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# GLIMS and the RGI: Relationships present and future

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The Global Land Ice Measurements from Space (GLIMS) glacier database was established at the National Snow and Ice Data Center (NSIDC) in 2005, and through the collaborative efforts of a global network of scientists, now contains outlines and metadata on 100 000 glaciers. There is a web-based map interface and web map services through which users can obtain the data at no cost. While this collaborative achievement has been impressive, it has not satisfied the needs of all researchers. For example, those investigating contributions from glaciers to sea level rise have required a globally complete collection of glacier outlines, even if it lacked metadata and source information. GLIMS data were rich in metadata, but not geographically complete enough for this segment of the research community and others.

Tad Pfeffer led the creation of the Randolph Glacier Inventory (RGI) with the express purposes of filling the geographic gaps in GLIMS, improving the quality of the outlines in some regions, and creating a globally complete map of glaciers. This was achieved: the RGI contains outlines for 171 000 glaciers or glacier complexes (not hydrologically divided), though without the richness of the GLIMS metadata and source information.

The RGI and GLIMS communities intend to merge the two sets of outlines. This will involve the addition of metadata to the RGI glacier outlines to conform to the GLIMS data model, and ingestion of the augmented dataset into the GLIMS Glacier Database. One important task is the assignment of GLIMS glacier IDs. For glaciers that have new RGI outlines, and for which there are already existingoutlines in the GLIMS database, we must ensure that the RGI outlines are assigned GLIMS IDs that match what has already been assigned to the glacier in the GLIMS database. Otherwise, outlines that are supposed to pertain to the same glacier will appear to be different glaciers. This would cause errors in deriving statistics from the database, such as glacier count or area.

Software for ID assignment has been developed, and some progress has been made toward merging the RGI into GLIMS. This contribution compares and contrasts the two datasets and discusses the status of the merge effort and lessons learned.