

# The Line, a huge construction site seen by Sentinel-2

Sentinel-2 MSI acquired on 06 & 08 December 2020  
Sentinel-2 MSI acquired on 01 & 03 December 2021  
Sentinel-2 MSI acquired on 06 & 08 December 2022  
Sentinel-3 OLCI acquired on 24 December 2022 at 07:41:48 UTC

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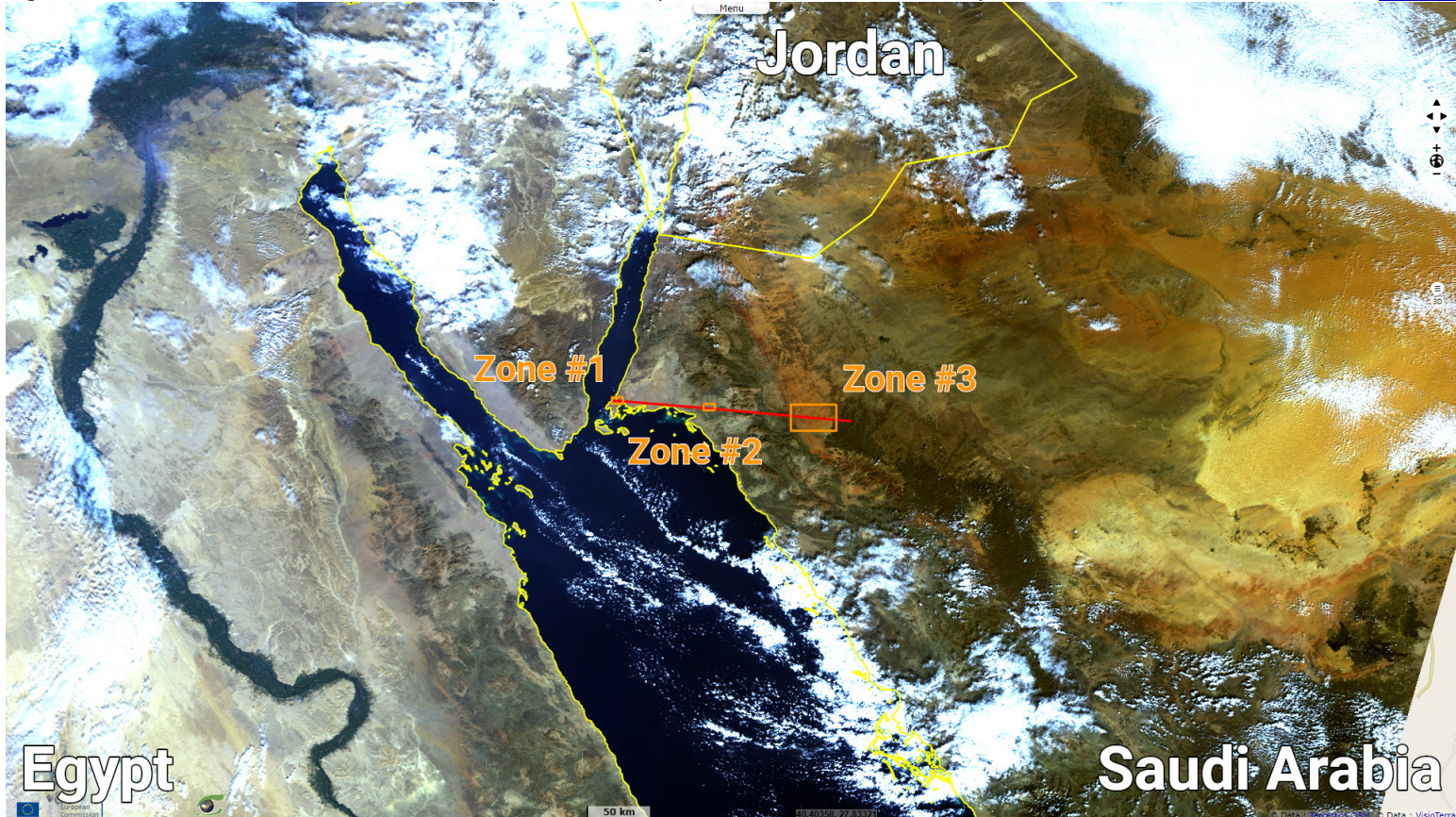
Keyword(s): Urbanization, modern cities, coastal, desert, Neom, Saudi Arabia



[2D Layerstack](#)

Fig. 1 - S3 OLCI (24.12.2022) - Natural colour composite - Location plan of the future linear smart city "The Line".

