

1. True colour image of the Aitik Mine (lower right in the image) in 2023. Data: Sentinel-2, 2023-06-15.

Copper Mine in Aitik, Sweden

Located near the town of Gällivare, Aitik is an openpit copper mine. Put into production in 1968, it covers now over 450 hectares as one of Europe's largest and the world's most efficient copper mines. 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.

3. View of the terraced structure of the Aitik open pit mine.







2. True colour image of the Aitik Mine in 1992. Data: Landsat 5, 1992-06-05.

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.



4. Development of copper production in the Aitik mine. Over the years, the copper concentration of the ore has roughly halved, meaning that more ore has to be mined for the same amount of copper.



5. The development of the global copper production since 1850 shows an almost exponential trend.