

# The 2017 Ljubljana Declaration on Landslide Risk Reduction

## Contributing to the Sendai Framework for Disaster Risk Reduction

1. The World Landslide Forum IV was convened and organized in Ljubljana, Slovenia, from 29 May to 2 June 2017 by the International Consortium on Landslides (ICL), International Programme on Landslides (IPL), University of Ljubljana and Geological Survey of Slovenia. The event was co-organized by the Ministry of Defence, Ministry of the Environment and Spatial Planning, Ministry of Infrastructure, National Platform for Disaster Risk Reduction and Chamber of Engineers of the Republic of Slovenia. The Forum was sponsored by several other entities. 608 participants\* including scientists, engineers, researchers, policy makers, public officials as well as other stakeholders came from 49 countries/regions, 4 United Nations Organizations, and 5 other international organizations.
2. The participants appreciate the hospitality and welcome that was accorded to the Forum by the authorities and relevant institutions of Slovenia.
3. The participants addressed the challenges of landslide disaster risk. They examined how landslide knowledge and technology, and landslide investigation can be further enhanced and applied to contribute to the reduction of vulnerability and exposure and to building the resilience of persons, communities and countries to landslide disasters which, like other disasters triggered by natural hazards, undermine efforts to achieve the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development.
4. The participants note that landslides are a complex natural phenomenon of many types and varieties that can be triggered by earthquakes, volcanic eruptions, heavy and recurrent rainfall, typhoons, hurricanes, wildfires, snowmelt, sometimes exacerbated by anthropogenic activities and developments such as construction of roads, waterworks and mining. They recall that submarine landslides are able to generate tsunamis and represent a major hazard to coastal areas.
5. The participants underline that landslides, occurring on land and at sea, continue to pose considerable risks to humankind, to human settlements and to livelihoods and economies in mountains, cities, coasts and islands. They underline further that people most exposed to, and affected by landslide disasters are disproportionately the poor, marginalized and vulnerable, including women and children.
6. The participants caution that climate change and variability are expected to increasingly affect the frequency and extent of heavy rainfall and wildfires at local and regional levels with an enhanced potential for landslide occurrence. They recognize that the combined effects of natural phenomena and human adverse activities, associated with a rise in the vulnerability and exposure of urban and rural settlements and agglomerations, are increasing landslide risk around the world.
7. The participants reiterate that 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 as well as local and traditional knowledge.
8. The participants value the mobilization generated and the significant impact of activities developed and implemented throughout the processes of previous World Landslide Forums, namely WLF 1 held in Tokyo in November 2008, WLF 2 held in Rome in October 2011, and WLF 3 held in Beijing in June 2014.
9. The participants recognize and welcome, in particular, the *ISDR-ICL Sendai Partnerships 2015-2025 for Global Promotion of Understanding and Reducing Landslide Disaster Risk* which was adopted as a voluntary commitment to the United Nations World Conference on Disaster Risk Reduction, held in Sendai, Japan, 14-18 March 2015. They affirm that this Partnership is a supporting tool for the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030. They greet and commend the numerous Partners who adhered to this Partnerships. They recognize, with great satisfaction, the progress made by the Partnerships during the first biennium of its life. They commit to pursue and support its further implementation, including through building on the 2012 ICL Strategic Plan 2012-2021.
10. The participants recognize the concrete actions and co-operative activities carried out by the ICL family including through ICL Members, the IPL and IPL Projects, ICL Supporting Organizations, ICL Regional and Thematic Networks, ICL World Centres of Excellence on Landslide Risk Reduction, ICL UNITWIN Cooperation Programme in the framework of the UNITWIN/UNESCO Chairs Programme, Landslide School Network, Landslide Journal and other ICL publications. They value the most recent output which is illustrated by the ISDR-ICL Landslide Interactive Teaching Tools.
11. The participants reiterate their call upon related governmental, non-governmental and international programmes, and initiatives from natural, engineering, human, social and economic sciences, public and private, to continue promoting science and technology and their applications for landslide disaster risk mitigation including by supporting and joining the ISDR-ICL Sendai Partnerships.
12. The participants look forward to the initiation and furthering of the process leading to the organization of the Fifth World Landslide Forum (WLF 5) in 2020.
13. The participants are of the view that, in the perspective of, and during the WLF 5, an opportunity must be found to mobilize in the medium and long term a global alliance which will accelerate and incentivize action for landslide risk reduction. They therefore urge to put in place a mechanism to that effect and call for a commitment, the Kyoto 2020 Commitment for Global Promotion of Understanding and Reducing Landslide Disaster Risk, to be finalized during the preparatory activities for WLF 5 and adopted during WLF 5 in order to serve this purpose.
14. The participants express gratitude to Governmental authorities and specialized organizations and entities worldwide, and in particular authorities and organizations from Japan, for the valuable support which they provide to ICL-IPL. They express sincere appreciation to the leadership and management of ICL for their dedication to the functioning of the Consortium and to the continuation of its initiatives and activities.
15. The participants submit the 2017 Ljubljana Declaration on Landslide Risk Reduction to UNISDR for endorsement as a further commitment on the part of the global landslide community to the Sendai Framework for Disaster Risk Reduction 2015-2030.

