

EPOS-N Portal: Demo Use cases

Joint 2020 Nordic Seismology and Nordic EPOS Seminar (51th Nordic Seismology Seminar)

30 September - 2 October 2020

EPOS-N Portal: <https://epos-no.uib.no:444/>

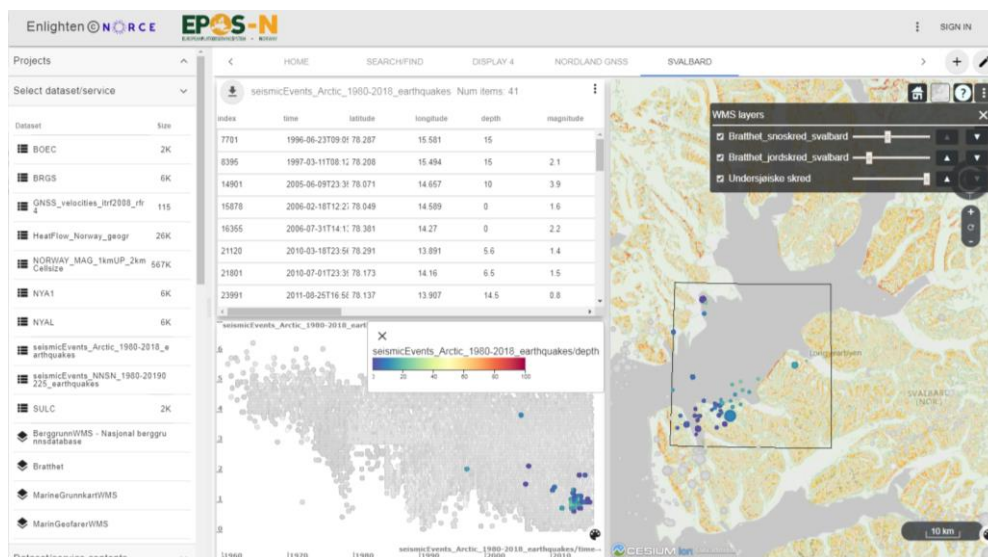
Use Case 4 was introduced during the demo presentation.

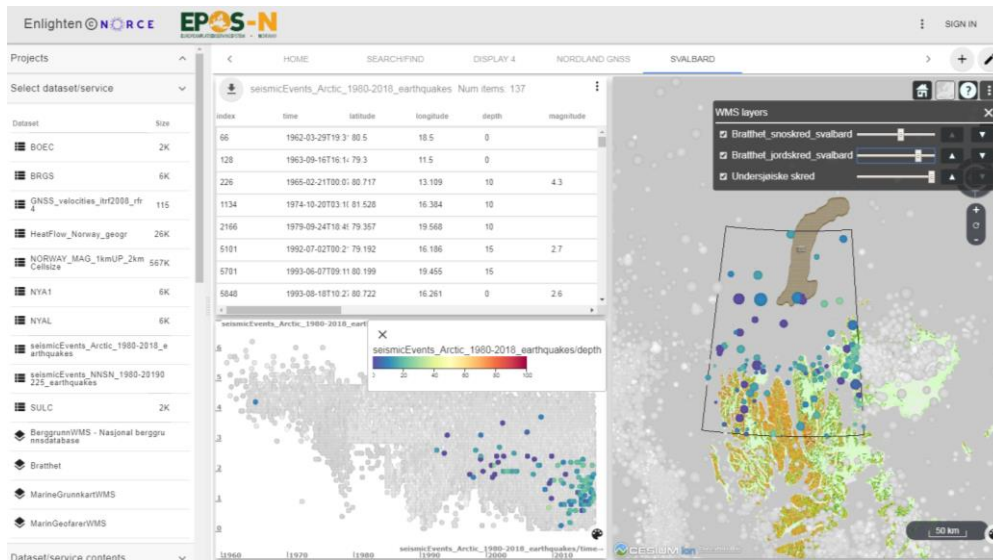
- **Use Case 1: Geohazard in the Arctic**

AIM: Explore geohazard around Svalbard.

