



1992-06-04, Landsat 5



2023-06-15, Sentinel-2

Located near the town of Gällivare, Aitik stands in Sweden's rich mining heritage. The Aitik mine is an open-pit copper mine covering over 450 hectares. Satellite imagery illustrates change in the scale of its operations between 1992 and 2023. During this period the extraction of ore was extended to approximately 39 million tonnes annually.

The economic importance of Aitik is high, as it contributes significantly to Sweden's mineral exports, accounting for nearly 40% of the nation's copper production. Additionally, smaller amounts of Gold, Silver and Molybdenum are produced. With its activities the mining hub provides employment opportunities for thousands in the local community.

With its impact on the environment, Aitik's mining activities have raised sustainability concerns, necessitating environmentally responsible practices. The mine employs cutting-edge technology to minimize its ecological footprint, with measures in place to mitigate water and air pollution.

## Exercises

- Look at the satellite image from 1992 and try to identify the most important land cover classes.
- Now look at the the satellite image from 2023 and describe the changes between 1992 and 2023. What has happened with the mine area? What has happened to the settlement areas?
- Take a look to the forests around the image centre. Where does the brownish colour come from? Look at the months in which the images were acquired.



**Additional Material**



*View of the pit of the Aitik mine (photograph: TZorn)*