Adopted in Ljubljana on 31 May 2017

## ANNEX to the 2017 Ljubljana Declaration on Landslide Risk Reduction List of Participants

United Nations Educational, Scientific and Cultural Organization (UNESCO)	Institute of Geology, China Earthquake Administration, CHINA	Fondazione CMCC, ITALY
World Meteorological Organization (WMO)	Institute of Mountain Hazards and Environment, CAS, CHINA	GEODATA Engineering S.p.A, ITALY
Food and Agriculture Organization of the United Nations (FAO)	Ministry of Land and Resources, CHINA	HUESKER SRL, ITALY
United Nations University (UNU)	Nanjing Tech University, CHINA	INGV (Istituto Nazionale di Geofisica e Vulcanologia), ITALY
International Council for Science (ICSU)	Nanjing University, CHINA	ISPRA, ITALY
Integrated Research on Disaster Risk (IRDR)	Northeast Forestry University, CHINA	Joint Research Centre, ITALY
International Union of Geological Sciences (IUGS)	Sichuan University, CHINA	Maccaferri Innovation Center Srl, ITALY
International Union of Geodesy and Geophysics (IUGG)	Southwest Jiaotong University, CHINA	NHAZCA S.r.l., ITALY
International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)	State Key Laboratory of Geohazard Prevention and Geoenvironment Protection, CHINA	Politecnico di Milano, ITALY
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Albanian Geological Survey, ALBANIA	University of Medellin, COLOMBIA	Protezione Civile, ITALY
Centre National de Recherche Appliquée en Génie Parasismique (CGS), ALGERIA	Universidad Nacional de Colombia, COLOMBIA	RFI S.p.A, ITALY
Universidad Nacional de Cuyo, ARGENTINA	GeoDa Consulting d.o.o., CROATIA	S.G.A. Studio Geologi Associati, ITALY
Gecko Geotechnics Pty Ltd, AUSTRALIA	Geokon-Zagreb, CROATIA	Sapienza University of Rome, ITALY
Prime Geotechnics Pty Ltd, AUSTRALIA	University of Rijeka, CROATIA	Scientific and Technological Attaché, ITALY
University of Wollongong, AUSTRALIA	University of Zagreb, CROATIA	TRE ALTAMIRA, ITALY
AIT Austrian Institute of Technology GmbH, AUSTRIA	CDV - Transport Research Centre, CZECH REPUBLIC	Universita degli Studi della Basilicata, ITALY
Amt der Kärntner Landesregierung, AUSTRIA	Charles University, CZECH REPUBLIC	Universita degli Studi della Campania Luigi Vanvitelli, ITALY
Austrian Service for Torrent and Avalanche Control (BMLFUW), AUSTRIA	Czech Technical University, CZECH REPUBLIC	Universita degli Studi di Modena e Reggio Emilia, ITALY
DORFTV, AUSTRIA	GEODRILL s.r.o., CZECH REPUBLIC	Università degli Studi di Napoli Federico II, ITALY
Geological Survey of Austria, AUSTRIA	Institute of Rock Structure and Mechanics, CAS, CZECH REPUBLIC	Universita degli Studi di Padova, ITALY
IBTP Koschuch, AUSTRIA	Sohag University, Egypt	Universita degli Studi di Parma, ITALY
Institute für Geotechnik, AUSTRIA	BRGM, FRANCE	Universita degli Studi di Udine, ITALY
ÖBB Infrastruktur AG, AUSTRIA	CNRS - EOST UMS 830, FRANCE	Universita della Calabria, ITALY
Trumer Schutzbaten GmbH, AUSTRIA	IRIS Instruments, FRANCE	University Enna Kore, ITALY
University of Natural Resources and Life Sciences, Vienna, AUSTRIA	Terre Armee, FRANCE	University of Brescia, ITALY
University of Salzburg, AUSTRIA	TP GEO, FRANCE	University of Florence, ITALY
University of Vienna, AUSTRIA	Bundesanstalt für Geowissenschaften und Rohstoffe, GERMANY	University of Milano, ITALY
