



Best Practices for making geospatial data analysis - Resource

Source*: QGreenland Researcher Workshop 2023

*All materials for this resource are hosted on the [QGreenland Research Workshop webpage](#)

Activity Summary

These examples and exercises from a QGreenland CryoCloud researcher workshop in 2023 are intended to help you make geospatial data analysis-ready and useable alongside QGreenland. These resources were designed for the workshop audience fully in mind, but includes resources on the topics outlined below that are helpful and/or usable for anyone looking to work with QGreenland geospatial data.

Learning Goals and Outcomes

Students will:

- Learn how to make geospatial data analysis-ready with GIS tools
- Use best practices for formatting geospatial data
- Understand key open science concepts
- Understand key metadata concepts for geospatial data

Context for Use

Topic	Geospatial technology
Course Type	Tutorial
Audience	Intermediate user
Instructional Time	185 minutes of instructional time spread across 3 days
Context	These materials and exercises are best suited to those users with some GIS and programming experience.
Materials	Computer with access to the QGreenland Researcher Workshop Website
Materials Prep	Have slides and exercises printed/downloaded/shared for students' use

Description

Day 1

- Workshop Overview
- Intro to Jupyter Lab
- Review geospatial concepts and terms
- Data formats and data inspection
- End of day wrap-up

**Day 2**

- Intro to GitHub
- Review Open Science (and data) principles
- Workshop discussion: FAIR/CARE
- Fixing common data/metadata issues

Day 3

- Geospatial data transformations and data cross-compatibility
- Symbolizing geospatial data in QGIS

Assessment

While no tailored assessments are designed for this lesson, consider using an exit ticket. See below for some resources on exit tickets:

- Center for Professional Education for Teachers (n. d.) *Exit Tickets as Formative Assessments*. Available at: <https://cpet.tc.columbia.edu/news-press/exit-tickets-as-formative-assessments> (Accessed: 3 September 2026).
- Center for Teaching Excellence (15 March 2024) *Exit Tickets*. Available at: <https://cteresources.bc.edu/documentation/exit-tickets/> (Accessed: 3 September 2026).

References and Resources

- Center for Professional Education for Teachers (n. d.) *Exit Tickets as Formative Assessments*. Available at: <https://cpet.tc.columbia.edu/news-press/exit-tickets-as-formative-assessments> (Accessed: 3 September 2026).
- Center for Teaching Excellence (15 March 2024) *Exit Tickets*. Available at: <https://cteresources.bc.edu/documentation/exit-tickets/> (Accessed: 3 September 2026).
- QGreenland Researcher Workshop 2023 (2023) *Exercises*. Available at: <https://qgreenland-workshop-2023-researcher.github.io/content/exercises/> (Accessed 3 September 2026).
- QGreenland Researcher Workshop 2023 (2023) *Workshop materials*. Available at: <https://qgreenland-workshop-2023-researcher.github.io/content/materials.html> (Accessed: 3 September 2026).