Initial outcomes of the Canadian Permafrost Electrical Resistivity Survey (CPERS) database project

**Motivation**

Permafrost thaw affects landscapes, infrastructure, and communities across the North. Electrical resistivity tomography (ERT) is a geophysical method that is commonly used to map the distribution of frozen ground, but ERT datasets often go unpublished.

We created the Canadian Permafrost Electrical Resistivity Survey (CPERS) Database with the goal of facilitating data sharing between researchers, practitioners, and communities to advance our collective understanding of permafrost conditions in Canada.

**Data availability**

An interactive webmap can be found on the CPERS website. Data can be easily searched and visualized.

![Interactive Map](image)

Archived data can be found in the Nordicana D data publication. This includes raw ERT data and descriptive, standardized metadata.

![Metadata](image)

**Database contents**

- **Landform**
  - 209 profiles
  - 280 surveys
  - 15 profiles with time-lapse data
- **Number of surveys**
  - 2008 - 2022

**Outcomes**

**Improved data sharing**

Large-scale permafrost assessments

- Each point represents the average resistivity of the ground beneath an ERT survey

![Resistivity Map](image)

**Open-source data processing workflow**

An interactive webmap can be found on the CPERS website.

![Webmap](image)

Data can be easily searched and visualized.

**Best practices document**

Best practices for using electrical resistivity tomography to investigate permafrost

**Data contributors**

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