

Glacier maps from the GLIMS Glacier Database, built on demand for arbitrary years

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Glaciers are shrinking in most regions of the world. Glacier losses have impacts on local water availability and hazards, and contribute to sea level rise. To understand these impacts and the processes behind them, it is crucial to monitor glaciers through time by mapping their areal extent, changes in volume, elevation distribution, snow lines, ice flow velocities, and changes to associated water bodies. The glacier database of the Global Land Ice Measurements from Space (GLIMS) initiative is the only multi-temporal glacier database tracking all these glacier measurements and providing them to the scientific community and broader public.

Here we present a new tool for extracting global glacier maps representative of arbitrary years. These maps are similar to the existing Randolph Glacier Inventory (RGI) data sets, but are created on-demand from the full multi-temporal GLIMS Glacier Database. We also summarize recently added data. The GLIMS Glacier Database is useful for tracking changes in water resources, hazards, and mass budgets of the world's glaciers.