

Landslides (2009) 6:167–179
 DOI 10.1007/s10346-009-0161-8
 Received: 15 June 2009
 Accepted: 17 June 2009
 Published online: 22 August 2009
 © Springer-Verlag 2009

Kyoji Sassa

Report of the 2008 First World Landslide Forum on 18–21 November 2008 at UNU, Tokyo

Abbreviations BOR/ICL: Board of Representative Meeting of ICL · FAO: Food and Agriculture Organization of the United Nations · IBRD: World Bank · ICSU: International Council for Science · ICL: International Consortium on Landslides · IPL: International Program on Landslides · IPL-GPC: Global Promotion Committee of IPL · IUGS: International Union of Geological Sciences · JLS: Japan Landslide Society · KU: Kyoto University · UNDP: United Nations Development Program · UNEP: United Nations Environment Program · UNESCO: United Nations Educational, Scientific and Cultural Organization · UN-ISDR: United Nations International Strategy for Disaster Risk Reduction · UNITWIN: University Twinning and Networking Scheme · UNU: United Nations University · WCDR: United Nations World Conference on Disaster Reduction · WCoEs: World Centers of Excellence on Landslide Risk Reduction · WFEO: World Federation of Engineering Organizations · WMO: World Meteorological Organization · WLF: World Landslide Forum

Introduction

The International Consortium on Landslides (ICL) was created during the UNESCO-Kyoto University joint Symposium in January 2002 as an international non-governmental and non-profit scientific organization and registered as a legal body under Japanese law for non-profit organizations in August 2002 in the Government of Kyoto Prefecture, Japan (Sassa 2004a; Sassa 2005). The objectives of the ICL are to promote landslide research for the benefit of society and the environment, as well as capacity building, including education, notably in developing countries; to develop an international Program on Landslides (IPL; Sassa 2004b) including the publication of an international journal on Landslides (Sassa 2004a) and others.

The United Nations World Conference on Disaster Reduction (WCDR) was organized in Kobe, Japan on 18–22 January 2005. ICL organized thematic session 3.8 “New International Initiatives for Research and Risk Mitigation of Floods (IFI) and Landslides (IPL)” on 19 January 2005. The ICL proposed a **Letter of Intent** to promote further joint global activities in disaster reduction and risk prevention through “Strengthening research and learning on ‘Earth system risk analysis and sustainable disaster management’ within the framework of the ‘United Nations International Strategy for Disaster Reduction’ (ISDR)” by global partners UNESCO, WMO, FAO, UN-ISDR, UNU, ICSU, and WFEO. It was agreed and signed by Directors of these five UN organizations and two global scientific and engineering organizations (Sassa 2006).

Based on this Letter of Intent, ICL, UNESCO, WMO, FAO, UN-ISDR, UNEP, UNU, and Kyoto University jointly organized the Round Table Discussion “Strengthening research and learning on earth system risk analysis and sustainable disaster management within UN-ISDR as regards landslides—towards a dynamic global

network of International Program on Landslides (IPL)” on 18–20 January 2006 at the United Nations University, Tokyo, Japan. The participants adopted the Tokyo Action Plan “Strengthening Research and Learning on Landslides and Related Earth System Disasters for Global Risk Preparedness” (Sassa 2006). The **Tokyo Action Plan** created the Global Promotion Committee of the International Program on Landslides (IPL-GPC) as a thematic platform on landslides with UN-ISDR, and decided to organize a World Landslide Forum (WLF) every 3 years, and identification and promotion of World Centers of Excellence on Landslide Risk Reduction (WCoEs) together with an Independent Panel of Experts to endorse the WCoEs, as well as global cooperation fields of the International Program on Landslides.

The Organizing Committee of the First World Landslide Forum was launched with participation of the Director-General of UNESCO Mr. Matsuura Koïchiro and the Rector of the United Nations University Dr. Hans van Ginkel, and Representatives of the Cabinet Office and four related ministries of the Government of Japan, as well as the ICL officers in Tokyo on 22 August 2006. The structure and dates of the First World Landslide Forum was decided at the First IPL-GPC held in January 2007 through examination during the fifth session of the BOR/ICL at UNESCO Headquarters, Paris.

Objectives and aspects of the Forum.

- The First World Landslide Forum was a global cross-cutting information and cooperation platform for all types of organizations from academia, United Nations, governments, private sectors, and individuals that are contributing to landslide research and education and who are willing to strengthen landslide and other related earth system risk reduction.
- The First World Landslide Forum was organized within the scope of the **Hyogo Framework for Action 2005–2015, Building the Resilience of Nations and Communities to Disasters**, adopted at the United Nations World Conference on Disaster Reduction held in Kobe, Hyogo, Japan in 2005. It is expected that the outcome of the First Landslide Forum will feed into the ISDR Global Platform for Disaster Risk Reduction. It is also expected that the outcome of the First Landslide Forum will feed into the UN-ISDR Global Platform for Disaster Risk Reduction.
- By the Statutes of ICL, the Regular Session of the Board of Representatives of ICL is organized every year, and one term for officers is 3 years. The General Assembly of ICL is organized every 3 years, in order to disseminate the activities and achievements of ICL and to promote international cooperation by inviting ICL members, ICL supporting members, all levels of organizations and individuals in the field of landslide risk mitigation. The First General Assembly of ICL was organized in the National Academy of Sciences, Washington, D.C., USA, in October 2005. The First World Landslide Forum in November

2008 was planned to facilitate the Second General Assembly of ICL by utilizing the resources of ICL.

Organizers and organizing committee

Organizers: ICL, UNESCO, WMO, FAO, UN-ISDR, UNU, UNEP, IBRD, UNU, UNDP, ICSU, WFEQ, KU, and JLS

Cosponsors: Cabinet Office of Japan (CAO), Ministry of Foreign Affairs, Japan (MOFA); Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXT); Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF); Ministry of Land Infrastructure and Transport, Japan (MLIT); Japan Meteorological Agency (JMA); Science Council of Japan (SCJ); Japan International Cooperation Agency (JICA); Public Works Research Institute, Japan (PWRI); Asian Disaster Reduction Center, Japan (ADRC); Ministry for Research and University, Italy; Ministry of Foreign Affairs, Italy; Ministry of the Environment, Italy; Department of Civil Protection of the Presidency of the Council of Ministers, Italy; International Union of Geological Sciences (IUGS); International Union of Geodesy and Geophysics (IUGG); International Flood Initiative (IFI); International Year of Planet Earth (IYPE); and Academy of Forest, Wood and Environment, Japan (AFWE).

