

Address by Jón Atli Benediktsson, Rector of the University of Iceland, at the opening of the workshop 'Landslides onto Glaciers. Research, Monitoring and Hazard Assessment'. Held in the Nordic House in Reykjavik on Tuesday 13 November 2018

Ladies and gentlemen,

A very good morning to you all. It gives me great pleasure to welcome you here on behalf of the University of Iceland, and it is an honour to open this international workshop entitled 'Landslides onto Glaciers. Research, Monitoring and Hazard Assessment'.

This workshop is held by the Nordic Centre of Excellence On Resilience and Societal Security (NORDRESS), the Icelandic Meteorological Office and the University of Iceland and I would like to thank the organisers for their excellent work.

The location and timing of this workshop are not coincidental. Global warming is causing rapid and dramatic changes to all aspects of our environment and one of the most tangible impacts is the significant retreat of glaciers, which here in Iceland we can directly observe all around us.

These changes are happening so fast that, unfortunately, our research and understanding have not kept pace.

One of the effects of rapid glacial retreat is that deep glacial lakes form in front of the snouts and these lakes are often surrounded by steep and frequently unstable slopes. In such conditions, mass movements of rocks and debris can fall onto outlet glaciers or even into their fast expanding glacial lakes.

In the past fifty years, two mass movements have been observed falling onto outlet glaciers in Iceland. The first fell on Steinholt sjökull in South Iceland in 1967, partly into the glacial lake, which caused a major glacial lake outburst flood in the valley. Just over a decade ago, in 2007, a large rock avalanche fell on the upper part of Morsárjökull, an outlet glacier of the great Vatnajökull, but did not reach the snout. As well as these mass movements, a large number of smaller landslides have fallen onto outlet glaciers in Iceland. As the glaciers continue to retreat and the glacial lakes continue to expand, the danger of mass movements falling onto glaciers or into glacial lakes is growing.

The recent detection of a fracture in Svínafellsjökull in South East Iceland has shown us that these environmental changes to outlet glaciers in Iceland are occurring and could potentially cause a great deal of damage. Further research and monitoring is therefore urgently required. A partnership is currently being developed between the University of Iceland and the Icelandic Meteorological

Office, involving collaboration on research, installation of measuring equipment and monitoring. It is important to develop methods that can be used to map and monitor the situation, such as with remote sensing and drone imaging, areas in which there surely have been rapid and exciting advances in recent times.

Ladies and gentlemen. As I mentioned at the start of this address, our understanding of these phenomena and their consequences is still limited and this workshop is therefore particularly significant. This gathering of leading foreign experts in research, monitoring and hazard assessment offers the opportunity to share knowledge, form networks and develop future partnerships.

Ladies and gentlemen. There is an exciting programme ahead and I hope you all find it enlightening, enjoyable and useful.

Thank you.