

CONDUCTING FIELD DATA COLLECTION

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Summary

This fact sheet explains fundamental information on field data collection. It also outlines a process to plan and execute field data collection according to your project needs. Field data collection plays a role for collecting information that currently does not exist, and it provides evidence that can strengthen community knowledge of the land.

Keywords: collecting data, direction setting, building capacity, Elders/knowledge keepers, planning team

What Is Field Data Collection?

Conducting field work is a “hands on” way to understand and record the environment and land in and around the community. For some, it could be an enjoyable experience as it allows curious community members to be adventurous and reconnect with the land. Field data collection also provides the chance for community members to think about the environment and the reasons it has grown to be as it is.¹ You can use field data collection as a tool to collect background information on community resources. This helps the community understand the current situation. Collecting field data plays a role in filling in where information does not currently exist.²

Field data collection involves recording observations on how the environment is changing over time. The data you collect depends on what you are hoping to accomplish with your project, how you collect the field data, and what tools you use for data collection.

Field Data Collection Project Examples

Locating and mapping cabin locations in a community is an example of a field data collection project. This would require GPS units and maps to collect longitude and latitude.

Another example is a project to **measure coastline erosion on a lake** over time, which would require collecting data on the current coastline extent and comparing to past or future extents.

TYPES OF DATA



Figure 1 | Types of Field Data Observations

What are Quantitative Observations?

Quantitative observations include collecting measured values from the environment. An example is the location and number of observed fishing boats,³ or the amount of snowfall at a particular location. Recording measurements allows for a direct comparison of observations over a short and long period of time and from multiple locations. For example, you could compare rainfall (in millimetres) in different part of the community over the duration of a storm.

What are Qualitative Observations?

Qualitative observations involve recording a detailed description of an object or phenomenon. An example is a description of the conditions of a cultural site or an interview with a hunter on the conditions of deer in the area.⁴ Although it is not typically possible to compare qualitative observations the same way as quantitative observations, it is still possible to compare the descriptions of these observations (such as the experiences of various resource users).

Depending on your field data collection project, you could be collecting either one or both types of observations.

Why Is Field Data Collection Important?

The purpose of field data collection is to give community members another tool to understand and connect with the land and the environment. They usually know their land and environment best and are the first to notice changes, damage, and impacts of resource use.

Having a documented record of environmental changes is extremely powerful evidence that helps prove impacts on the environment. This evidence could influence decision-making and efforts to preserve the environment or influence change.⁵

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How Is Field Data Used?

Quantitative and qualitative observations can both be used as evidence to show how the environment has changed. Field data is often used to add evidence to current knowledge and understanding of the natural environment.⁶ Careful planning and execution of field data collection can also help communities add to their traditional knowledge.

Who Is Involved in Field Data Collection?

Field data can be collected by anyone who is interested in the project. However, it is often important to have a subject matter expert as well as a traditional knowledge keeper involved in the project. An example of this would be to have a botanist on a plant survey field data collection team to identify different plant species. A subject matter expert can help the data collection be more accurate, while a traditional knowledge keeper can help to ensure data collection is carried out in a way which respects community values and incorporates local knowledge.

How Is Field Data Collected?

There isn't a "cookie-cutter" way to collect field data. This is often determined by the project you wish to undertake, as well as opportunities, training, and personal experience.⁷

- 1) Understand the needs of your project
- 2) Create a data collection plan
- 3) Execute data collection plan
- 4) Compile and organize collected data and notes
- 5) Data analysis

Figure 2 | Data Collection Process

However, the following list provides a starting point to begin to understand your project's data collection needs (Figure 2).

1 Understand the Needs of Your Project

Understanding your project will help with identifying data collection needs. Asking questions about the overall goal and the data needed to support the goal will help determine what kind of data you are looking for, how to collect observations, and what tools you will need to collect your observations.

2 Create a Data Collection Plan

Creating a data collection plan will help to build a strategy for execution. Your plan could include when, where, how, who, and why you will collect data. Your plan could also identify what tools you will use to collect your data, what method you will use to record your data, and what safety measures should be in place.

3 Execute Data Collection Plan

Executing your data collection plan begins with safety. It is important that you go into the field prepared with the necessary gear. It is also helpful to inform another community member or leader of your activities so that they will keep track of you during your data collection. While in the field gathering data, it is important to assess the conditions (e.g. weather conditions, terrain) as you are in the field. It could be difficult to plan for unpredictable situations before going into the field. Re-adjusting your plan to collect field data is key to successful execution.⁸

4 Compile and Organize Collected Data and Notes

Once data collection is complete, organizing the observations and notes in a timely manner is very effective to document information while it is still fresh in your mind. Nuances in measurements or weather conditions during the data collection are all notes that should be recorded along with your collected data. This helps paint a clear picture of what the conditions were when data was being collected.

5 Data Analysis

Once the data has been collected and compiled, it can be analyzed to help contribute to your project. Whether it was to document the climate change experiences from Elders, or to map cabins throughout the community. The data collected will help you tell the story.

Final Thoughts

Understanding the importance of field data and the skills needed to plan and execute collection can help you gather the data needed to better understand your land and environment. Field data also provides the concrete and recoded evidence to support the perspective of the community for decision making and advocacy.

Further Reading

Analyzing Surveys by Lissie Rappaport

The Analyzing Surveys fact sheet provides a brief description on surveys and analyzing data.

Creating Surveys by Chantal Maclean

This fact sheet provides an introduction to creating surveys, its strengths and weaknesses, and how to approach consent and confidentiality with sensitivity.

Using Oral History by Natalie Lagassé

The Using Oral History fact sheet gives information on the using oral history as a tool for Indigenous communities as part of their history.

Endnotes

1. Turkington, Alice. 2010. "Making Observations and Measurements in the Field." in Key Methods in Geography, by Nicholas Clifford, Shaun French and Gill Valentine. 220.
2. Indian and Northern Affairs Canada. 2009. "CCP Handbook: Comprehensive Community Planning for First Nations in British Columbia." 31-32.
3. Indigenous Gaurdians Toolkit. 2018. "Chapter 10: Monitor and Collect Data." www.indigenousgaurdiantoolkit.ca/section/how-will-you-report-and-share-your-data-and-monitoring-results.
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7. Baur, Bernard, Julie A Winkler, and Thomas Veblem. 1999. "Afterword: A shoe for all occasions or shoes for every occasion: Methodological diversity, normative fashions, and metaphysical unity in physical geography." 774.
8. Turkington, Alice. 2010. "Making Observations and Measurements in the Field." in Key Methods in Geography, by Nicholas Clifford, Shaun French and Gill Valentine. 225.