International organizing committee:

Honorary Chairpersons: Sálvano BRICEÑO (Director of UN-ISDR); Jacques DIOUF (Director-General of FAO); Michel JARRAUD (Secretary General of WMO); Koïchiro MATSUURA (Director-General of UNESCO), Goverdhan MEHTA (President of ICSU); Shuzo NISHIMURA (Vice President of KU); and Konrad OSTERWALDER (Rector of UNU)

Chairperson: Kyoji SASSA (President of ICL, IPL World Center),

Co-Chairpersons: Paolo CANUTI (European Center of ICL, Florence); Srikantha HERATH (Program Officer of UNU); Kazuhiro ISHIHARA (Director of DPRI-KU); Peter LYTTLE (Coordinator, U.S. Geological Survey); Thomas ROSSWALL (Executive Director of ICSU); and Badaoui ROUHBAN (Section Director of UNESCO)

Local Organizing Committee: Kaoru TAKARA (Chair, Executive Director of ICL); Hirotaka OCHIAI (Deputy, Forestry Agency of Japan); Hiroshi FUKUOKA (Secretary General, Treasurer of ICL); and Osamu NAGAI (Deputy, Research Promotion Officer of ICL)

Sponsorship: The Ministry of Foreign Affairs, Japan (MOFA), UN-ISDR, UNU, UNESCO, The Grant-in-Aid for Publication of Scientific Research Results (No.2063001) of the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXT); The Commemorative Organization for the Japan World Exposition ('70); and The Association for Disaster Prevention Research, Kyoto, Japan

Reports of the forum

Four hundred thirty persons from 48 countries attended the Plenary sessions and parallel sessions of the Forum held at the UNU, Tokyo on 18–21 November 2008. In addition to the main sessions of the Forum, a series of pre-events and side-events were organized before and during the Forum.

Pre-events and side-events

1. Exhibition of Landslides and Risk Mitigation of the World (4–28 November 2008) at the Exhibition Hall of UNU (second floor). The color posters of landslides, investigation technol-

ogies and risk mitigation measures of the world were exhibited for 1 month to citizens and students as well as participants for the promotion of public awareness and education on landslide risk reduction.

2. International Conference (Satellite Conference of WLF) “Management of landslide hazards in Asian Pacific Region” was organized at Tohoku-Gakuin University, Sendai City, by the Japan Landslide Society cosponsored by ICL on 11–15 November 2008. It included a field trip on large-scale landslides and earthquake-induced landslides, mountain collapse in the Tohoku Region of Japan. During the conference, posters of landslide disasters in Asian and Pacific region were displayed in Sendai City.
3. The Symposium on Risk Management of World Heritage in Seismic Zone was organized at U-Thant Hall of UNU by Ritsumeikan University (UNESCO-Chair on Cultural Heritage and Risk Management), ICL, and UNESCO, UNU on 17 November 2008. Trainees and lectures and a participant from UNESCO (World Heritage Center) joined the First World Landslide Forum from 18 November 2008.
4. Public Forums on “Protection of Society and Cultural and Natural Heritage” and “Landslides for Children” were offered free of charge and organized by ICL, UNESCO, UN-ISDR and UNU on 19 November 2008 at U-Thant Hall of UNU. They were aimed at public awareness and children education on landslide risk reduction.
 - I. Protection of society and cultural and natural heritages
 - 1) Sálvano Briceño of UN-ISDR: International Cooperation for Disaster Risk Reduction: UN-ISDR System and HFA
 - 2) Badaoui Rouhban of UNESCO: “Role of UNESCO in Disaster Education”
 - 3) Hideaki Marui of JLS: “What is Landslides? Significance of Landslide Research”
 - 4) Landslides and Cultural Heritages (Machu Picchu and Bamiyan, Afghanistan) by K. Sassa and C. Margottini.
 - II. Landslide for Children
 1. Landslide Investigation by Children from landslide disaster areas: Children from Guinsaogon, Leyte, Philippines; Children from Saijyo City, Ehime Prefecture, Japan; and Children from Yamakoshi Village, Niigata Prefecture, Japan
 2. Let’s talk about landslide disaster reduction: 52 children including three orphans of the 2006 Leyte landslide, Philippines, children from Japan, as well as three mayors and five teachers presented their activities for disaster reduction in this forum.
5. The Seventh Session of Board of Representatives of ICL was organized at Rose Hall of UNU on the morning of 17 November 2008. The activities of landslide research and capacity building in 2007 and 2008, and new members of ICL were reported, and the plan of activities for 2009 was examined and decided. The recipients of the 2008 Varnes Medal and 2007 Best Paper Award were decided.
6. The Third IPL Global Promotion Committee was organized at Rose Hall of UNU on the afternoon of 17 November 2008 which was chaired by Mr. Salvano Briceño, Director of UN-ISDR, and Badaoui Rouhban, Director of Disaster Reduction of UNESCO and President of ICL.

The Committee identified 12 WCoEs from 11 countries from Europe, Asia, America, and Africa based on the recommendation from the Independent Panel of Experts, chaired by Prof. Hans van Ginkel, the former Rector of UNU and the Under-Secretary General of the United Nations. The Committee decided to organize the Second World Landslide Forum to be held at the Food and Agriculture Organization of the United Nations (FAO) in Rome, Italy in September 2011.

The criteria of the IPL Award of Success were also decided to be identified and conferred at the time of the Second World Landslide Forum. Two new IPL projects were approved.

Plenary sessions of the forum

Opening Sessions

1. Opening of World Landslide Forum and Aim by Kyoji Sassa (Chairperson of 1st WLF)
2. Hyogo Framework of Action and thematic area on Landslides by Sálvano Briceño (Director, UN-ISDR)
3. Welcome addresses by Mr. Hiroshi Oe (Deputy Director-General for Global Issues, Ministry of Foreign Affairs, Japan) and by Konrad Osterwalder (Rector, UNU)
4. Greetings from organizers and cosponsors by Badaoui Rouhban (Director for Disaster Reduction, UNESCO), by Jose-Antonio Prado (Director, Forest Management Division, FAO), by Thomas Roswall (Executive Director, ICSU), and by Peter Bobrowsky (Secretary General, IUGS)
5. Short Play “The 2006 Leyte landslide Disaster” By Orphans and Mayer

Three orphans, Mayer Rico Rentuza, his wife, and disaster coordinator of the Saint Bernard City presented a short play on the Leyte landslide disaster killing more than 1,000 people and recovery with sound and movie (Fig. 1).

