

# GIS-3 Vector Analysis

2025-02-17

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## Introduction

In this paper, we will look into the sediment, soil, and bedrock characteristics of the Oslofjord area. The data used to build this analysis can be downloaded from Canvas ([GIS3 datafiles](#); requires login). The software used is ArcGIS Pro.

Topics we will explore:

- Distribution of cultivated fields in a specified municipality
- Conflicting groundwater resources and cultivated land/buildings/rivers (why rivers?)
- Which elevations do marine areas exist?
- Which land cover type (soil class) dominates the selected municipality?
- Which sediments primarily dominates cultivated fields?
- What sediment type is preferable as groundwater resources?

## 1 Load data

In order to get sedimentary, soil, and bedrock data, we need to load in the `GIS3.gdb` file to ArcGIS.

As a preliminary tutorial exercise, the Bærum municipality has already been explored ([link](#); requires login). Our current analysis will therefore expand on that research, looking into the neighboring Oslo municipality.

```
{mermaid} flowchart LR
    A[Load Data] --> B[Filter Oslo]
    B --> C[Analyze Sediments]
    C --> D[Study Groundwater]
    D --> E[Examine Land Cover]
    E --> F[Conclusions]
```

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### 1.1 Sub section

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