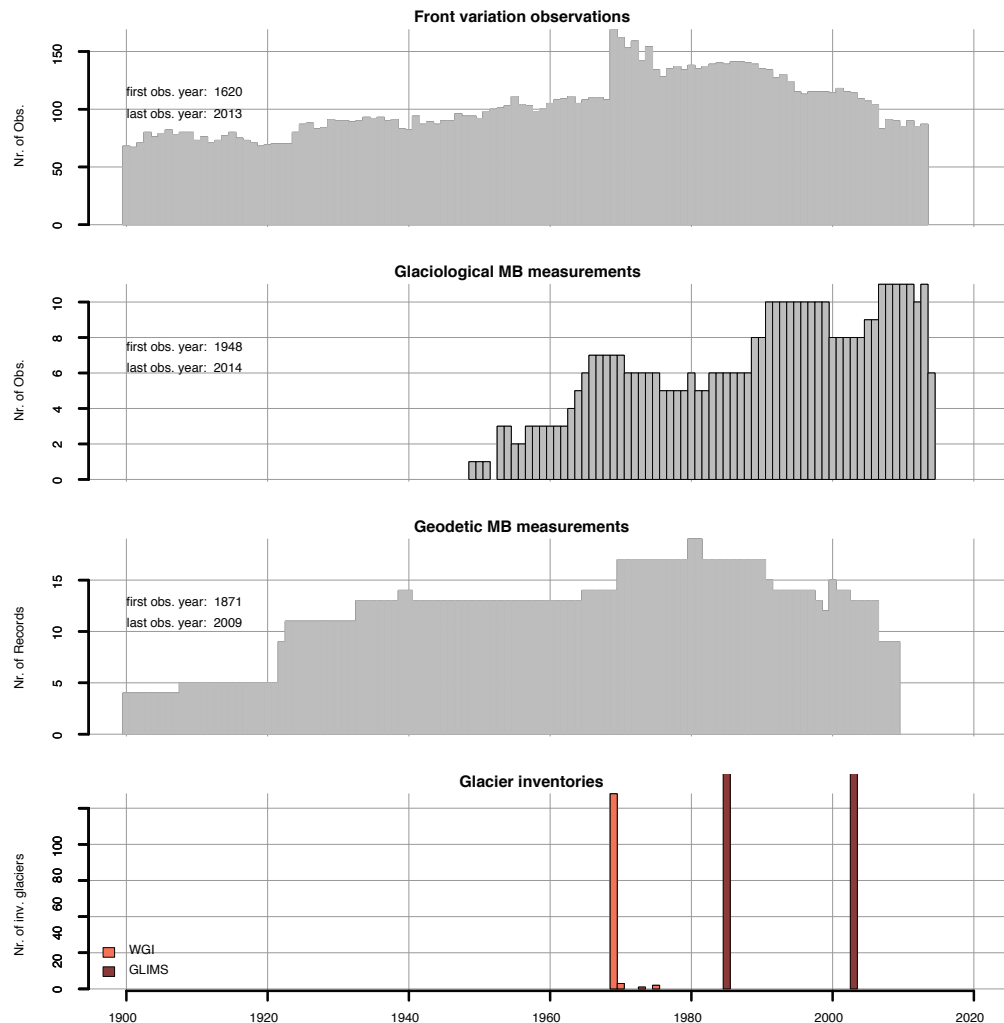


# GLACIER MONITORING: AUSTRIA

Being an Alpine country glacier monitoring has a very long tradition in Austria. A large number of length change and mass balance measurements with many long-term data series and comprehensive inventory data are available.

## Available series



With a total of 191 series, Austria has a very dense glacier monitoring network. FV observations reach back to 1620 and show a relative constant number since 1900. The measurement of MB series started in the 1940s and increased to more than 10 nowadays. A peak in TC records is found around 1980. The glacier inventories have been performed repeatedly, but cover only small parts of the glaciated area.

## Key statistics

total glaciated area: 367 km<sup>2</sup>  
total coverage WGI: 92 %  
total coverage GLIMS: 11 %

Number of series: 153  
Average length [years]: 87  
Average number of observations: 60

Front Variation	Mass Balance	Thickness Change
153	18	20
87	23	40
60	24	5

## Present state

Nationally well-coordinated glacier monitoring with periodically published data reports.

Several glaciers with long-term mass balance programmes based on both glaciological and geodetic methods and including energy balance and flow velocity studies.

Good spatial distribution of long-term mass balance series. Under current climate change scenarios, some glaciers are endangered to vanish within next few decades.

Good spatial distribution of long-term front variation series. Geodetic balance results are reported for some glaciers only.

National inventories not available at the time of this assessment.

## Future potential/needs

Consider the setup of national website and data access. Foster regional coordination and knowledge exchange with neighbouring countries in the Alps and across Europe.

Promotion of one or a few benchmark glaciers for long-term and detailed measurement programmes for process understanding and model calibration.

Continue long-term mass measurement programmes. Early start replacement measurements for vanishing glaciers.

Continue front variation series, extend sample size with decadal length change assessments from remote sensing. Make available geodetic balance results for large glacier samples.

Make available national inventories from around 1850, 1969, 1998 and plan next repeat inventory towards 2020.

## Spatial distribution of series

Glaciers in Austria are distributed all over the Austrian Alps and thus are concentrated to the west of the country. The distribution of measurement series in Austria is considered spatially comprehensive and comparatively dense.