Open forum “Progress of IPL Activities”

1. Progress of the International Program on Landslides by Kyoji Sassa (President of ICL)
2. Reports of IPL Projects: Assessment of global high-risk landslide disaster hotspots (research project) by Farrokh Nadim (International Center for Geohazards at NGI), International summer school on rockslides and related phenomena in the Kokomeren river valley, Tien Shan, Kyrgyzstan (capacity-building project) by Alexander Strom (Institute of Geospheres Dynamics, Russia), Landslide investigation and capacity building in Machu Picchu–Agua Calientes Area (cultural heritage project) by Kyoji Sassa (IPL World Center)

After the Open Forum, Certificates of the World Centers of Excellence were conferred from Sálvano Briceño to 12 identified organizations from the world. Then, most of the participants of the Open Forum of the first day took a joint photo in the U-Thant Hall (Fig. 2)

Plenary symposium “Global Landslide Risk Reduction”:

Special Report Landslides triggered by the 2008 Sichuan earthquake and their impact by Yueping Yin (China Geological Survey), Landslide risk assessment and mitigation strategy by Suzanne Lacasse and Farrokh Nadim (International Center for Geohazards/



Fig. 1 Short play on the 2006 Leyte landslide disaster and recovery toward a resilient community

NGI), Understanding to predict by Luciano Picarelli (Second Napoli University, Italy), Research toward the mitigation of debris-flow disasters by Tamotsu Takahashi (Assoc. for Disaster Prevention Research, Japan), A review of submarine mass movements and their consequences by Jacques Locat (Laval University, Canada) and Homa Lee (USGS)

Keynote lectures:

Satellite remote sensing applications for landslide detection and monitoring by Vern Singhroy (Canada Center for Remote Sensing), Huge landslides caused by massive earthquakes and long-lasting geotechnical risks by Kazuo Konagai (University of Tokyo), Incorporating spatial, temporal, and climate variability into tools for assessing post wildfire debris-flow hazards by Susan Canon (U. S. Geological Survey) and Jerome De Graff (USDA Forest Service), Recovery of the Buddha’s niches and cliff in Bamiyan (Central Afghanistan) after the destruction of 2001 by Claudio Margottini (APAT), Effects of global change on landslide risk by Bjørn Kalsnes (International Center for Geohazards/NGI)

High level panel discussion “Landslides in Global Change—How to mitigate risk? Toward the Second World Landslide Forum in 2011”: *Chairperson:* Hans van Ginkel (Former Under-Secretary General of the United Nations), *Moderator:* Badaoui Rouhban (Director for Disaster Reduction of UNESCO)

Panelists: Thomas Roswall (Executive Director of ICSU), Peter Lyttle (Coordinator of Landslide Hazard Program of USGS), Pedro



Fig. 2 A Joint Photo of participants at U-Thant hall of UNU on 18 November 2008

Pinto (President of International Society for Soil Mechanics and Geotechnical Engineering), Dwikorita Karnawati (Prof. Gadjha Mada University, Indonesia), Kyoji Sassa (IPL World Center of ICL)

Talks of each panelist from their different backgrounds were followed by discussions from participants on the floor. Then, participants discussed the draft of 2008 Tokyo Declaration. In the end of the High Level Panel Discussion, the **2008 Tokyo Declaration Strengthening the International Program on Landslides (IPL) with UN-ISDR** was adopted by participants seeking promotion of cooperation and support for the landslide risk reduction through the International Program on Landslides at the closing session based on the result of High Level Panel Discussion on 21 November 2008 (Fig. 3).

Parallel Sessions

1. A look from space (Chairs: Nicola Casagli and Robert Adler)
2. Case Studies and National Experiences (Chair: Srikantha Herath)
3. Catastrophic slides and avalanches (Chairs: Alexander Strom and Kenneth Hewitt)
4. Climate change and slope instability (Chair: John Clague)
5. Landslides threatening heritage sites (Chairs: Paolo Canuti and Claudio Margottini)
6. Economic and Social Impact of Landslides (Chairs: Oddvar Kjekstad and Lynn Highland)
7. Education, Capacity Building and Public Awareness for Disaster Reduction Chairs: Badaoui Rouhban and Rajib Shaw)
8. Environmental Impact of Landslides (Chairs: Marten Geertsema and Lynn Highland)
9. Landslides in General (Chairs: Hiromitsu Yamagishi, Villagran de Leon, and Netra Prakash Bhandary)
10. Landslides and multi-hazards Hideaki (Chairs: Hideaki Marui and Farrokh Nadim)
11. Mapping: inventories, susceptibility, hazard and risk (Chairs: Javier Hervas and Peter Bobrowsky)
12. Monitoring, prediction and early warning (Chairs: Kyoji Sassa, Luciano Picarelli and Yin Yueping)
13. Policy and Institutional framework for Disaster Reduction (Chairs: Gue See Sew and Dwikorita Karnawati)
14. Rainfall, debris flows and wildfires (Chairs: Jerome V. DeGraff, Hirotaka Ochiai, and Mark E. Reid)

15. Landslide Disaster Mitigation Engineering Measures (Chairs: Mihail Popescu and Katsuo Sasahara)
16. Watershed and Forest Management for Risk Reduction (Chairs: Thomas Hoffer and Libor Jansky)
17. Landslides in Dam Reservoirs (Chairs: Wang Fawu and Patrick Wassmer)

Dialogues on country landslide issues which aimed to summarize best practices of landslide management (Chair: Srikantha Herath)

Dialogues on International Cooperation Initiatives which aimed to present international initiatives and programs (Chairs: Wolfgang Eder and Kaoru Takara).

Poster session and oral short presentation (Chair: Osamu Nagai)

Closing Session

Video message by the new President of ICL, Paolo Canuti was presented. Then, awards and certificates were given to recipients.

The *2008 Varnes Medal* was conferred to Prof. David Cruden.

The nomination citation is as follows:

Nomination citation for 2008 Varnes Medal by Peter Bobrowsky

The Varnes Medal for 2008 is being bestowed upon Professor David Cruden from Canada. Trained in Oxford, London and the University of Alberta during the 1960s, Cruden is now recognized as one of the preeminent engineering geologists and slope stability specialists in North America. He began his teaching career in 1970 and for over three decades he has supervised and mentored ten PhD students and 39 MSc students, many of whom dealt with some fact of slope instability research. Prof Cruden is a prolific contributor to the technical literature, having authored or co-authored over 250 publications during his career. Most notable is his collaborative effort with David Varnes in the production of Chapter 3 in the TRB Special Publication 247. His professional services include Chair of the Technical Committee on Landslides of the International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE), UNESCO's Working Party on the World Landslide Inventory and Chair of the International Union of Geological Sciences Working Group on Landslides which eventually morphed into the Joint Working Technical Committee. Most recently he has expanded his role as a teacher about landslides to



The 2008 Tokyo Declaration

Strengthening the International Programme on Landslides (IPL) with UN-ISDR

The First World Landslide Forum (18-21 November 2008, Tokyo, Japan), convened by the International Consortium on Landslides (ICL) and other supporting organizations and entities, provided a first rare opportunity to discuss and address landslide risk on a global scale. 430 participants from 48 countries in the Forum adopted the following Declaration:

The participants have assessed the activities developed and implemented following the Tokyo Action Plan: “Strengthening Research and Learning on Landslides and Related Earth System Disasters for Global Risk Preparedness”. They have also been looking forward to the main activities needed to be developed in the years ahead by the ICL, as an integral part of ISDR’s “Global Platform for Disaster Risk Reduction”.

