

Metadata Information Sheet

1. Identification

LongName	c3s_gi_rgi04_L8_S2_2019_v1.zip		
ShortName	Glacier inventory Baffin Island	Type	vector (polygon), shapefile
Creators	Frank Paul, Phillip Rastner	Institution	Dept. of Geography, University of Zurich
Created at	25.11.2024 (release v1.0)	Funding	ECMWF C3S
Entry ID	xxx	Remarks	to be submitted to GLIMS

2. Description

Description	This is a new glacier inventory for Baffin Island created from 12 Landsat scenes and 3 Sentinel-2 tiles acquired in mid-August 2019 (2 scenes in the south are from 2020). Scene-specific thresholds were applied to the ratio images and manual editing was used to correct water, debris-cover and shadow regions after raster-vector conversion. RGI 7.0 outlines and very high-resolution images from the ESRI basemap guided the corrections. We used the same ice divides as for RGI 7.0 (derived from the Arctic DEM @ 30 m). This DEM was also used to calculate topographic data for each glacier.		
Methods	Landsat: pan/SWIR (S-2: red/SWIR) band ratio w/ manual correction (water / debris / shadow). The SWIR band of L8 (S-2) was resampled to 15 (10 m) before calculation.		
Dataset	11063 glaciers >0.005 km ² covering an area of 31913.2 km ² .		
Uncertainty	Not determined yet, but should be better than 5%.		
References	In preparation.		
Citation	When using this dataset, please ask FP for a citation (a related publication is in prep.).		

3. Source data

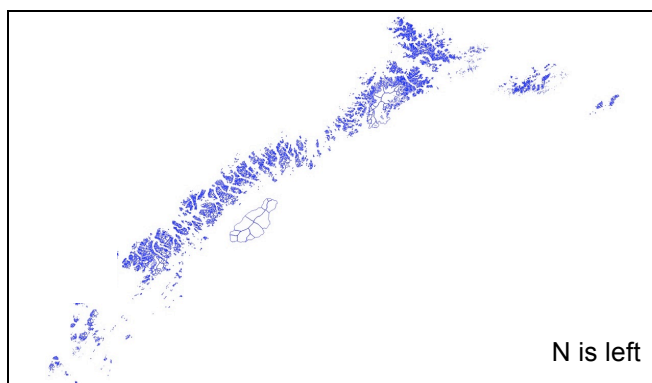
Source	earthexplorer.usgs.gov	Date (range)	Aug 2019 (12), Aug (2020 (2)
Satellites	Landsat 8, Sentinel-2	Years total	2
Sensors	OLI, MSI	Remarks	The ArcticDEM (@30 m) was used to digitize drainage divides and to calculate topographic parameters for all glaciers.
Path / row range	15-36 / 8-16		
Nr. of scenes	15 (see page 2)		

4. Geographic coverage

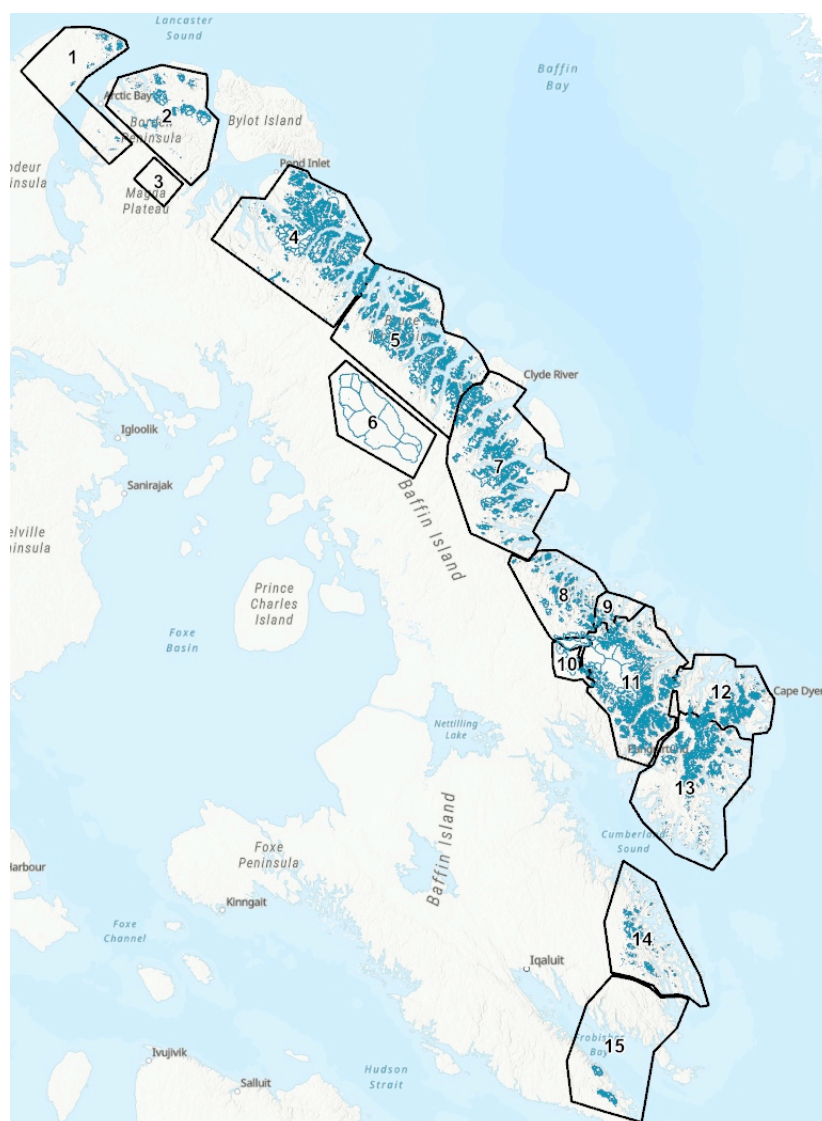
Country	Canada	xxx map insert by Enveo
Region	Baffin Island (wo/ Bylot Island)	
RGI Region	04 Arctic Canada South	
Longitude	61.3-86.5° W	
Latitude	62.1-73.9° N	
Projection	UTM Zones 17 to 21N	
Datum	WGS84	
Sampling	10/15 m pixels, manual editing	

5. Data files

Name*	c3s_gi_rgi04_L8_S2_2019_v1.xxx
Size	22 MB
Upload:	xx.xx. 2024
File 1-4	Name + dbf/prj/shp/shx
File 5	Screen shot of geogr. coverage
File 6	This Metadata Information Sheet



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Footprints of the Landsat 8 and Sentinel-2 scenes (black) used to generate the glacier outlines (blue-green) for RGI Region 04. Details of each numbered scene is listed in the table below.

Nr.	Path-Row	Date	ID	Nr.	Path-Row	Date	ID
1	036-008	15-08-2019	11	9	19WEQ	13-08-2019	6
2	034-008	17-08-2019	10	10	19WFR	13-08-2019	5
3	034-009	17-08-2019	12	11	017-013	10-08-2019	4
4	029-009	14-08-2019	0	12	015-013	12-08-2019	9
5	025-010	18-08-2019	3	13	015-014	12-08-2019	8
6	025-011	18-08-2019	1	14	015-015	30-08-2020	13
7	022-011	13-08-2019	2	15	015-016	30-08-2020	14
8	19WER	13-08-2019	7				

Path-Row ([Tile ID](#)) and date (MM-DD-YYYY) of the Landsat ([Sentinel-2](#)) scenes used for the inventory. The column ID refers to the ID of the footprint polygon in the attribute table.