Data description sheet for CH2014-Impacts, Chapter 5: Snow, ice, and ski tourism: permafrost

Variable

Name	Ground temperature
Units	°C
Description	Ground temperatures from 1991 to 2099 at different depths

Climate data input

Data set
CH2011 DAILY-LOCAL scenario for Mürren station with elevation correction.

CH2011 scenario cube coverage

time period: 2035, 2060, 2085
GHG scenario: A1B, A2, RCP3PD
climate uncertainty: not considered

Reference period
1980-2009 (standard)

Climate variables considered
Temperature and Precipitation

Domain

spatial

coverage/resolution	Schilthorn reference site Point level, at the borehole site.

time

coverage	time periods 2035, 2060, 2085 (interpolated)
resolution	daily

Impact Model

Name	COUP model (Jansson, 2012)
Description	Coupled heat and mass transfer ground model.

Impact uncertainty coverage

Uncertainty provided	no

Data structure

First column is date (DD.MM.YYYY) and first row is depth (in m).

How to cite

Marmy, A., et al. (2014), Cryospheric aspects of climate change – impacts on snow, ice, and ski tourism; Chapter 5 in CH2014-Impacts, Toward Quantitative Scenarios of Climate Change Impacts in Switzerland, published by OCCR, FOEN, MeteoSwiss, C2SM, Agroscope, and ProClim, Bern, Switzerland, 136 pp.

Jansson, P. E. (2012). CoupModel: model use, calibration, and validation. Transactions of the ASABE 55: 1335–1344.

Various information

Data obtained after a calibration based on a 20-years borehole data set and after a 30 years spin up.