[2D view](#)



"The Line is planned to be 170 kilometres (110 mi) long, preserving 95% of the nature within Neom. It will stretch from the Red Sea approximately to the city of Tabuk. It is intended that it will have nine million residents, resulting in an average population density of 260,000 people per square kilometre. By comparison, Manila, the world's most densely populated city in 2020, had a density of 44,000/km<sup>2</sup>. The Line's plan consists of two mirrored buildings with an outdoor space inbetween, having a total width of 200 metres (660 ft) and a total height of 500 metres (1,600 ft)". "The estimated building cost is US\$100–200 billion, with some estimates as high as \$1 trillion". [Wikipedia - The Line](#)



Artist's view of the project The Line (credits: Neom: [The Line](#))

Fig. 2 - S2 (12.2020 & 12.2021 & 12.2022) - Colour composite - View of the western tip of The Line, near the Red Sea.

[2D animation](#)



"The plan for The Line was announced on 10 January 2021, by Saudi Crown Prince Mohammed bin Salman in a presentation that was broadcast on state television." ([Wikipedia - The Line](#))  
One may see some road infrastructures that are under construction in late 2021. On the Sentinel-2 images of 2022, we can notice that the excavation work has begun.

Fig. 3 - S2 (12.2020 & 12.2021 & 12.2022) - View around the middle of The Line, where the built-up areas are extended.

[2D animation](#)



The project is already criticized, especially for its carbon footprint, estimated around 1.8 gigatons of CO<sub>2</sub> equivalent but also for the local biodiversity issues.

"Oldfield and Chartier also point out that despite its small footprint, the length and nature of The Line's walls could cause biodiversity issues – including for migrating birds, for whom large mirrored structures are highly dangerous." ([Dezeen](#))

Fig. 4 - S2 (12.2020 & 12.2021 & 12.2022) - View of the eastern part of The Line, where the elevation reach 1200m.

[2D animation](#)

