

The 2014 Beijing Declaration

Landslide Risk Mitigation : Toward a Safer Geo-environment

1. The World Landslide Forum III was convened in Beijing, China from 3 to 6 June 2014 by the International Consortium on Landslides (ICL) and the China Geological Survey with the sponsorship of the Global Promotion Committee of the International Programme on Landslides (IPL) and the Ministry of Land and Resources of the People's Republic of China, and with support from other organizations. 531 participants came from 211 national and international technical and scientific organizations*, representing 40 countries, and 5 organizations of the United Nations system. They examined how scientific knowledge and technical know-how can, on a global scale, be further applied to policy-making and practice for landslide disaster risk reduction and resilience building.
2. The participants underline that landslides, occurring on land and at sea, pose considerable risks to humankind, disrupting societal functions and derailing economic gains. They threaten people's lives and livelihoods by destroying buildings, transportation and other networks as well as cultural and natural heritage, affecting communities and their economy. It is often the poorest people who are most seriously affected by these dramatic events.
3. The participants observe that landslides are a complex natural phenomenon that can be triggered by earthquakes, volcanic eruptions, heavy and recurrent rainfall, typhoons, hurricanes, snowmelt, sometimes exacerbated by unregulated anthropogenic developments such as roads, waterworks and mining. Submarine landslides are able to generate tsunamis and represent a hazard to coastal areas.
4. The participants acknowledge the fact that global climate change is expected to increasingly affect the frequency and extent of heavy rainfall at local and regional level. Combined effects of natural phenomena and human adverse activities, associated with a rise in the vulnerability of the human and physical environment, are increasing landslide risk in the world. Understanding landslides, their associated risks and the vulnerability of societies, requires an integrated and multi-disciplinary approach including contributions from natural, social and engineering sciences and local knowledge.
5. The participants assessed the activities developed and implemented in pursuance of the 2006 Tokyo Action Plan and the 2008 Tokyo Declaration; and commit to pursue their further implementation in line with the 2012 ICL Strategic Plan 2012-2021. They agreed on an initiative to further strengthen **international networking and partnerships in science and technology** on landslides toward a safer geo-environment in support of the International Strategy for Disaster Reduction.
6. The participants endorse the plans to organize an ICL-IPL Conference as part of the Third World Conference on Disaster Risk Reduction (3rd WCDRR) to take place in Sendai, Japan, March 2015. They urge the ICL-IPL Sendai Conference to define and adopt concrete actions which will be carried out by international networks and partnerships, of public and private institutions, in science and technology, the **ICL-IPL Sendai Partnerships**, to help achieve the ISDR goals.

A Call

7. The participants invite related governmental, non-governmental and international programmes, and initiatives from natural, engineering, human, social and economical sciences, public and private, to promote science and technology and their applications for landslide risk mitigation by joining the **ICL-IPL Sendai Partnerships** aimed at enhancing capacities, in particular in the developing world, to reduce risk and vulnerabilities and build resilience related with landslides, also through formal and informal education, and contribute to a safer geo-environment in support of the International Strategy for Disaster Reduction.

Adopted in Beijing on 6 June 2014

* List in Annex

ANNEX to the 2014 Beijing Declaration: Landslide Risk Mitigation: Toward a Safer Geo-environment

*List of participating organizations

A. ICL Supporting Organizations

UNESCO: United Nations Educational, Scientific and Cultural Organization
WMO: World Meteorological Organization
FAO: Food and Agriculture Organization of the United Nations
UNISDR: United Nations Office for Disaster Risk Reduction,
UNU: United Nations University
ICSU: International Council for Science
IUGS: International Union of Geological Sciences

B. ICL Member Institutions

Albanian Geological Survey, Albania
Geological Survey of Canada, Canada
China Geological Survey, China P.R.
Northeast Forestry University, China P.R.
Institute of Mountain Hazards and Environment, Chinese Academy of Sciences, China P.R.
Universidad Nacional de Colombia, Colombia
Croatian Landslide Group from University of Rijeka and University of Zagreb, Croatia
City of Zagreb, Emergency Management Office, Croatia
Charles University, Faculty of Science, Czech Republic,
Joint Research Centre (JRC), European Commission
Technische Universität Darmstadt, Institute and Laboratory of Geotechnics, Germany
Gadjah Mada University, Indonesia
University of Firenze, Earth Sciences Department, Italy
ISPRA-Italian Institute for Environmental Protection and Research, Italy
University of Calabria, Laboratory of Environmental Cartography and Hydraulic and Geological Modeling, Italy
Kyoto University, Disaster Prevention Research Institute, Japan
Niigata University, Research Institute for Natural Hazards and Disaster Recovery, Japan
Korea Institute of Geoscience and Mineral Resources (KIGAM), Republic of Korea
Korea Infrastructure Safety & Technology Corporation, Republic of Korea

