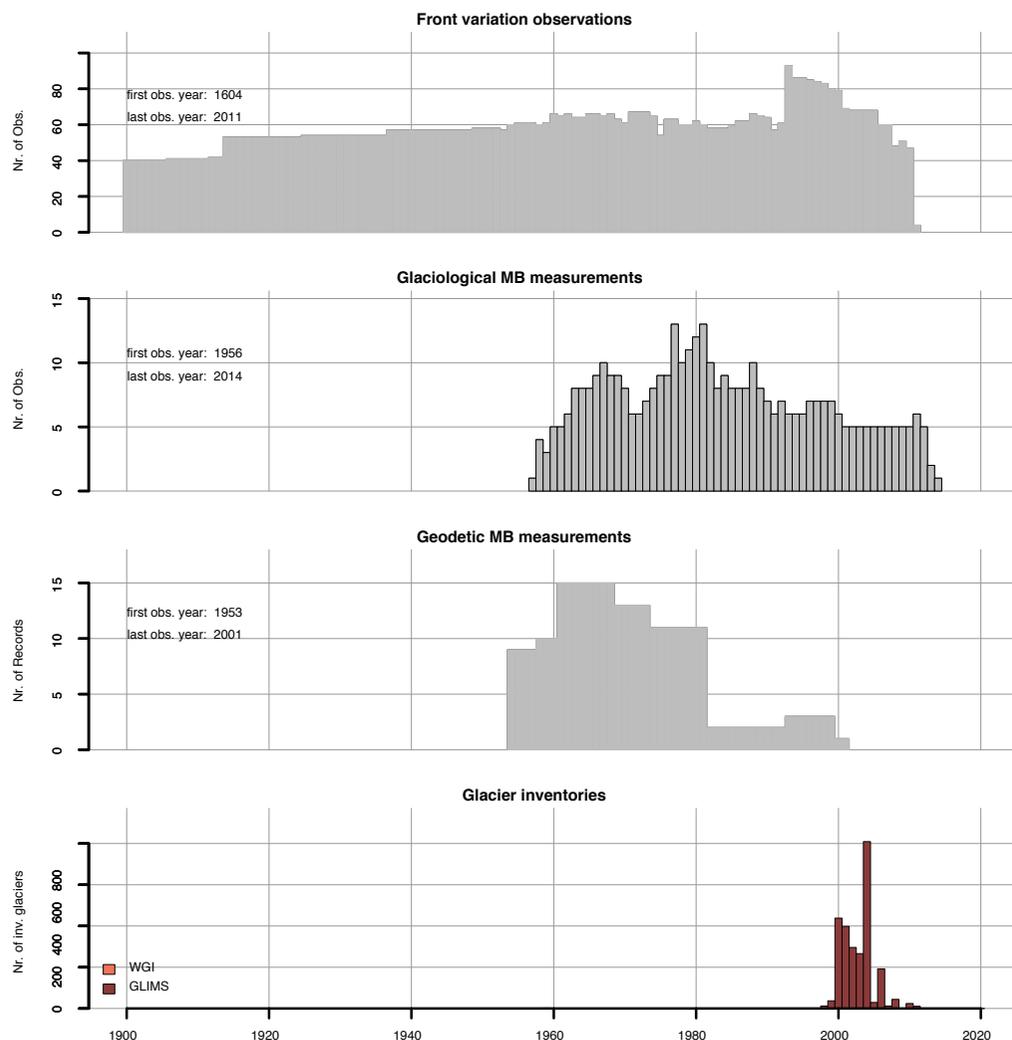


# GLACIER MONITORING: RUSSIA

Russia has a long history in glacier monitoring, but due to political change several long-term series were interrupted and the continuation of remaining series is still endangered. In many regions the glaciers have a significant role in local and regional water resources.

## Available series



A high number of front variation series is available in Russia, starting around 1600. In addition several mass balance series (glaciological and geodetic) exist, starting in the 1950s. Unfortunately some series were interrupted in the 1990s. Almost 100% of the glaciated area has been inventorized in GLIMS around 2000.

## Key statistics

	Front Variation	Mass Balance	Thickness Change
total glaciated area:	53'873 km <sup>2</sup>	103	28
total coverage WGI:	88 %	16	8
total coverage GLIMS:	97 %	14	2
Number of series:		28	12
Average length [years]:		48	16
Average number of observations:		15	2

## Present state

National correspondent available but limited national and international coordination. Many of the former Soviet monitoring programmes abandoned in the 1990s.

Several long-term and detailed mass balance programmes. Some of them interrupted in the 1990s, the continuation of the remaining endangered.

Half a dozen balance series covering the second half of the 20<sup>th</sup> century.

Several dozen front variation series and a few geodetic observations.

Almost full coverage in WGI (as Soviet Union, so including Georgia, Kyrgyzstan, Kazakhstan, Tajikistan and Uzbekistan) and GLIMS databases.

## Future potential/needs

Coordinate glacier monitoring activities. Resume abandoned monitoring programmes, improve coverage in the Russian Arctic. Collaborate with neighbouring countries.

Ensure the continuation of long-term and detailed measurement programmes for process understanding and model calibration. Resume some of the abandoned long-term series.

Continue and resume glacier mass balance studies. Improve regional coverage in Russian Arctic.

Resume decadal length change observations from remote sensing. Encourage geodetic change assessments for large glacier samples. Improve regional coverage in Russian Arctic.

Complete inventory of Russian Arctic. Plan next repeat inventory towards 2020.

## Spatial distribution of series

In Russia, glaciers are spread all over the country; from mountain glaciers in the Altai and on the Kamchatka Peninsula to Arctic ice caps on islands in the Kara and Barents Sea. They cover more than 53 000 km<sup>2</sup>. In most of the regions glacier monitoring series were set up in former times; a lot of them were interrupted and remain endangered.

