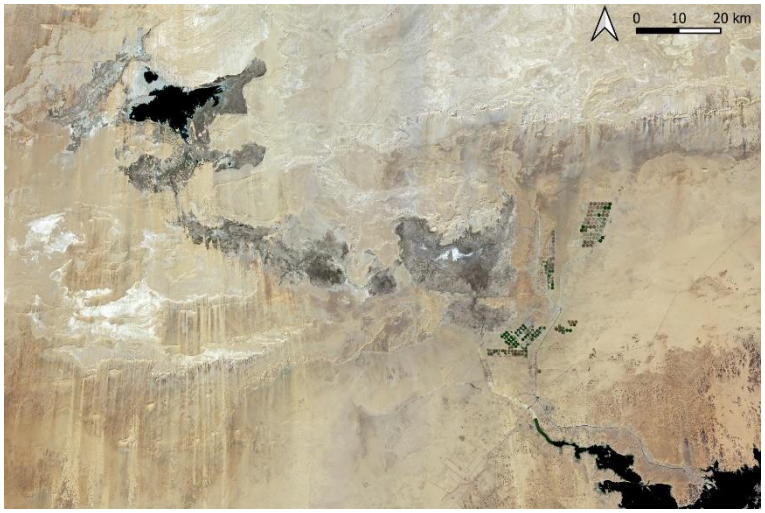


November 2015, Landsat5 image mosaic

November 2022, Sentinel-2 image mosaic

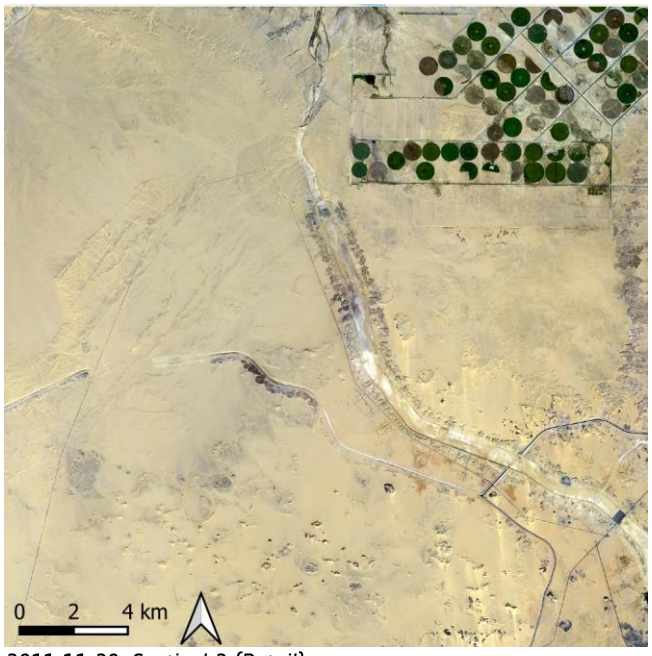
The New Valley in Egypt covers an area of around 440,000 square kilometres. This region has undergone a significant agricultural development. The New Valley, encompassing the Toshka Depression and adjacent lands along the Nile River, was the focus of the Toshka Project, which was initiated in the late 20th century.

This project aimed to divert water from Lake Nasser to irrigate approximately 540,000 hectares of desert land in the New Valley, with the goal of creating new agricultural land. The project involved the construction of canals and infrastructure to facilitate irrigation. After initial successes, the Toshka Project faced a series of challenges, and by 2011, it was estimated that only a fraction of the intended area was under cultivation. In the meanwhile, the efforts have been increased again and have led to a significant growth of the cultivated area.

To understand the scale and impact of the project, satellite images are a valuable tool. Over the years, satellite technology has been instrumental in monitoring changes in land use and vegetation. Satellite images are used to analyse how the landscape transforms, providing a visual representation of successes and setbacks of the agricultural initiatives in the New Valley.

Exercises

- Take a look at the satellite image maps and compare the mosaic images from **2015** and **2022**.
- What changes can you recognise?
- Look at the detailed images from **2011** and **2022**. Which land cover classes can you recognise?
- What changes can you recognise in the detailed images?



2011-11-20, Sentinel-2 (Detail)

2022-11-24, Sentinel-2 (Detail)

Additional Material

View of the canal delivering water from the Nile to the Toshka Lakes (photograph: Rémih)

Links and Sources

- https://www.esa.int/ESA_Multimedia/Images/2022/03/Lake_Nasser_Egypt - Sentinel-2 image of Lake Nasser