Korea Institute of Construction Technology, Republic of Korea
Korean Society of Forest Engineering, Republic of Korea
Slope Engineering Branch, Public Works Department of Malaysia
Norwegian Geotechnical Institute (NGI), Oslo, Norway
Department of Engineering and Ecological Geology, Moscow State University, Russia
JSC "Hydroproject Institute", Russia
Russian Academy of Sciences, Sergeev Institute of Environmental Geoscience (IEG RAS), Russia
University of Belgrade, Faculty of Mining and Geology, Serbia
Comenius University, Faculty of Natural Sciences, Department of Engineering Geology, Slovakia
University of Ljubljana, Faculty of Civil and Geodetic Engineering (ULFGG), Slovenia
Geological Survey of Slovenia, Slovenia
Engineering Geoscience Unit, Council for Geoscience, South Africa
Central Engineering Consultancy Bureau (CECB), Sri Lanka
National Building Research Organization, Sri Lanka
National Taiwan University, Department of Civil Engineering, Chinese Taipei
Asian Disaster Preparedness Center (ADPC), Thailand
Institute of Transport Science and Technology, Viet Nam

C. Other organizations

University of Vienna, Austria
Institute of Applied Geology, BOKU University, Austria
AIT Austrian Institute of Technology GmbH, Austria
Austrian Service in Torrent and Avalanche Control, Austria
University of Liege, Belgium
University of Rio de Janeiro State, Brazil

University of Campinas, Brazil
Rio de Janeiro Geological Survey, Brazil
Public Works Department, Brunei
SNC-Lavalin, Canada
University of Northern British Columbia, Canada
Centre for Natural Hazards Research, Simon Fraser University, Canada

University of Waterloo, Canada
 Anhui University of Science and Technology, China P.R
 Beijing Jiaotong University, China P.R
 Beijing University of Technology, China P.R
 CCCC Highway Planning and Design Institute co., LTD,
 China P.R
 Center for Hydrogeology and Environmental Geology,
 CGS, China P.R
 Chang'an University, China P.R
 Chengdu Center of Geological Survey, CGS, China P.R
 Chengdu Institute of Geology and Mineral Resources, China
 P.R
 Chengdu University of Technology, China P.R
 China Aero Geophysical Survey & Remote Sensing Centre
 for Land & Resources, China P.R
 China Earthquake Networks Center, China P.R
 China Institute of Water Resources and Hydropower
 Research, China P.R
 China Ordnance Industry Survey and Geotechnical
 Institute, China P.R
 China Three Gorges University, China P.R
 China University of Geosciences, China P.R
 China University of Mining and Technology, Beijing,
 China P.R
 Chinese Academy of Sciences, China P.R
 Chongqing Exploration & Design Institute of Geological
 Hazard Control Engineering, China P.R
 Chongqing Geological Survey, China P.R
 Chongqing Survey & Design Institute of Geological
 Hazard Control Engineering, China P.R
 Chongqing Yangtze River Engineering Survey and Design
 Institute, China P.R
 Dalian University of Technology, China P.R
 Fugro Geotechnical Services Ltd., China P.R
 Gansu Construction Vocational Technical College, China
 P.R
 Gansu Geological Environmental Monitoring Institute,
 China P.R
 Geological Environment Monitoring Station of Chongqing,
 China P.R
 Geological Environmental Monitoring Institute in Gansu
 Province, China P.R
 Geological Hazards Institute, Gansu, Academy of Science,
 China P.R
 Geological Hazards Prevention Institute, Gansu Academy
 of Sciences, China P.R
 Geology Survey Center of Shaanxi Province, China P.R
 Institute of Exploration Technology, CAGS, China P.R
 Institute of Geographical Sciences and Natural Resources
 Research, Chinese Academy of Sciences, China P.R
 Institute of Geology and Geophysics, Chinese Academic
 of Science, China P.R
 Institute of Geology, China Earthquake Administration,
 China P.R
 Institute of Geomechanics, CAGS, China P.R
 Institute of Oceanology, Chinese Academy of Sciences,
 China P.R
 JiangXi Province ShangRao City Land Resources Bureau,
 China P.R
 Jundun System Science and Technology CO. LTD,
 China P.R
 Lanzhou University, China P.R
 Logistical Engineering University, China P.R
 Nanjiang Hydrogeological & Engineering Geology
 Brigade, China P.R
 Nanjing Center of Geological Survey, CGS, China P.R
 Nanjing University, China P.R
 Ocean University of China, China P.R
 School of Geology Engineering and Geomatics, China P.R
 Shandong University, China P.R
 Shanghai Jiao Tong University, China P.R
 Shanxi geological environment monitoring center,
 China P.R
 Sichuan Geological Survey 909 Geological Brigade,
 China P.R
 Southwest Jiaotong University, China P.R
 Southwest Petroleum University, China P.R
 Southwest University of Science and Technology,
 China P.R
 Springer Beijing, China P.R
 State Chengdu University of Technology, China P.R
 The China Meteorological Administration Public
 Meteorological Service Center, China P.R
 The Hong Kong Polytechnic University, China P.R
 The Institute of Crustal Dynamics, China P.R
 The Nuclear Industry Geological Survey 282 Geological
 Brigade, China P.R
 The Three Gorges Hazard Prevention Office, China P.R
 The University of Hong Kong, China P.R
 The Yangtze River Water Resources Commission Yangtze
 River Academy of Sciences, China P.R
 Tian Jin Institute of Geology and Mineral Resources,
 China P.R
 Tongji University, China P.R
 Wuhan Center of Geological Survey, CGS, China P.R
 Xi'an Center of Geological Survey, CGS, China P.R
 Xi'an Jiaotong University, Department of Civil
 Engineering, Xi'an, China P.R
 Xi'an Center of Geological Survey, CGS, China P.R
 Yunnan Institute of Geological Environmental Monitoring,
 China P.R
 National Central University, Chinese Taipei
 University of Ostrava, Czech Republic
 Institute of Information Theory and Automation, Czech
 Republic
 ARCADIS Geotechnika a.s, Czech Republic
 Albert-Ludwigs University Freiburg, Germany
 University of Bremen, Germany
 University of Vechta, ISPA, Germany
 German Research Center for Geosciences (GFZ), Potsdam,
 Germany
 University of Thessaly, Greece
 JICA Honduras Office, Honduras
 Mizoram University, Pachhunga University College, India
 National Institute of Technology Hamirpur, H.P., India
 CMCC Centro Euro-Mediterraneo sui cambiamenti
 climatici, Italy
 CNR-IRPI, National Research Council, Italy
 Comuhedi Amcoma, Italy
 Department of Earth and Environment Sciences,