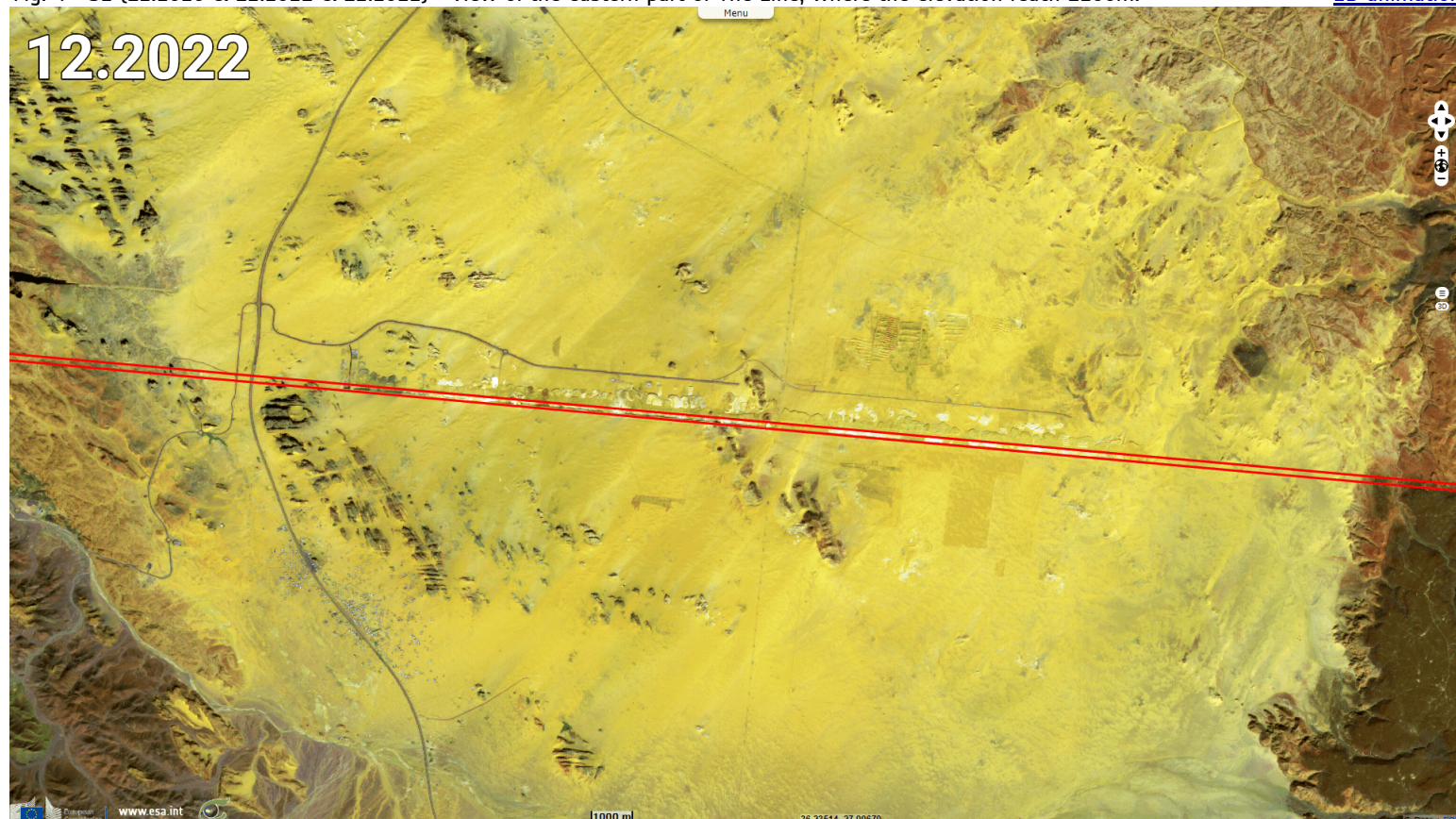
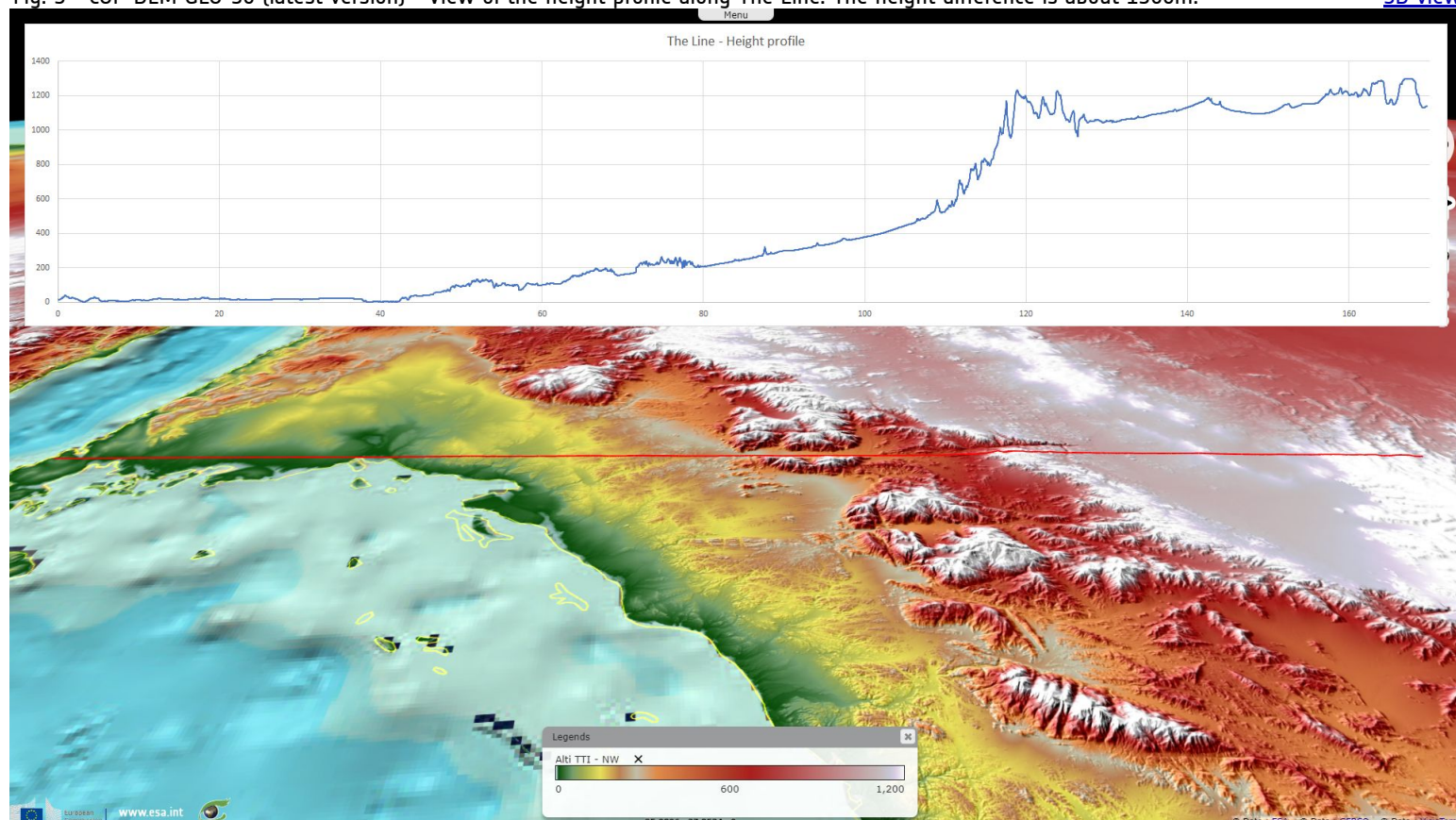


Fig. 5 - COP-DEM GLO-30 (latest version) - View of the height profile along The Line. The height difference is about 1300m.

[3D view](#)



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