

Name	ACPR_sett_pf
Definition	Permafrost settlements as settlements located within the permafrost extent
Year	Alaska: July 2017; Canada: 2016; Faroe Islands & Greenland & Iceland & Norway & Svalbard: 1st January 2017; Sweden & Finland: 31st December 2016; Russia: 1st January 2017
Units	Number
Source	<p><u>Population:</u> Alaska: Alaska Department of Labor and Workforce Development, Research and Analysis Section, Alaska Population Estimates by Borough, Census Area, City, and Census Designated Place (CDP), 2017; Canada: Statistics Canada, 2016 Census, Catalogue no. 98-400-X2016004, Age (in Single Years) and Average Age (127) and Sex (3) for the Population of Canada, Provinces and Territories, Census Divisions and Census Subdivisions; Faroe Islands: Statistics Faroe Islands, IBO1030: Population by sex, age and village/city, 1th January (1985-2017); Greenland: Statistics Greenland, BEXSTE: Population in localities by time and locality; Iceland: Statistics Iceland, MAN03106: Population by locality, age and sex 1 January 2011-2017; Sweden: Statistics Sweden, BE0101T1: Population by region and every fifth year; Finland: Statistic Finland, vaerak_026_201600: Väestö 31.12. muuttujina Vuosi, Kunta ja taajama, Sukupuoli ja Ikä; Norway: Sraristics Norway, Bosatte: Area and population of urban settlements, by densely populated area, contents and year; Svalbard: Statistics Norway, 07430: Norwegian settlements at Svalbard, by settlement, contents and half year; Russia: Russian Federation Federal State Statistics Service: Census 2002 & 2010, Estimate of the number of permanent residents as of January 1, 2017. (Table 36. ЧИСЛЕННОСТЬ ПОСТОЯННОГО НАСЕЛЕНИЯ РОССИЙСКОЙ ФЕДЕРАЦИИ ПО МУНИЦИПАЛЬНЫМ ОБРАЗОВАНИЯМ на 1 января 2016 года)</p> <p><u>Permafrost:</u> We defined permafrost settlements as settlements located within the permafrost extent, as modelled by Obu et al. (2019). The permafrost extent is based on the modeled temperature at the top of the permafrost (ТТОР model) for the period 2000–2016. The permafrost extent is available at the circum-Arctic scale, with a resolution of 1 km². The permafrost zones are defined as follows: continuous (90–100% area coverage), discontinuous (50–90% area coverage), and sporadic (0–50% area coverage). To estimate the future of permafrost settlements, we used projected permafrost extents modeled by Hjort et al. (2018) using Representative Concentration Pathways (RCPs) 2.6, 4.5, and 8.5 for the period 2041–2060. The model is binary and uses 30 arc-second grid cells (1 km²) to determine if permafrost is present or absent. We used the consensus index (Ic), that which classifies future permafrost extent into hazard zones (1, low; 2, medium; and 3, high hazard zones). When defining hazard zones, the consensus index considers the relative increase of the active layer thickness, ground ice content, ground temperature, permafrost thaw potential, surface properties (sediment/bedrock), fine-grained sediment content, frost susceptibility of ground material, and slope gradient.</p>

Info	Some estimates made with linear interpolation technique for 509 settlements using 2002 census data. (Data of settlements over 500 inhabitants inside AHDR's definition on Arctic - 77 estimates for 2002)
Extracted	April 2020
Reliability	High

Attribute	Explanation	Unit
Cntr	Country name	-
Region	Region name	-
Code	Settlement administrative/census code	-
Sett	Settlement name	-
PF_EXTENT	Permafrost extent	Isolated patches: Isol / Sporadic: Spora / Discontinuous: Discon / Continuous: Con
AT_COAST	Coastal settlements	Binary: coastal settlements = 1
Pop_2017	Population in 2017	Number
lc_26	Consensus Index showing zones of hazard potential for 2041–2060 under RCP 2.6	Hazard zones: 1 – low / 2 – medium / 3 – high
lc_45	Consensus Index showing zones of hazard potential for 2041–2060 under RCP 4.5	Hazard zones: 1 – low / 2 – medium / 3 – high
lc_85	Consensus Index showing zones of hazard potential for 2041–2060 under RCP 8.5	Hazard zones: 1 – low / 2 – medium / 3 – high