



## 2023 Florence Declaration on Landslide Risk Reduction

### Preamble

We, the representatives of the global landslide community, gathered in Florence, Italy, for the 6<sup>th</sup> World Landslide Forum (WLF6) from 14 to 17 November 2023, have focused on Landslide Science for Sustainable Development by providing a common platform to foster cooperation among landslide scientists, engineers, practitioners, policymakers, and other stakeholders to define shared priority actions for landslide risk reduction at the global level. Additionally, we have addressed key aspects of landslide risk reduction, including monitoring and early warning, modelling, hazard and risk assessment, mitigation techniques, triggering mechanisms, relationships with climate change, landslide risk dialogue, and capacity building for social resilience as a part of intra-sectoral multi-hazard governance.

Landslides significantly threaten communities and individuals, causing loss of life and damage to property, infrastructure, economy, and cultural, natural and environmental heritage in all types of terrains and conditions. People most affected by landslide disasters are disproportionately the poor, the marginalized, and the vulnerable, especially women and children. Like other hazards, the adverse impact of landslides undermines efforts to achieve Sustainable Development Goals (SDGs) by 2030.

As climate change is expected to increasingly affect the frequency, magnitude, and extent of heavy rainfall, forest fires, snow and ice melt, and permafrost degradation, the potential for landslides is increased at local and regional levels. Likewise, population growth and development in mountainous, steep, and coastal areas, including infrastructure construction and urban expansion due to population shifts and growth, dramatically increase exposure to landslide hazards. Moreover, the combined effects of triggering factors, including rainfall, snow and ice melt, earthquakes, volcanic eruptions, and human activity can lead to major impacts from catastrophic landslides such as debris flows, rockfalls, rockslides, lahars, and megaslides.

Therefore, understanding landslide disaster risk requires an integrated multi-hazard and multi-sectoral approach that focuses on social and institutional vulnerability to formulate effective risk management policies. In the same way, landslide disaster risk can be effectively reduced through, *inter alia*, land use and urban planning, building codes, risk assessment, early warning systems, legal and policy developments, integrated research, insurance, and, most importantly, risk education and awareness at all levels, building together an effective landslide disaster risk governance.

The effectiveness of landslide disaster risk reduction actions depends on scientific, technological, and social developments to understand the components of disaster risk, including causes and

triggering mechanisms, multi-hazard, cascading effects, vulnerability, exposure, public awareness, and community resilience. This goes hand in hand with capacity building and the production of freely available educational publications and tools, supported by multi-sector, bottom-up, and top-down collaboration between governments at all levels, civil society, and scientific communities, to reduce landslide disaster risk.

**In view of the former considerations, the WLF6 community COMMITS to support efforts that:**

- 1) foster understanding and reduce the risk of landslide disasters worldwide;
- 2) share information and best practices, support research and development of new technologies, and build capacity at all levels to improve preparedness and response to a landslide disaster;
- 3) pursue and support the further implementation of the Kyoto 2020 Commitment for Global Promotion of Understanding and Reducing Landslide Disaster Risk (KLC2020) by continuing to reduce the risk and impact of landslides on the environment and society, and working with all stakeholders to make further progress in the coming years;
- 4) work together to raise awareness of the risks posed by landslides and promote the implementation of effective mitigation and adaptation measures, including early warning systems, safe land use planning, sustainable land management practices, risk education and awareness;
- 5) initiate and promote the process to organize the 7<sup>th</sup> World Landslide Forum (WLF7) in 2026 by mobilizing a medium and long-term global alliance to accelerate and incentivize landslide risk reduction actions as defined in KLC2020; and
- 6) submit the 2023 Florence Declaration on Landslide Risk Reduction to UNDRR for endorsement as a further commitment from the global landslide community to the Sendai Framework for Disaster Risk Reduction 2015-2030.

**We CALL on:**

- a) new competent global, regional, national, and local institutions and entities to join and support the KLC2020 initiative as an engagement to the Sendai Landslide Partnerships 2015-2025, the Sendai Framework for Disaster Risk Reduction 2015-2030, the 2030 Agenda Sustainable Development Goals, the New Urban Agenda, and the Paris Climate Agreement;
- b) landslide scientists, researchers, engineers, practitioners, policy makers, and other stakeholders to contribute to the open access book series Progress in Landslide Research and Technology, the Landslide journal and other ICL publications;
- c) all stakeholders to join us in this effort and recognize the critical role of understanding and reducing landslide disaster risk in creating a safer and more sustainable future for all; and
- d) related governmental, non-governmental, and international programs and initiatives from the natural, engineering, human, social, and economic sciences, both public and private, to further promote science and technology and their applications for landslide disaster risk reduction by supporting and joining KLC2020.

**Adopted in Florence, Italy, 14 November 2023**