kyoto University and ICL has jointly constructed its headquarter building in the Uji campus of Kyoto University. The opening ceremony was organized in September 2004 under the presence of Kazuo OIKE (President of Kyoto University), three representative from UNESCO; Wolfgang EDER (Division of Earth Science), Badaoui ROUHBAN (Section of Disaster Reduction) and Winsome GORDON (Section of Higher Education), Hans van GINKEL from United Nation University (UN Under Secretary-general), Luis J. Macchiavello (Peruvian Ambassador), Satoru Nishikawa (Cabinet office of Japan), Takayuki Nakamura (Ministry of Education, Culture, Sports, Science and Technology of Japan) and others.

Right photo is a symbol panel of Haiku with the background of Machu Picchu addressing the development of international cooperation in the field of landslides. Next page photo presents the view of Headquarter building.





A joint photo commemorating the establishment of International Consortium on Landslides, 23 January 2002, Kyoto, Japan



A joint photo of the participants to the opening ceremony of the UNITWIN Programme Headquarter Building, 3 September 2004, Kyoto, Japan



Unveiling ceremony of UNITWIN Panel in September 2004

Application for International Programme on Landslides

Application format for the IPL is below. Those interested in application are requested to submit the proper forms to the ICL Secretariat.

IPL Project Proposal Format

(MAXIMUM: 3 PAGES IN LENGTH)

Type of ICL Project Proposal: (ICL member existing project; ICL member new project)

Project Title: (2 lines maximum)

Main Project Category(s): (1 line maximum; fundamental research, database and hazard assessment, societal application, capacity building/information or other)

Date of Proposal Submission:

Primary Investigator Name:

Primary Investigator Affiliation: (2 lines maximum; include position and address)

Primary Investigator Contact: (1 line maximum; fax, phone, email)

Co-Investigator Names/Affiliations: (1 line maximum per investigator; 4 individuals maximum)

Objectives: (5 lines maximum; what you expect to accomplish ?)

Background Justification: (10 lines maximum)

Study Area: (2 lines maximum; where will the project be conducted/applied ?)

Project Duration: (1 line maximum)

Total Project Budget: (1 line maximum; in USD; equals sum of the following two):

Total Amount of Secured Funding/List Sources: (1 line per source maximum)

Total Amount of Funding Still Required/List Sources: (1 line per source maximum)

Total Budget Details: (10 lines maximum; include travel, equipment, personnel, contracts, in-kind support, etc. as needed)

Project Description: (30 lines maximum)

Work Plan/Expected Results: (20 lines maximum; work phases and milestones)

Deliverables/Time Frame: (10 lines maximum; what and when will you produce ?)

Project Beneficiaries: (5 lines maximum; who directly benefits from the work ?)

References (Optional): (6 lines maximum; i.e. relevant publications)

Note:

The International Program on Landslides (IPL) is coordinated by the International Consortium on Landslides. IPL projects can be financially supported by various sources. IPL projects must be proposed to the ICL Secretariat in the project proposal format by ICL members. IPL projects will be evaluated by the IPL Review Committee of the International Consortium on Landslides.

One of project proposers is requested to attend and orally explain the projects in the Session of Board of Representatives of International Consortium on Landslides (BOR/ICL). The annual Session of BOR/ICL is usually held in October or November.

IPL



斜面災害研究センター (防災研究所)



UNITWIN本部棟

UNITWIN Headquarter / Research Centre on Landslides

Secretariat of International Programme on Landslides

UNITWIN Headquarter Building of Research Centre on Landslides

Disaster Prevention Research Institute, Kyoto University

Uji, Kyoto 611-0011, Japan

Fax: +81-774-32-5597, Tel: +81-774-38-4112

e-mail: jimu@landslide.dpri.kyoto-u.ac.jp

web: landslide.dpri.kyoto-u.ac.jp



International Programme on Landslides (IPL)