We, participants at the First World Landslide Forum,

1. *Encourage* the earth, engineering and social sciences communities to strengthen and take advantage of the International Programme on Landslides (IPL) managed by the IPL Global Promotion Committee consisting of ICL and the supporting organizations, and other related international programmes to find satisfactory answers to future dangers threatening society and the environment.
2. *Urge* decision makers of all nations to utilize the existing wealth of knowledge about the “Earth System” and its vulnerability to disasters, notably landslides, and encourage the development and application of new knowledge and technologies on landslide risk reduction for the benefit of developing and developed nations alike.
3. *Invite* public and private industries and intergovernmental, governmental, international, national and private science organizations to support the follow-up of this Declaration for the development of new knowledge, strategies and capacity building activities to mitigate disasters related to landslide and guide sustainable economic development to meet the needs of our expanding global society and the generations to come;
4. *Request* Governments, NGOs as well as UN organizations to support the initiative of the IPL Global Promotion Committee and to the International Network of Centres on Landslide Risk Reduction (World Centres of Excellence: WCoE) launched at the First World Landslide Forum to achieve global landslide disaster mitigation and to streamline organisation structures and responsibilities for landslide risk management;
5. *Strongly suggest* the world’s landslides community to closely work together in and with the ICL to focus its activities in the next three years leading up to the 2nd World Landslide Forum on the impacts of global change on landslides and to also develop framework plans, guidelines and recommendations on landslide risk reduction for developing countries.

We are looking forward, to enhanced cooperation in landslide research and disaster risk management among the global scientific community, national academies of sciences, research funding agencies, industry, national governments, and inter-governmental bodies so that society and its leaders will have at their disposal the best possible data and information to make the decisions necessary for a sustainable future for humankind.

The 2nd WLF has been decided to be organized in September 2011 at the “Food and Agriculture Organization of the United Nations” (FAO), Rome, Italy.

We extend our appreciation to the Government of Japan, the United Nations University, and the Japan Landslide Society for hosting this First World Landslide Forum.

*Tokyo,
21st November 2008*

For further information, please contact:
The Organising Committee of the 1st World Landslide Forum
E-mail: wlf@iclhq.org

Fig. 3 The 2008 Tokyo Declaration Strengthening the International Program on Landslides (IPL) with UN-ISDR

include the general public; as evident in his work regarding the Frank Slide.

There is no question that Professor David Cruden (Professor Emeritus at the University of Alberta) ably conforms to the criteria regarding the Varnes Medal. He has a proven international track record for student teaching, training and supervision; he has devoted his entire career to the direct study of landslides and landslide issues; he has contributed prominently to the international arena and has now embarked on the education of the general public regarding the importance of landslide research. The strong letters of support he received from colleagues, referees, and friends for this nomination further attest to his stature as a worthy recipient for the award.

It is with great pleasure that we, the voting members of the International Consortium on Landslides, present this unique and prestigious recognition, the silver Varnes Medal to David Cruden on the occasion of the First World Landslide Forum in Tokyo, Japan in November 2008.

The conferment of the Medal to Prof. David Cruden is shown in Fig. 4.

The best paper award, *Landslides, Volume 4, 2007* was given to Didier Leynaud and other colleagues from Norway and France (Fig. 5). Nomination citation is as follows.

Nomination citation for Best Paper Award, *Landslides, Volume 4, 2007*

The Award for Best Paper for *Landslides, Volume 4, 2007*, goes to Didier Leynaud (Department of Geology, University of Tromsø, Norway), Nabil Sultan (Ifremer, Géosciences Marines, France), and Jürgen Mienert (Department of Geology, University of Tromsø) for their excellent paper, “The role of sedimentation rate and permeability in the slope stability of the formerly glaciated Norwegian continental margin: the Storegga slide model” (2007, Volume 4, Number 4, pp. 297–309). This paper presents an outstanding example of the important role of mass movements in shaping the sedimentary structure of continental margins.

Despite the gently dipping (about 1°) sea bottom, large-scale submarine slope failures (Storegga, Sklinnadjupet, and Traenadjupet) occurred at the mid-Norwegian continental margin during the Holocene. The best known of these, with a volume estimated from 2,400 to 3,200 km³ and an area of about 95,000 km², is the Storegga slide, which is one of the largest and most-studied submarine

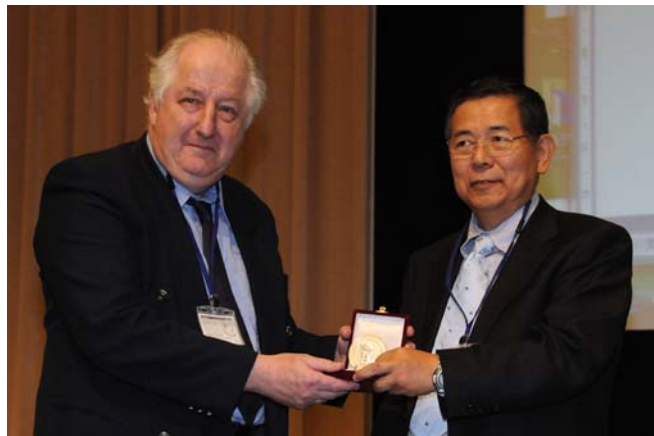


Fig. 4 Photo of 2008 Varnes Medal to Prof. David Cruden

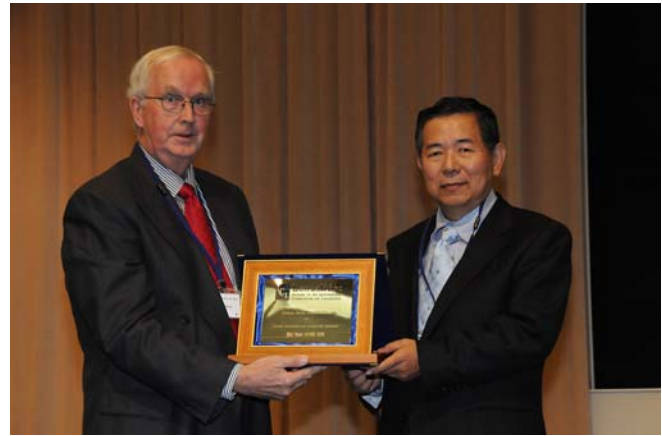


Fig. 5 Photo of 2007 Best Paper Award to Dr. Kjekstad on behalf of Dr. Leynaud and colleagues

landslides in the world. Finite element modeling indicates that even a large earthquake would not provide a sufficient triggering mechanism to cause failure at more than 110 m beneath the sea floor as is the case at Storegga. This implies that other factors (e.g., liquefaction, strain softening, gas discharging, or rapid burial) are needed to explain the triggering of the Storegga slide with its deep surface of failure.

This paper discusses the possible development of excess pore pressures due to compaction effects of rapidly accumulated sediments in the Storegga slide area as an important contributing factor in the initiation of slope failure. Depending on sedimentation rates and permeability, excess pore pressures might develop in permeable strata beneath less-permeable rapidly accumulating layers. The modeling discussed in this paper illustrates that under certain conditions, such excess pore pressures due to rapid sedimentary loading could result in widespread instability of very gentle slopes in the deep subsurface (110 m or more). This should be considered for slope stability assessment where geologically rapid sedimentation has occurred on continental margins.

