

Site conditions on plot level

When using these data, please cite:

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Introduction

In this data sheet all measured environmental variables per biplot are shown. These contain the plot id, date of survey, aspect, five measurements of substrate depth (max. 40 cm), the vertical and horizontal soil temperature (max. 5 cm), the soil moisture and conductivity (max. 5 cm).

Table 1. General information

project_name	ETH+ Arctic Greening
creation_date	2024-11-12
last_modification_date	2025-04-09
sampling_period	2022-07-09 – 2023-08-09
creator	Jana Ruethers
contact	Jana.ruethers@usys.ethz.ch
contact_2	Jake.alexander@usys.ethz.ch
number_samples	113
processing_status	complete
upload_status	structured

Table 2. Variable overview

variable	explanation	unit
plot_id	plot_id of the respective observations	-
aspect	Exposition of slope	-
substrate_depth_1 to substrate_depth_5	Maximum depth of soil before reaching resistance (e.g. big stone, bedrock), 5 measurements per biplot	cm
soil_temp_vert	Vertical soil temperature in apprx. 5 cm depth	°C
soil_temp_horiz	Horizontal soil temperature in a 45° angle in apprx. 5 cm depth	°C
soil_moisture	Soil moisture per biplot, average value of 10 measurements	%
conductivity	Soil conductivity per biplot	mS/cm

Methods

Sample processing

All data was directly measured in the field, no later processing was needed.

Sample analysis

The substrate depth was measured five times per biplot, with a 40 cm metal stick. This was inserted into the soil and the depth was measured until resistance. If the soil was deeper than 40 cm, we indicated this in the data with a >40. The vertical and horizontal soil temperature were measured with a soil thermometer. Soil moisture and conductivity were measured with a Fieldscout TDR 150.

References

NA