



In February 2021, a glacial lake outburst flood in the Uttarakhand region (NW India) killed more than 200 people and causes devastating damage to downstream infrastructure. This event, known as the Chamoli disaster, is just one in a series of a recent floodings from glacial lakes. An intensification of glacial floods has been observed in recent decades, which is directly related to the progressing global warming and glacier recession. Scientific works describing glacial lake outburst floods were conducted not only in high mountain regions (e.g., Himalayas, Andes), but also for the polar regions (e.g., Greenland, Alaska). This year, our research team has undertaken such an analysis for one of the last unexplored regions, which is the **Svalbard Archipelago**. On Svalbard, the main town is Norway's Longyearbyen, located in the archipelago's largest fjord, Isfjorden. This fjord is also the most visited area in the region by tourists and scientists. As part of the **GLOWS** project, our team set out to investigate which of the numerous glacial lakes in the area pose a potential threat in the form of catastrophic glacial lake outburst floods.

With the **GLOWS** project we want to answer the question of how we can estimate the risk of glacial floods within the watershed of Isfjord, which will likely continue to increase due to the aforementioned global warming. In the project, we want to use available remote sensing data and after appropriate analysis, combine them with data collected in the field. Thanks to this, we will be able to prepare a comprehensive map of geohazards for the analysed area and extrapolate the findings to other glacial lakes in polar regions.

One of the main goals of the **GLOWS** project is to determine the seasonal changes of glacial lakes since the termination of the Little Ice Age in Svalbard, which occurred during the first half of the 20th century.

The **GLOWS** project will closely collaborate with a research team from Norway, which allow mutual transfer of knowledge and comparison between low and high Arctic glacial lake dynamics. The **GLOWS** project also aims to strengthening the cooperation between Polish polar stations.