- Location: Svalbard

- Search/find **Seismological data** → **Seismic events, ARCTIC 1960-2018**: plot a map of earthquakes, color-coded by depth, magnitude as size
- Plot the table for earthquakes
- Plot time-magnitude (as x-y scatter plot)
- Search/find **Geological data** → **Svalbard slope angle maps**: plot on the same map the slope angle (Bratthet) for
 - landslide slopes (jordskred)
 - snow avalanche slopes (snøskred)
- Search/find **Geological data** → **Marine geo hazards maps** (Undersjøiske skred): plot in the same map as previous

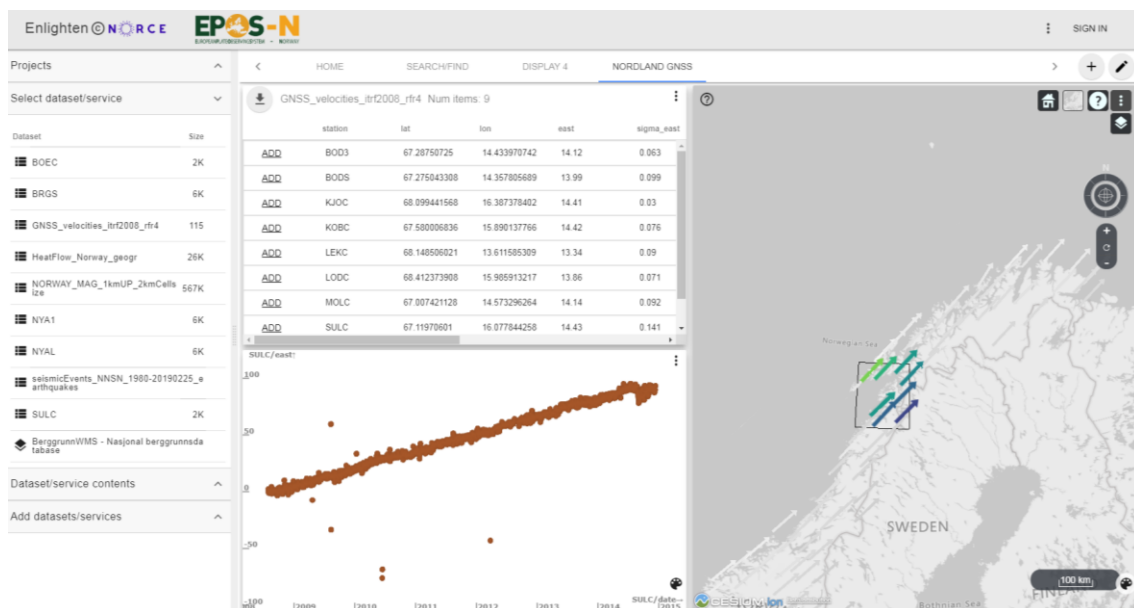


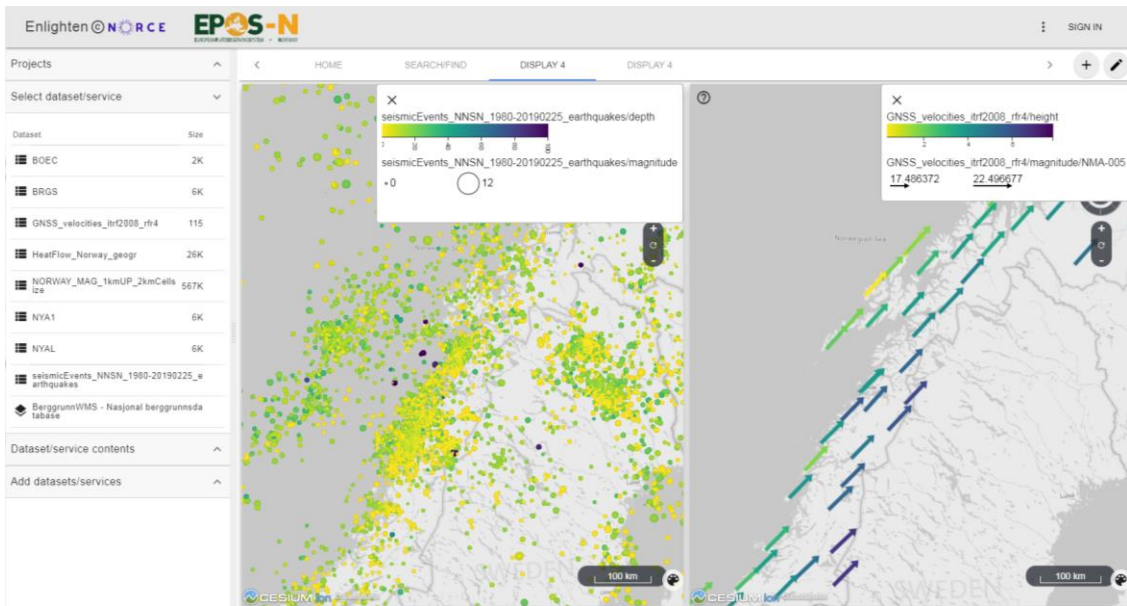


- **Use Case 2: Geodetic data**

AIM: Explore geodetic data in Nordland area and compare to occurrence of earthquakes.