Because the authors of the best paper award were absent, Dr. Oddvar Kjekstad from Norway received the plaque of the award on behalf of the group (Fig. 5).

Certificates for on-going IPL projects and new ICL members were given to the participating leaders and representatives.

New IPL projects approved in 2008 are:

1. M142 Seismic landslide hazards mapping in Sichuan. Project leader: Yueping Yin (China Geological Survey)
2. M143 Evaluation of Sensitivity of the Combined Hydrological Model (Dynamic) for Landslide Susceptibility Risk Mapping in Sri Lanka. Project leader: A. Virajh Dias (Center for Research & Development of Central Engineering Consultancy Bureau (CECB), Sri Lanka).

New members of ICL approved in 2008 are as follows:

Asian Disaster Preparedness Center (ADPC)
Central Engineering Consultancy Bureau, Sri Lanka

IPL-GPC invites New Members implementing and supporting the initiatives of **WLF, IPL projects** including Journal **Landslides** and **WCoEs**.

Members of IPL-GPC are ICL members, ICL Supporting Organizations which have exchanged MoU to cooperate with **IPL** or Governments and Entities which provide **Subvention** to **IPL**.



The Global Promotion Committee of The International Programme on Landslides



*An thematic platform on Landslides with UN-ISDR
promoting landslide research and capacity building for the benefit of society and the environment*

Chair: Sílvano Briceño (Director of UN-ISDR)

Deputy Chairs: Badaoui Rouhban (Section Director for Disaster Reduction of UNESCO) /
Kyoji Sassa (Director of IPL World Centre / ICL Executive Director) / **Paolo Canuti** (ICL President)

Voting Members of IPL-GPC

The United Nations Educational, Scientific and Cultural Organization (UNESCO) / The World Meteorological Organization (WMO) / The Food and Agriculture Organization of the United Nations (FAO) / The United Nations International Strategy for Disaster Reduction Secretariat (UN/ISDR) / The United Nations University (UNU) / International Council for Science (ICSU) / World Federation of Engineering Organizations (WFEO) / International Union of Geological Sciences (IUGS) // University of BUEA, Cameroon / Geological Survey of Canada / Chinese Academy of Sciences, Chengdu Institute of Mountain Hazards and Environment / Xian Municipal Government, China / Northeast Forestry University, China / Xi'an Jiaotong University, Department of Civil Engineering, China / China Three Gorges University, Institute of Geological Hazard Mitigation / China Geological Survey / Universidad Nacional de Columbia, Columbia / Charles University, Faculty of Science, Czech Republic / Technische Universität Darmstadt, Institute and Laboratory of Geotechnics, Germany / Building & Housing Research Center, Iran / International Institute of Earthquake Engineering and Seismology (IIIES), Iran / Agricultural Research and Educational Organization (AREO), Iran / European Commission's Joint Research Centre, IES/LMNH/, Italy / University of Firenze, Earth Sciences Department, Italy / Research Centre for Geological Risks, University of Roma "La Sapienza" / Center of Geological Environment, Geological Agency of Indonesia/ University of Gadjah Mada, Indonesia / Ehime University, Faculty of Engineering, Japan / Forestry and Forest Product Research Institute, Japan / Japan Landslide Society / Kyoto University, Disaster Prevention Research Institute / Niigata University, Research Center for Natural Hazards and Disaster Recovery, Japan / University of Tokyo (Institute of Industrial Science and Department of Civil Engineering, Geotechnical Engineering Group), Japan / Korea Institute of Geoscience and Mineral Resources (KIGAM) / Mara University of Technology, Malaysia / Slope Engineering Branch, Public Works Department of Malaysia / National Autonomous University of MEXICO (UNAM) / International Centre for Integrated Mountain Development (ICIMOD), Nepal / Department of Geology, University of Nigeria / International Centre for Geohazards (ICG) in Oslo, Norway / Grudec Ayar, Peru / Lab. Engineering Geodynamics, Geological Faculty, Moscow State University, Russia / Russian Academy of Sciences, Institute of Environmental Geoscience (IEG RAS) / Russian Academy of Sciences, Institute of the Geospheres Dynamics / Open Joint-Stock Company Engineering Centre UES / Engprotection, Russia / Comenius University, Faculty of Natural Sciences, Department of Engineering Geology, Slovakia / University of Ljubljana, Faculty of Civil and Geodetic Engineering (UL FGG), Slovenia / Engineering Geoscience Unit, Council for Geoscience, South Africa / Central Engineering Consultancy Bureau, Sri Lanka / Ministry of Agriculture and Cooperatives, Land Development Department, Thailand / Asian Disaster Preparedness Center (ADPC), Thailand / United Nations University-ITC School on Disaster Geo-Information Management (UNU-ITC DGIM), The Netherlands / U.S. Geological Survey, USA / Institute Hydroingeo, State Committee of Geology of Uzbekistan

Secretariat: IPL World Centre at ICL Headquarters

The Association for Disaster Prevention Research, 138-1 Tanaka Asukai-cho, Sakyo-ku, Kyoto 606-8226, Japan
Tel: +81(75)7230640, +81(774) 384834, Fax: +81(75)9500910, +81(774)384019
E-mail: secretariat@iclhq.org, URL: <http://iclhq.org/>

Fig. 6 IPL global promotion committee

Project No.	Project Name	Project leader
C101-1	Landslide investigation and capacity building in Machu Pichu- Aguas Calientes area	Kyoji Sassa, Japan
C101-2	Landslides monitoring and slope stability at selected historic sites in Slovakia	Jan Vlcko, Slovakia
C101-3	The geomorphological instability of the Buddha niches and surrounding cliff in Bamiyan valley (Central Afghanistan)	Claudio Margottini, Italy
C103	Global landslide observation strategy	Kaoru Takara, Japan and Nicola Casagli, Italy
C104	World Landslide Database	Hiroshi Fukuoka, Japan and Nicola Casagli, Italy
C105	Early Warning of Landslides	Kyoji Sassa, Japan
C106-1	Landslide museum in Civita di Bagnoregio	Claudio Margottini, Italy
C106-2	International Summer School on Rockslides and Related Phenomena in the Kokomeren River Valley, Tien Shan, Kyrgyzstan	Alexander Strom, Russia
M101	Areal prediction of earthquake and rain induced rapid and long-travelling flow phenomena (APERITIF)	Hiroshi Fukuoka, Japan
M112	Landslide mapping and risk mitigation planning in Thailand	Saowanee Prachansri, Thailand
M132	Research on vegetation protection system for highway soil slope in seasonal frozen regions	Wei Shan, China and Fawu Wang, Japan
M134	Large-scale rockslides in coarse-bedded carbonate rocks in the Apennines (Italy), Caucasus (Russia) and Zagros (Iran): evaluation of possible triggers and hazard assessment	Alexander Strom, Russia
M135	Landslide hazard assessment in Changunarayan hill of Kathmandu, Nepal - Geotechnical investigation and preventive plan-	Ryuichi Yatabe, Japan
M136	Shear behaviour and mechanics of Megaslides and their nearby faults in Hittian Balla, Pakistan and Shaolin, Taiwan	Kazuo Konagai and Kyoji Sassa, Japan
M137	Italian Landslide Inventory (IFFI Project)	Alessandro Triglia, Italy
M138	Long run out and Catastrophic Landslides study: Yigong Landslide, Tibet China.	Yin Yueping, China
M139	Development of low-cost early warning system of slope instability for civilian use	Ikuo Towhata and Taro Uchimura, Japan
M140	Landslide and multi-geohazards mapping for community empowerment in Indonesia	Dwikorita Karnawati, Indonesia
M141	Geo-Risks Management for Third World Countries - Mapping and Assessment of Risky Geo-factors for Land Use (e.g. in Ethiopia)	Jiří Zvelebil, Czech Republic
M142	Seismic landslide hazards mapping in Sichuan	Yuepin Yin, China
M143	Evaluation of Sensitivity of the Combined Hydrological Model (Dynamic) for Landslide Susceptibility Risk Mapping in Sri Lanka	A A Virajh Dias, Sri Lanka

