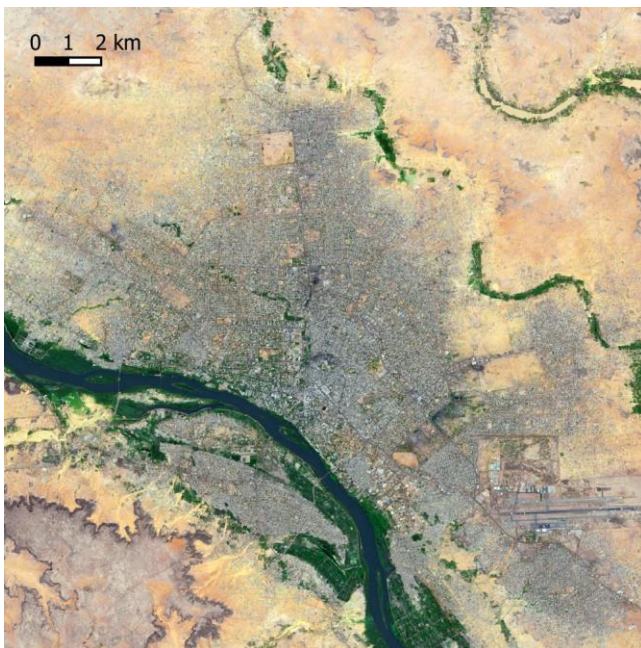


*Landsat4 from 1984-10-13 (upper)*



*Sentinel-2 from 2023-02-27 (lower)*

### Development of an African capital

Niamey, the capital city of Niger, has seen a remarkable population development over the years. Situated on the banks of the Niger River, the city has grown significantly since Niger gained independence in 1960. By the turn of the century, it had become one of the fastest-growing cities in Africa.

Several factors have contributed to Niamey's population boom, including improved healthcare services and educational opportunities. However, the most factor is rural-to-urban migration. These factors have not only increased the city's overall population but have also influenced the age structure with its average age of 21 years. This youthful population is a resource for the city's development, offering workforce and potential for innovation. However, it also presents enormous challenges in terms of providing education, employment, and healthcare.

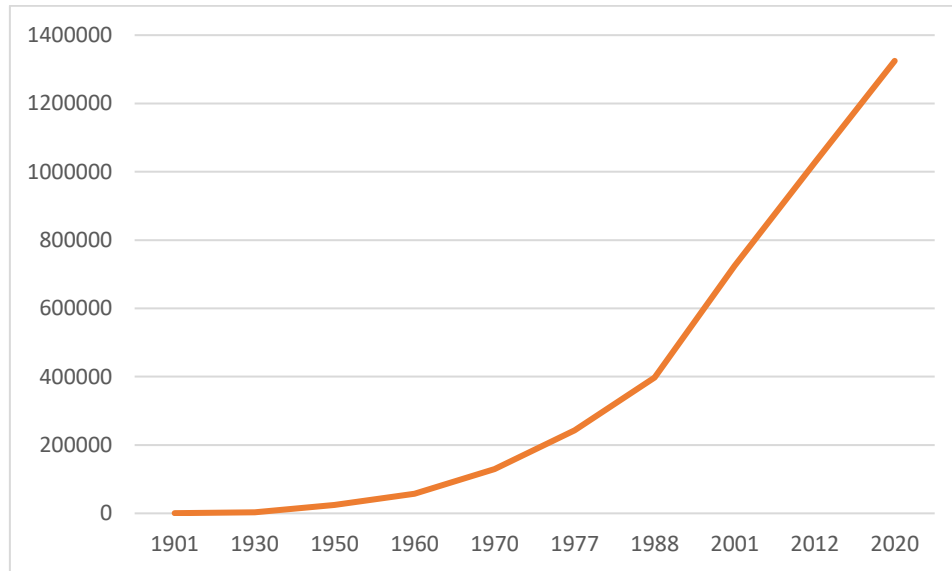
These challenges are reflected in the satellite maps, too, which show the growth of irregular informal settlements along the city borders.

### Exercises

- **Satellite Map:**
  - Looking at the satellite image maps, try to identify built-up areas, deserts, riverine environments.
  - Estimate the area of the city in 1984 and in 2023, respectively.
  - By which factor has the area increased?
  - How does this relate with the population increase during this time span (see Diagram below)?
  - Try to identify important traffic infrastructure (high-level roads, bridges crossing the Niger river, airports) and describe the change.



### Additional Material



Niamey, population development since 1900.



Niamey, Bridge crossing the Niger River (Wikimedia, [Nomax11](#))

### Links and Sources:

- [https://www.esa.int/Applications/Observing\\_the\\_Earth/Envisat/Satellites\\_help\\_locate\\_water\\_in\\_Niger](https://www.esa.int/Applications/Observing_the_Earth/Envisat/Satellites_help_locate_water_in_Niger) - an ESA project
- [https://emergency.copernicus.eu/mapping/system/files/components/EMSR018\\_01NIAMEY\\_DELINEATION\\_DETAIL01\\_v1\\_100dpi.pdf](https://emergency.copernicus.eu/mapping/system/files/components/EMSR018_01NIAMEY_DELINEATION_DETAIL01_v1_100dpi.pdf) - a flood map of Niamey from 2012 produced by the Copernicus emergency service

