

"Glacier Growing - a Local Response to Water Scarcity in Baltistan and Gilgit, Pakistan."

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Abstract

People in the districts of Baltistan and Gilgit practice 'glacier growing' with the intention of making glaciers that will enhance water availability. This is done by placing ice from natural glaciers inside caves dug out from talus-slopes at altitudes between 4000 and 5000 m a.s.l. Apart from the ice; gourds containing water are also added to the interior of the cave. A layer of charcoal and sawdust is then put on top of the ice to provide insulation. In addition to the human contribution of ice; the locations where glacier growing is conducted accumulate large amounts of snow by drift and avalanche activity. At these sites the ground is perennially frozen, which provide conditions conducive to ice accumulation in talus-slopes, sometimes leading to the formation of rock glaciers.

This study is an exploration of the practice of glacier growing and of its implications for water management in Gilgit and Baltistan. After observation of five glacier growing sites, and by informal interviews with practitioners of glacier growing, a grounded theory of glacier growing is arrived at. That is, a theory that is based on categories and concepts used by the local people who participate in glacier growing. Glacier growing is further interpreted within the context of the scientific discipline of glaciology in order to account for how natural processes affect the sites of glacier growing.

Glaciers have a big impact on the lives of people in the studied area and provide benefits by evening out river discharges, but may also become a peril when advancing onto cultivated land, destroying irrigation canals and roads, and damming up rivers. Perhaps this is also why people of this region perceive of glaciers as living entities endowed with gender and responsive to human action. The gender division of glaciers also bears implications for how glacier growing is performed, as it is seen as necessary to bring together 'female' and 'male' ice to make the glacier grow. The perception of glaciers as animated is in this thesis understood as an important condition for how 'glacier growing' comes to be regarded as a feasible method to make new glaciers.



Ingredients for a new glacier

Picture: Ingvar Tveiten

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