Fig. 7 List of on-going IPL projects

Engineering Geoscience Unit, Council for Geoscience, South Africa
Institute of Geography, National Autonomous University of Mexico (UNAM)

United Nations University-ITC School on Disaster Geo-Information Management (UNU-ITC DGIM)
University of Buea, Cameroon

Welcome Address to the Second World Landslide Forum was presented by Mr. Thomas Hofer, Forestry Department of FAO. The Forum will be organized at the Headquarters of FAO, Rome, in the second half of September 2011. Then, the First World Landslide Forum was closed at 16:00 on 21 November 2009.

IPL global promotion committee

The IPL-GPC and WCoEs and the planning of WLF-II 2011 are important information related to the World Landslide Forum. These three items are explained in the later part of this article.

The IPL-GPC was proposed by 2006 Tokyo Action Plan and it was formally established in the first session of the IPL-GPC was held in January 2007 at UNU, Tokyo.

1. Terms of Reference: (1) Organization of sessions of the IPL Global Promotion Committee and IPL Symposium, (2) Evaluation and Promotion of IPL projects, (3) Organization of World Landslides Forum, (4) Identification and Promo-

tion of WCoEs, (5) Contribution to global landslide issues and promotion of partnerships within the framework of ISDR.

2. Finance: (1) Fund from ICL, (2) Subvention to IPL: Financial supports from ICL Supporting organizations and other funding agencies.
3. Management: the committee is managed by members and supporting members.

Members with voting rights: (1) ICL member organizations, (2) ICL supporting organizations which have exchanged MoU with ICL, and (3) Organizations which provide Subvention to IPL.

Supporting members: Organizations or experts which are willing to cooperate with the Action Plan may be invited as observers.

4. Chairpersons of the Committee

Chairperson: Sálvano Briceño (Director of UN-ISDR), Deputy Chairperson: Badaoui Rouhban (Section Director for Disaster Reduction of UNESCO), *Deputy Chairperson:* Kyoji Sassa (Director of IPL World Center, Executive Director of ICL), *Deputy Chairperson:* Paolo Canuti (President of ICL)

5. Secretariat of the Committee

The IPL World Center was established at ICL Headquarters in Koto, Japan to serve as the secretariat. It is a part of the legal body of ICL and managed by IPL Global Promotion Committee.

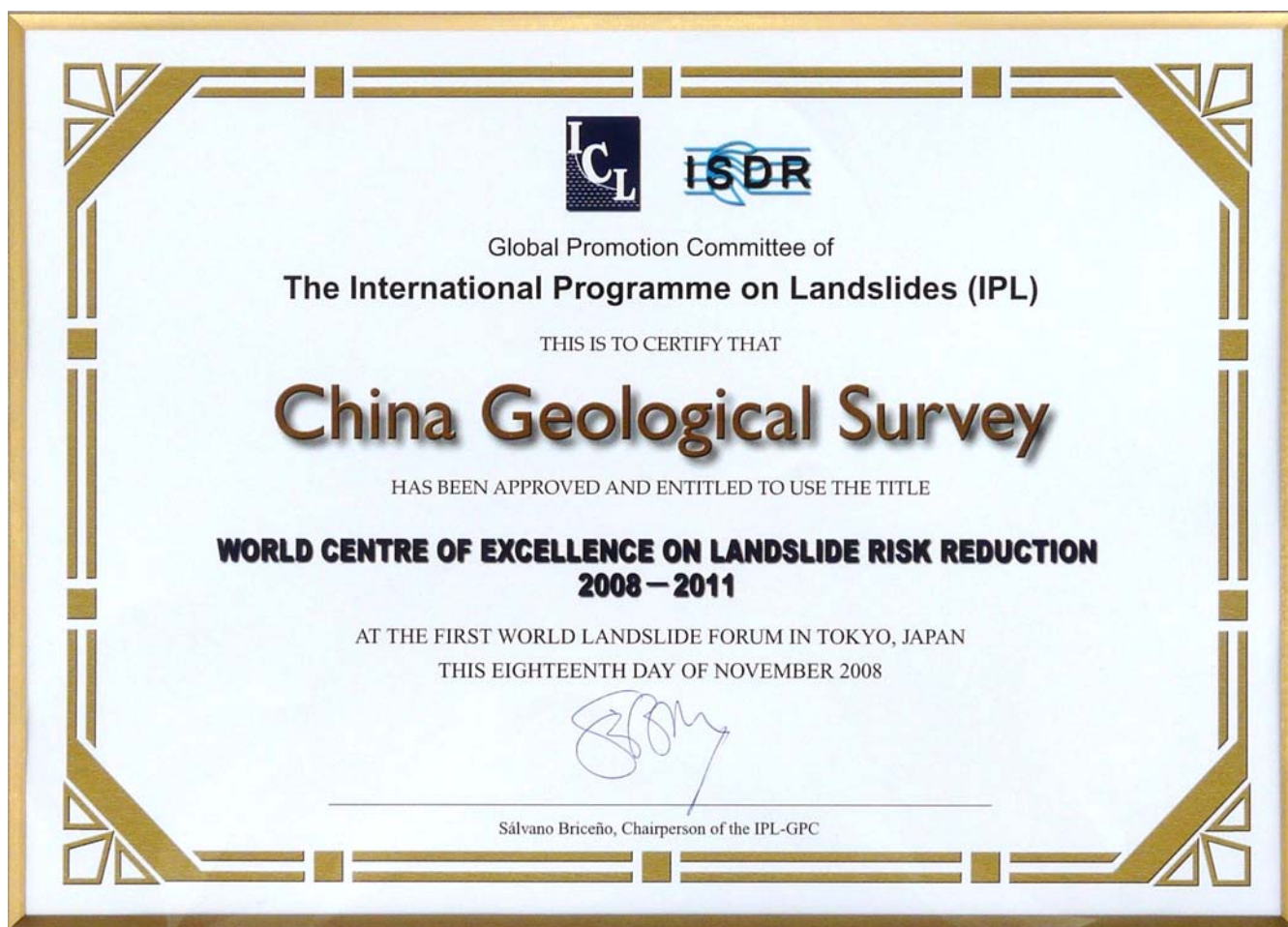


Fig. 8 Example of certificate of China Geological Survey



Fig. 9 A group photo of leaders of 12 WCoEs

Terms of Reference: (1) Secretariat for IPL and the IPL Global Promotion Committee, (2) Coordination of IPL Global issues such as Edition of Landslides Journal, Landslide Database, and Landslide disaster investigation like the Leyte landslide

The current voting members of IPL-GPC are shown in Fig. 6 (extracted from the First Announcement of the Second World Landslide Forum).