- Location: Nordland
 - Search/find **Geodetic data** → **GNSS velocity maps**: plot as **vectors** (east-north as x-y) on the map (option in map plot)
 - Add plot with the table view of GNSS stations
 - From the map choose stations (Alt+mouse)
 - In the reduced table add individual station data to workspace
 - Plot time-series for one station (e.g. SULC: east vs. time)
 - Compare GNSS velocity to seismicity
 - Search/find **Seismological data** → **Seismic events, NNSN, 1980-2018**: plot in a separate map, color-coded by depth, magnitude as size





- **Use Case 3: Seismicity catalog analysis (also as video)**

AIM: Demonstrate the brushing and linking feature for analysis of complex catalogue/dataset (identifying outliers, trends in data, select new dataset with specific criteria)

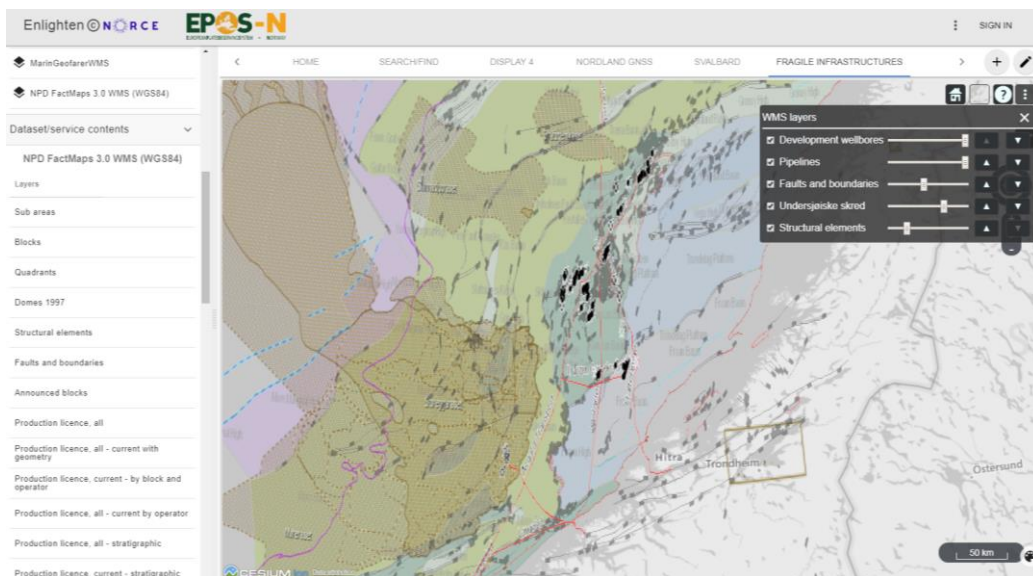
- Location: Norway and adjacent areas
 - Search/find **Seismological data** → **Seismic events, NNSN, 1980-2018**: plot a map, depth as color scale, magnitude as size scale
 - Plot a time vs. magnitude (as x-y scatter plot)
 - Use depth as a colour code
 - Plot a depth vs. magnitude (as x-y scatter plot)
 - Y-axis can be inverted (scatter plot option)
 - Plot the events' error estimates
 - Lat-error (y-axis)
 - Lon-error (x-axis)
 - Use depth-error as colour code



- **Use Case 4: Geohazards for offshore infrastructures (also as video)**

AIM: Explore geohazards for offshore infrastructures and compare to occurrence of earthquakes.

- Location: Offshore North Sea
 - Page-layout with one column and one plot
 - Search/find **Geological data** → **NPD factmaps**: plot the following WMS layers in one map:
 - Structural elements
 - Faults and boundaries
 - Pipelines
 - Development wellbores
 - Search/find **Geological data** → **Marine geo hazards maps**
 - Undersjøiske skred



- Add another plot on the page layout
- Search/find **Seismological data** → **Seismic events, NNSN, 1980-2018**: plot a map, depth as color scale, magnitude as size scale
 - Plot the seismicity as a table to select individual events or clusters
 - Select the relevant data and download it as CSV file

