The data sets contains the Glacier Inventory named as “Kashmir University Glacier Inventory (KUGI)” of three Upper Indus basin: Jhelum basin, Suru basin and Chenab basin.

The glaciers in KUGI were delineated manually from following Landsat Satellite images:

|  |  |
| --- | --- |
| 1. ETM+ (30 m) | 27-09-2000 |
| 1. ETM+ (30 m) | 02-08-2000 |
| 1. ETM+ (30 m) | 04-09-2000 |
| 1. ETM+ (30 m) | 12-10-2002 |
| 1. ETM+ (30 m) | 28-10-2002 |

Furthermore, glaciers were categorized as clean and debris cover based on the debris fraction threshold of 19%. Besides glacier thickness change information derived from the DEM differencing of SRTM and TanDEM-X DEMs.

The description of each of the “Fields” in the KUGI is as follows:

**Glacier\_ID:** Each glacier in KUGI is identified with a unique ID represented by the Glacier\_ID.

**GLIMSid:** For easy identification and comparison with existing global and regional glacier inventories each glacier in KUGI is linked to the corresponding “GLIMSid”.

**Lat and Lon:** The locational information for each of the glacier in the KUGI is provided in the form of central latitude (Lat) and longitude (Lon) in decimal degrees.

**Area\_Sqkm:** The glacier area in square kilometers.

**Zmin:** Minimum glacier elevation in meters derived from aster GDEM v3

**Zmax:** Maximum glacier elevation in meters derived from aster GDEM v3

Zmean: Mean glacier elevation in meters derived from aster GDEM v3

**SlopeMin:** Minimum glacier slope in degrees derived from aster GDEM v3

**SlopeMax:** Maximum glacier slope in degrees derived from aster GDEM v3

**SlopeMean:** Mean glacier slope in degrees derived from aster GDEM v3

AspectMin: Minimum glacier aspect in degrees derived from aster GDEM v3

**AspectMax**: Maximum glacier aspect in degrees derived from aster GDEM v3

**Aspectmean:** Mean glacier aspect in degrees derived from aster GDEM v3

**DC\_status:** This field indicates the debris cover status of each of the glacier based on the 19% debris fraction threshold; DC\_status= Clean means the glacier has debris cover fraction <19% where as DC\_status=DC means the glacier is categorized as Debris-covered and the debris cover fraction is >19%

**dH\_myr:** Mean annual glacier thickness change derived from the differencing of SRTM and Tandem-X Digital Elevation Models between 2000 and 2012.