IPL-GPC approved the IPL projects in 2007 and 2008. Currently on-going IPL projects are shown in Fig. 7.

The IPL projects are promoted by the IPL and WCoE Network Committee. The committee was set up in 2009 following the previous IPL Promotion committee. Current members are Oddvar Kjekstad (International Center for Geohazards, Norway) as the chairperson, Peter Lyttle (USGS), Vit Vilimek (Charles University, Czech), and Thomas Hofer (FAO) as members.

World centers of excellence on landslide risk reduction

WCoEs were proposed in the 2006 Tokyo Action Plan, and were examined by the first session of the IPL-GPC in January 2007, and the chairperson of the Independent Panel of Experts to endorse the WCoEs. This was decided in the second session of the IPL-GPC in January 2008. The call for application of WCoEs was distributed under the joint names of Sálvamo Briceno, Chairperson of the IPL-GPC (Director of the UN-ISDR) and Kyoji Sassa, Deputy Chairperson of the IPL-GPC

(President of the International Consortium on Landslides) in May 2008 as follows:

RE: call for application for the world centers of excellence (WCoE) on landslide risk reduction

The 2006 Tokyo Action Plan proposed the creation of World Centers of Excellence on Landslide Risk Reduction as follows: The Global Promotion Committee (GPC) of the International Program on Landslides (IPL) will identify and promote WCoEs every 3 years within eligible organizations, such as universities, institutes, NGOs, government ministries and local governments, contributing to “Risk Reduction for Landslides and Related Earth System Disasters”. Linkages to WCoEs at the national level will be used to promote cooperation with the ICL and dissemination of knowledge and information. An independent Panel of Experts, set up by the Global Promotion Committee of International Program on Landslides (IPL-GPC), may be appointed to endorse the WCoEs. The establishment of WCoE was decided at the first session of IPL Global Promotion committee in January 2007, and further examined and endorsed in the second session of the IPL Global Promotion Committee held at UNU on 21 January 2008.

Objectives of WCoE:

To strengthen the International Program on Landslides (IPL) and IPL Global Promotion Committee;

The First Announcement

The Second World Landslide Forum

-Putting Science into Practice-

Date: 19-25 September 2011

Venue: Food and Agriculture Organization of the United Nations (FAO), Rome, Italy

Organizer: The Global Promotion Committee of the International Programme on Landslides*

(* All members are listed in the next page)

<Background and Objectives>

The Global Promotion Committee of the International Programme on Landslides (IPL-GPC) was established in 2007 as a thematic platform on landslides following the 2005 Hyogo Framework of Action and the 2006 Tokyo Action Plan “Strengthening Research and Learning on Landslides and Related Earth System Disasters for Global Risk Preparedness”. The **First World Landslide Forum** was organized by ICL, UNESCO, WMO, FAO, UN-ISDR, UNU, UNEP, IBRD, UNDP, ICSU, WFEO, KU and the Japan Landslide Society on 18-21 November 2008 at the United Nations University, Tokyo. **430 persons from 48 countries** attended. 3 Plenary sessions and 18 parallel sessions were organized. **12 World Centres of Excellence on Landslide Risk Reduction (WCoEs)** were identified from 4 continents by IPL-GPC. The Tokyo Declaration “Strengthening the International Programme on Landslides with UN-ISDR” was adopted including the organization for the Second World Landslide Forum (**WLF-II**) at FAO, Rome, Italy in September 2011.



(A joint photo of WLF-I after the Plenary session on 18 November 2008 at UNU)

The objectives of WLF-II are to provide global cross-cutting information and cooperation platform for all types of organizations from academia, United Nations, governments, private sectors, and individuals that are contributing to landslide research and education and are willing to strengthen landslide and other related earth system risk reduction. The emphasis of this forum will be “**Putting Science into Practice**”.

<Organizing Committee>

Honorary Chairpersons: Sálvano BRICEÑO (Director of UN-ISDR) and others to be invited.

Chairperson: Paolo CANUTI (President of ICL, University of Firenze)

Other Members to be identified.

The details of WLF-II will be discussed at the Fourth Session of IPL-GPC including WLF-II planning meeting at UNESCO Headquarters, Paris on 18-19 November 2009. Those who are willing to contribute to WLF-II are **invited** to participate in the meeting.

<Schedule (Tentative)>

18 September 2011 (Sunday): IPL Global Promotion Committee 2011, FAO Headquarters, Rome

19 September (Monday): Green Room (1st Floor of Building A) of FAO Headquarters

Opening Session, one Plenary Session, High Level Panel Discussion,

Conferment of World Centres of Excellence on Landslide Risk Reduction (2012-2015), IPL Award of Success

20 (Tuesday) and 22 (Thursday): Keynote lectures and parallel sessions

21 (Wednesday): A half day field trip in the Rome urban area.

Side events and forum for cross-cutting and twining dialogues.

23 (Friday): Parallel sessions and Closing Ceremony including the adoption of output document, the conferment of 2011 Varnes Medal, 2010 Best paper Award, and IPL-GPC new members (2008-2011)

24-25 (Saturday and Sunday): Field Trip in Central Italy

Call for Financial Support to invite practitioners, politicians, researchers and engineers working on landslide disaster reduction from developing countries to attend the WLF-II and also to strengthen other activities of the International Programme on Landslides including IPL Projects and the World Centers of Excellence on Landslide Risk Reduction.

Fig. 10 The first announcement of the second world landslide forum

To create “A Global Network of entities contributing to landslide risk reduction”; and
 To improve the global recognition of “Landslide Risk Reduction” and its social-economic relevance, and entities contributing to this field.

Criteria for WCoE Candidates:

Governmental and non-governmental entities such as universities, agencies, and other institutions, and their subsidiary entities (faculties, departments, centers, divisions or others) which meet the following two conditions:

- Contributing to “Risk Reduction for Landslides and Related Earth System Disasters”; and
- Willing to support IPL intellectually, practically and financially by either joining ICL or contributing to IPL-GPC and promote “landslide research and risk reduction” on a regional and/or global scale in a mutually beneficial manner.

Guidelines for WCoE:

1. Candidates of WCoEs must submit their application form to the Secretariat of the IPL Global Promotion Committee.
2. The number of identified WCoE in 2008 is to be decided depending on applications received.

