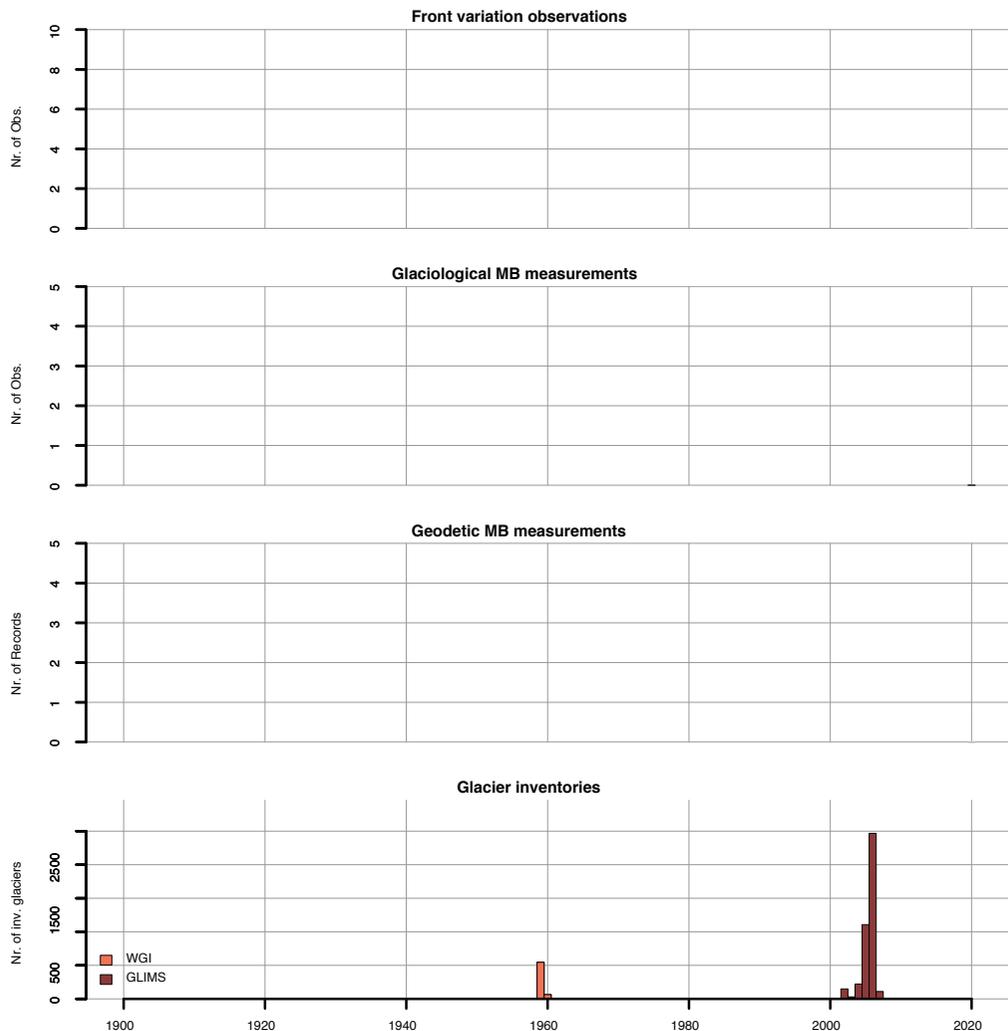


GLACIER MONITORING: AFGHANISTAN

Glaciers in Afghanistan have a significant role in local and regional water resources, natural hazards, and geopolitical stability (Bishop et al. 2014). The country lack fundamental and reliable quantitative information on glacier changes.

Available series



No front variation, mass balance and thickness change series are available from glaciers in Afghanistan. Several glacier inventories have been compiled, covering only 18 % of the glaciated area around 1960 (WGI) but providing full coverage after 2000 (GLIMS).

Key statistics

	Front Variation	Mass Balance	Thickness Change
total glaciated area: 2'543 km ²	0	0	0
total coverage WGI: 12 %	0	0	0
total coverage GLIMS: 118 %	0	0	0
Number of series:	0	0	0
Average length [years]:	0	0	0
Average number of observations:	0	0	0

Present state

No national monitoring activities. Initial contact established a National Correspondent nominated.

No long-term monitoring programme reported.

No mass balance measurements reported. Initial contact established to group that aims at starting a measurement program.

No front variation or geodetic volume change assessments available.

Country partly covered in the WGI with data from late 1950s and full coverage in GLIMS after 2000.

Future potential/needs

Strengthen the contact to research groups and national agencies with a potential interest in glacier monitoring.

Emphasize the need for at least one national site for long-term glacier monitoring.

Support the local contact with the initialization of a mass balance programme. Encourage participation of national contacts at international training courses.

Encourage remotely sensed assessments of glacier changes in length, area and volume.

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

Spatial distribution of series

The glaciers of Afghanistan are concentrated in the Hindu Kush and Pamir mountains, where around 3000 small glaciers cover an area of about 2500 km² (Bishop et al. 2014). The glaciers range from more or less debris-free white-ice glaciers, through progressively more debris accumulations on the ice.



References:
Bishop et al. (2014): Remote sensing of glaciers in Afghanistan and Pakistan. In: Kargel et al. (2014): Global Land Ice Measurements from Space. Springer.