University of Pavia, Italy
 DIFA, University of Bologna, Italy
 Institute for the Conservation and Valorization of Cultural Heritage (ICVBC), National Research Council (CNR), Italy
 Maccaferri, Italy
 National Institute of Oceanography and Experimental Geophysics (OGS), Italy
 Seconda Università di Napoli, Italy
 University of Milano Bicocca, Italy
 Advantecology Co.,Ltd, Japan
 Asia Air Survey Co., Ltd., Japan
 Asian Institute of Space Information, Japan
 Ehime University, Japan
 Graduate School of Science, Kyoto University, Japan
 Gunma University, Japan
 Hirosaki University, Japan
 International Consortium on Landslides, Japan
 Japan Water Agency, Japan
 Kochi University, Japan
 Kyoto University, Japan
 National Research Institute of Fire and Disaster, Japan
 Niigata University, Japan
 Nippon KOEI CO., LTD., Japan
 Shimane University, Japan
 Tohoku Gakuin University, Japan
 Dept. of Ocean Engineering, Pukyong National University, Korea
 Gangneung-Wonju National University, Korea
 Institute of Construction Technology, Korea
 Korea Advanced Institute of Science and Technology (KAIST), Korea
 Pukyong National University, Korea
 Sejong University, Korea
 Seoul National University, Korea
 University of Seoul, Korea
 Universiti Sains Malaysia, Malaysia
 MySTAR, Malaysia
 Universiti Sains Malaysia, Malaysia
 Universiti Teknologi Malaysia, Malaysia
 Universidad Nacional Autónoma de México, Mexico
 Practical Action, Nepal
 GNS Science, New Zealand
 University of Canterbury, New Zealand
 Geological Survey of Norway, Norway
 Norwegian Water Resources and Energy Directorate, Norway
 Norwegian Geotechnical Institute, Norway
 Norwegian Water Resources and Energy Directorate (NVE), Norway
 Institute of Opencast Mining "Poltegor-Institute", Ministry of the Environment, Poland
 Polish Geological Institute - National Research Institute, Poland
 Chuvash State University, Russia
 Earth Cryosphere Institute, Russian Academy of Sciences, Siberian Branch, Russia
 Institute of Geology and Mineralogy, SB RAS, Russia
 Kuban State University, Russia
 Tyumen State Oil and Gas University, Russia
 King Abdulaziz University, Saudi Arabia
 State Geological Institute of D. Stúr, Slovakia
 De Laih South Africa (Pty) Ltd, South Africa
 University of Peradeniya, Sri Lanka
 Stockholm University, Sweden
 Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland
 Swiss Federal Research Institute WSL, Switzerland
 GEOTEST AG, Switzerland
 Suranaree University of Technology, Thailand
 Middle East Technical University (METU), Turkey
 Tuzunw Yil University, Turkey
 Hacettepe University, Turkey
 Transport Research Laboratory (TRL), United Kingdom
 British Geological Survey, United Kingdom
 University of Bath, United Kingdom
 University of Southampton, United Kingdom
 California State University, Fullerton, United States
 U.S. Geological Survey, United States
 Visual Slope, LLC, United States