

Rapid growth of Al-Ain oasis city, United Arab Emirates

Landsat TM acquired on **11 July 1987** at 06:11:26 UTC
Sentinel-2 MSI acquired on **18 July 2016** at 06:46:32 UTC
Sentinel-2 MSI acquired on **12 July 2020** at 06:46:29 UTC
Sentinel-2 MSI acquired on **17 July 2023** at 06:46:29 UTC

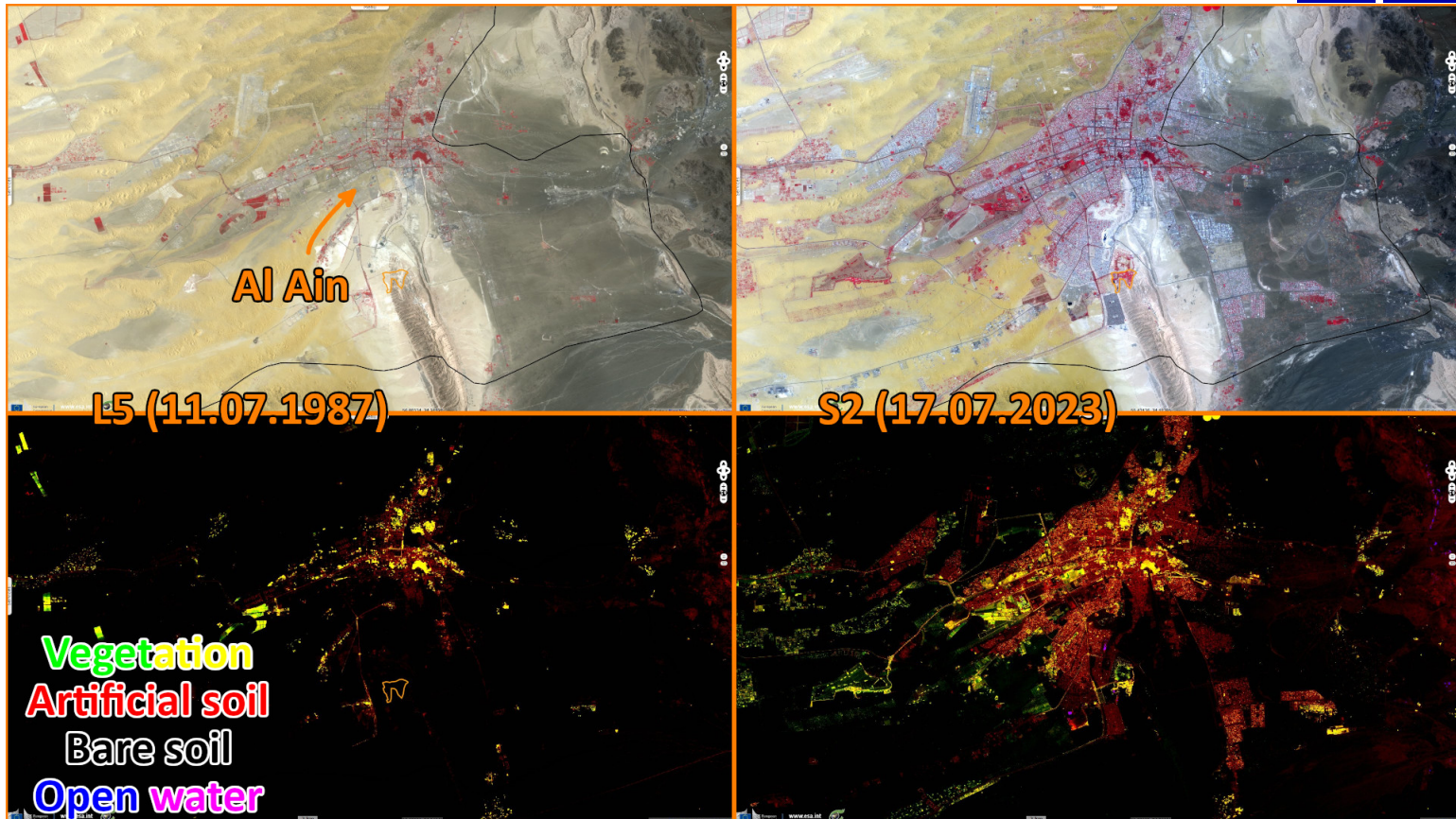
Author(s): Sentinel Vision team, VisioTerra, France - svp@visioterra.fr

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[2D Layerstack](#)

Fig. 1 - L5 (11.07.1987); S2 (17.07.2023) - An oasis city for millennia, the city of Al Ain has rapidly grown during the last decades. [2D view](#) [2D view](#)
[2D view](#) [2D view](#)



This approximate land use shows the increase in cultivated land, gardens and water used for recreation during the last 35 years. This growth in water consumption, which far exceeds the capacity of the oasis, is fed by desalination plants located by the sea. Most of these plants in the United Arab Emirates use older, power-hungry technology which are fueled by power sources that emit greenhouse gases.

Fig. 2 - S2 (18.07.2016, 12.07.2020, 17.07.2023) - The Open Water index shows small changes along time in artificial water bodies.

[2D view](#)



Lake Zaher has dried out in 2023, as shown by the low values in the blue channel. One can see that the white water section of Al Ain adventure park was closed (and dry) during COVID lockdown in 2020 which shows with the absence of blue.

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