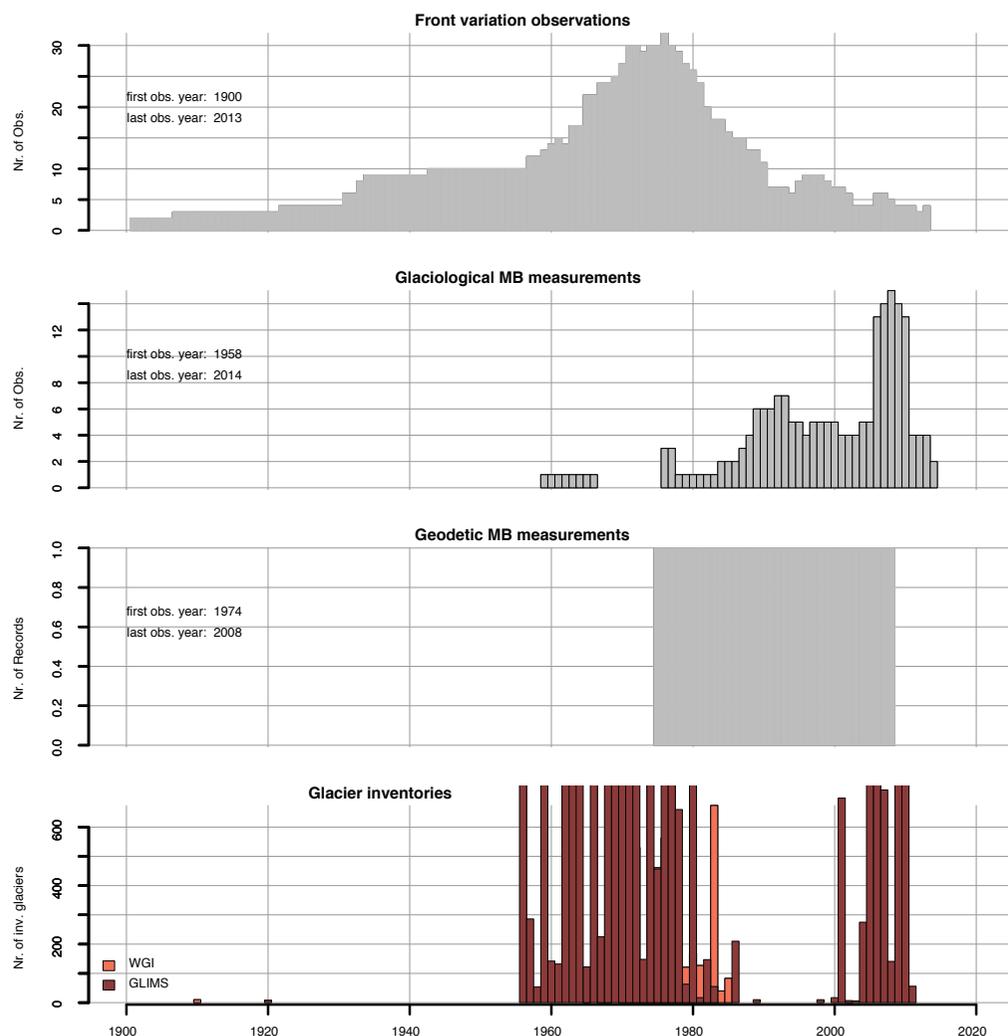


GLACIER MONITORING: CHINA

Glaciers in China are an important water source for both China and its neighbouring countries and thus have an influence on geopolitical stability. Long-term observation series need to be continued and extended.

Available series



Front variation observation in China was started in 1900 and had its peak in the 1970s with about 30 series. Today only a couple of glaciers are monitored. On a few glaciers mass balance is measured glaciologically and only one long-term and detailed series exist. Geodetic mass balance measurements are almost inexistent. Glacier inventories (WGI and GLIMS) show a good coverage but have been compiled over a long time frame.

Key statistics

	Front Variation	Mass Balance	Thickness Change
total glaciated area:	64'679 km ²	Number of series:	42
total coverage WGI:	21 %	Average length [years]:	11
total coverage GLIMS:	137 %	Average number of observations:	4
			24
			10
			1

Present state

Glacier monitoring is carried out by a few research groups.

One long-term mass balance programme at Urumqi Glacier No. 1 based on both glaciological and geodetic methods, including energy balance and flow velocity studies.

There are few other glaciers with mass balance series made available.

There are very few front variation series and basically no geodetic volume change assessment available.

There are two national inventories available (GLIMS) with the earlier having a large spread over time.

Future potential/needs

Strengthen the national monitoring activities and foster regional coordination and knowledge exchange with neighbouring countries.

Continue the long-term and detailed measurement programme and consider extension to a second bench mark glacier for process understanding and model calibration.

Encourage long-term mass balance studies, combining glaciological and geodetic methods, well distributed over the diverse geographical setting of the country.

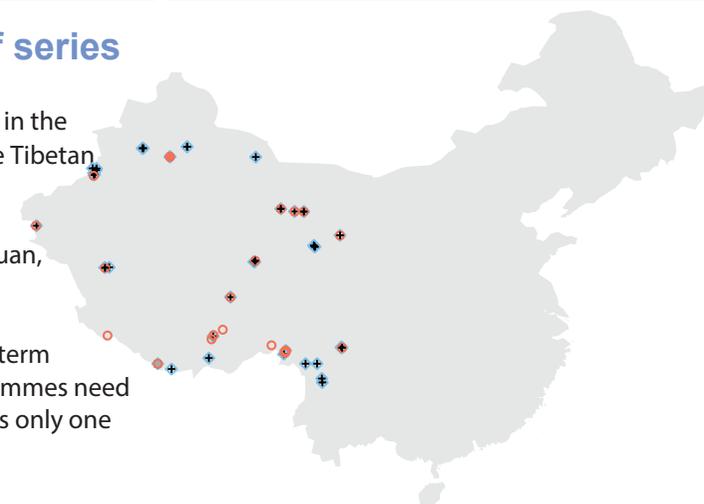
Encourage remotely sensed assessments of glacier changes in length, area and volume over larger areas and periods.

Complete glacier inventories with remote sensing data. Plan next repeat inventory towards 2020.

Spatial distribution of series

Glaciers in China are concentrated in the western part of the country; on the Tibetan Plateau and the surrounding mountain ranges Altai, Tianshan, Karakorum, Kunlun, Qilian, Hengduan, and Himalaya Mountains.

Glacier inventories exist, but long-term and detailed measurement programmes need to be established, since there exists only one at Urumqi Glacier No. 1.



References:
Zhongqin Li. 2012 Urumqi Glacier: From the Glacier Photograph Collection. Boulder, Colorado USA: National Snow