EuroGeoSurveys, BELGIUM	Federal Highway Research Institute, GERMANY	University of Milano – Bicocca, ITALY
KU Leuven, BELGIUM	Federal Institute for Geosciences and Natural Resources, GERMANY	University of Molise, ITALY
Royal Museum for Central Africa, BELGIUM	Friedrich Schiller University Jena, GERMANY	University of Pavia, ITALY
University of Liège, BELGIUM	GFZ Potsdam German Research Centre for Geosciences, GERMANY	University of Perugia, ITALY
Vrije Universiteit Brussel, BELGIUM	HUESKER Synthetic GmbH, GERMANY	University of Pisa, ITALY
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State University of Campinas, BRAZIL	Springer-Verlag, GERMANY	University of Sannio, ITALY
Geological Institute, BAS, BULGARIA	University of Vechta, GERMANY	University of Trieste, ITALY
Geological Survey of Canada, CANADA	University of Würzburg, GERMANY	Advantechnology Co., Ltd., JAPAN
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University of British Columbia, CANADA	MTA CSFK GGI, HUNGARY	Chuden Engineering Consultants Co., Ltd., JAPAN
University of Saskatchewan, CANADA	Amrita University, INDIA	Chuo Kaihatsu Corporation, JAPAN
University of Waterloo, CANADA	CSIR-Central Building Research Institute (CBRI), INDIA	Embassy of Japan in Slovenia, JAPAN
Beijing Normal University, CHINA	Gautam Buddha University, INDIA	Gunma University, JAPAN
Chengdu University of Technology, CHINA	National Institute of Hydrology, INDIA	Hirosaki University, JAPAN
China Earthquake Administration, CHINA	VIT University, INDIA	International Consortium on Landslides, JAPAN
China Geological Survey, CHINA	Universitas Gadjah Mada, INDONESIA	Japan Center for Area Development Research, JAPAN
China Institute of Geo-Environment Monitoring, CGS, CHINA	Indonesian Nasional Agency for Disaster Management, INDONESIA	Japan Landslide Society, JAPAN
China University of Geosciences, CHINA	Research Center for Geotechnology, Indonesian Institute of Sciences, INDONESIA	Kochi University, JAPAN
Hong Kong Polytechnic University, CHINA	Universitas Katolik Parahyangan, INDONESIA	Kyoto University, JAPAN
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IMDE, CAS, CHINA	EURAC, ITALY	National Institute of Occupational Safety and Health, JAPAN
Institute of Geographic Sciences and Natural Resources Research, CAS, CHINA		National Research Institute of Fire and Disaster, JAPAN
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		Shimane University, JAPAN
		Shizuoka University, JAPAN

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Sejong University, REPUBLIC OF KOREA  
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REDD Implementation Centre, NEPAL  
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Občina Dobrna, SLOVENIA  
Občina Gornji Grad, SLOVENIA  
Občina Hrastnik, SLOVENIA  
Občina Jesenice, SLOVENIA  
Občina Kobarid, SLOVENIA  
Občina Laško, SLOVENIA  
Občina Mežica, SLOVENIA  
Občina Mislinja, SLOVENIA  
Občina Nazarje, SLOVENIA  
Občina Podčetrtek, SLOVENIA  
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Občina Sevnica, SLOVENIA  
Občina Solčava, SLOVENIA  
Občina Šentjur, SLOVENIA  
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California State University, Fullerton, USA  
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