General idea is to recognize a sufficient number (order of ten) to create “A Global Network of entities contributing on landslide risk reduction”.

3. Candidates will be evaluated from their achievements and current activities (scientific, technical and educational capacity, training courses, publications, dissemination of knowledge and information) and planned activities contributing to IPL.
4. WCoEs will be identified at every World Landslide Forum (held every 3 years). The status as a WCoE will be given for 3 years until the next Forum.
5. Each WCoE must submit an annual activity report each year.
6. The status as a WCoE may be extended for another 3 years by the IPL Global Promotion Committee based on the activities carried out as a WCoE.

The following 12 organizations were recommended from the Independent Panel of Experts to the third session of the IPL-GPC as WCoEs in 2008–2011.

List of World Centers of Excellence on Landslide Risk Reduction (approved at 3rd IPL Global Promotion Committee on 17 November 2008):

- China:** China Geological Survey
Short title: Scientific research for mitigation, preparedness and risk assessment of landslides
Activity scale and targeted region: National
- Czech Republic:** Faculty of Science, Charles University in Prague
Short title: Landslide field research and capacity building through international collaboration.
Activity scale and targeted region: Intercontinental and National
- Italy:** Department of Earth Science, University of Florence
Short title: Earth observation advanced technologies for landslide monitoring, management and mitigation

- Activity scale and targeted region:* Global
Research Center on Prediction Prevention and Control of Georisks of Rome University “La Sapienza”
Short title: Research and development of advanced technology for landslide hazard analysis
Activity scale and targeted region: Regional/National
- Japan:** The Japan Landslide Society
Short title: Development of methodology for risk assessment of the earthquake-induced landslides
Activity scale and targeted region: Regional and National
- Malaysia:** Slope Engineering Branch, Public Works Department of Malaysia
Short title: Implementation of National Slope Master Plan.
Activity scale and targeted region: National
- Norway:** International Center for Geohazards (ICG) at NGI,
Short title: Research on mitigation of landslide risk and training of specialists.
Activity scale and targeted region: Global
- Russia and Kyrgyz:** Institute of Geospheres Dynamics of Russian Academy of Science (IDG RAS) & Kyrgyz Institute of Seismology (KIS)
Short title: International Summer School on Rockslides and Related Phenomena in the Kokomeran River basin, Kyrgyzstan.
Activity scale and targeted region: Global and Regional
- Slovenia:** University of Ljubljana, Faculty of Civil and Geodetic Engineering (UL FGG)
Short title: Mechanisms of landslides in over-consolidated clays and flysch
Activity scale and targeted region: National
- South Africa:** Engineering Geoscience Unit, Council for Geoscience
Short title: Landslide inventory and susceptibility mapping in South Africa.
Activity scale and targeted region: National
- Thailand:** Asian Disaster Preparedness Center
Short title: Promoting Knowledge sharing, Innovations and Institutions with South–South focus network on Landslide Risk Reduction in Asia.
Activity scale and targeted region: Regional (Asia)
- USA:** U.S. Geological Survey
Short title: Conduct landslide hazard assessments and develop early warning systems
Activity scale and targeted region: National (Figs 8 and 9)

The Second World Landslide Forum 2011

The 2009 ICL Steering Committee was organized on 19–20 May 2009 and held at FAO, Rome. The outline of the WLF-II was examined, and was approved by the members of IPL-GPC. The details will be examined by the Fourth Session of the IPL-GPC to be held at the Headquarters of UNESCO, Paris on 18–19 November 2009. The First Announcement of WLF-II was made as shown in Fig. 10.

Publication and further information of the Forum.

The presentation in the Forum was published in the following forms.

- Book: Landslides-Disaster Risk Reduction (Kyoji Sassa and Paolo Canuti, Editors), Springer 2008. (ISBN:978-3-540-6966-8, e-ISBN: 978-3-540-6970-5)

All full color, 650 pages including (1) Progress of IPL Activities, (2) keynote lectures, (3) papers by conveners of parallel sessions, (4) achievements of IPL Projects

- Proceedings (mono color): Parallel session volume (708 pages) and Poster session volume (122 pages) of the First World Landslide Forum were printed. They are available from ICL Headquarters.

All contents are also downloaded from: <http://www.iclhq.org/WLFweb/WLF.htm>

- Web proceedings (full color): this is published in full color only within WEB.

http://www.iclhq.org/WLFweb/WebProceedings_Index.htm

Other information will be obtained from ICL Headquarters or its WEB

ICL Headquarters:

The Association for Disaster Prevention Research,
138-1 Tanaka Asukai-cho, Sakyo-ku, Kyoto 606-8226, Japan
Tel: +81(75)7230640, +81(774) 384834, Fax: +81(75)9500910, +81(774)384019

E-mail: secretariat@iclhq.org, WEB: <http://iclhq.org/>

Invitation and requests

The IPL-GPC and ICL will invite all entities and individuals which are willing to contribute to the risk reduction of landslides and other related earth system disasters to join IPL-GPC as well as ICL. We will organize the fourth session of the IPL-GPC at the UNESCO Headquarters on 18–19 November 2009 and discuss the plan of the **Second World Landslide Forum** and the further development of IPL. We will invite potential partners to this meeting and the following meetings in 2010. I introduced major aspects of the Forum and IPL-GPC as well as IPL in this article.

Acknowledgements

The organization of the First World Landslide Forum was strongly supported by all joint organizers and cosponsors in many aspects. Thanks for financial support go to the Ministry of Foreign Affairs, Japan, UN-ISDR, UNU, UNESCO, and other sponsors as well as the Grant-in-Aid for Publication of Scientific Research Results (No. 2063001) of the Ministry of Education, Culture, Sports, Science and Technology, Japan (MEXT). Many landslide experts and researchers in addition to ICL members contributed significantly to the organization of Plenary Sessions and Parallel Sessions. Many of researchers from developing countries attended by raising funds for their own travels in addition to partial travel support from the organizing committee. Their willingness and support from their institutions are much appreciated. Without any of them, this first global cross-cutting information and cooperation platform for all types of organizations and individuals could not have succeeded. We extend our sincere thanks to all partners on behalf of the organizing committee for their contribution to the WLF-I, and request further support and even greater contribution to the WLF-II in 2011.

References

- Sassa K (2004a) The international consortium on landslides. *Landslides* 1(1):91–94
Sassa K (2004b) The international programme on landslides (IPL). *Landslides* 1(2):95–99
Sassa K (2005) ICL history and activities. *Landslides—risk analysis and sustainable disaster management*. In: Sassa et al. (ed), Springer:1–22
Sassa K (2006) “2006 Tokyo Action Plan”—strengthening research and learning on landslides and related earth system disasters for global risk preparedness. *Landslides* 3(4):361–369

K. Sassa (✉)

IPL World Centre at ICL Headquarters,
The Association for Disaster Prevention Research,
138–1 Tanaka Asukai-cho, Sakyo-ku,
Kyoto 606-8226, Japan
e-mail: sassa@iclhq.org