Sentinel Vision
SED-897
05 July 2021

2D Layerstack

Heatwave, hot wind & late monsoon in NW India

Sentinel-3 SLSTR LST acquired on **01 July 2021** from 04:48:51 to 05:31:15 UTC
Sentinel-3 SLSTR LST acquired on **02 July 2021** from 04:25:40 to 05:05:04 UTC
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Sentinel-3 SLSTR LST acquired on **07 July 2021** from 04:32:08 to 06:16:08 UTC

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Keyword(s): Weather, climate change, heatwave, wind, atmosphere, precipitations, India, Pakistan

Fig. 1 - S3 SLSTR (01.07.2021) - Daytime temperatures were above 40°C for the several consecutive days across north-west India. 2D view

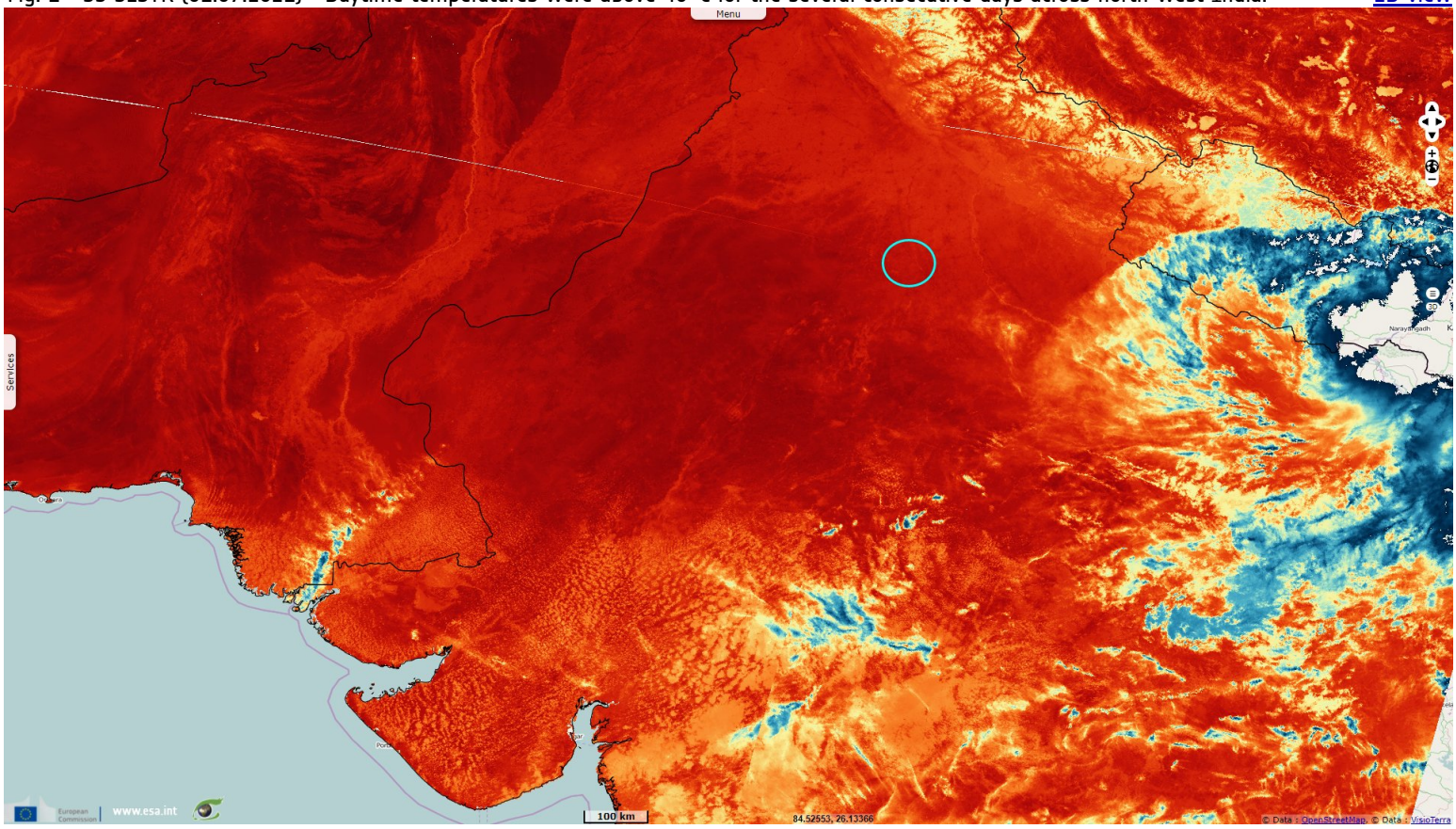
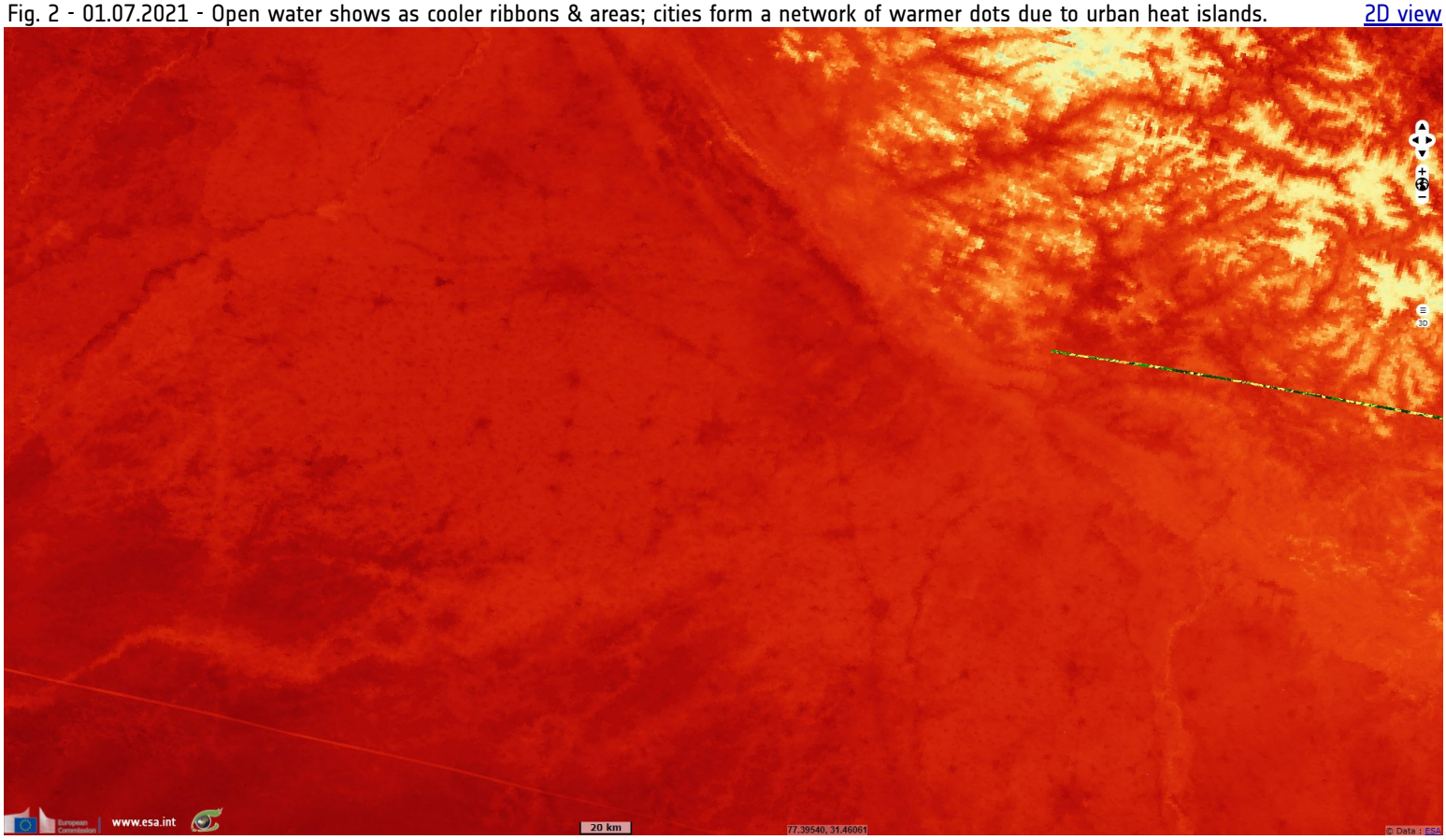
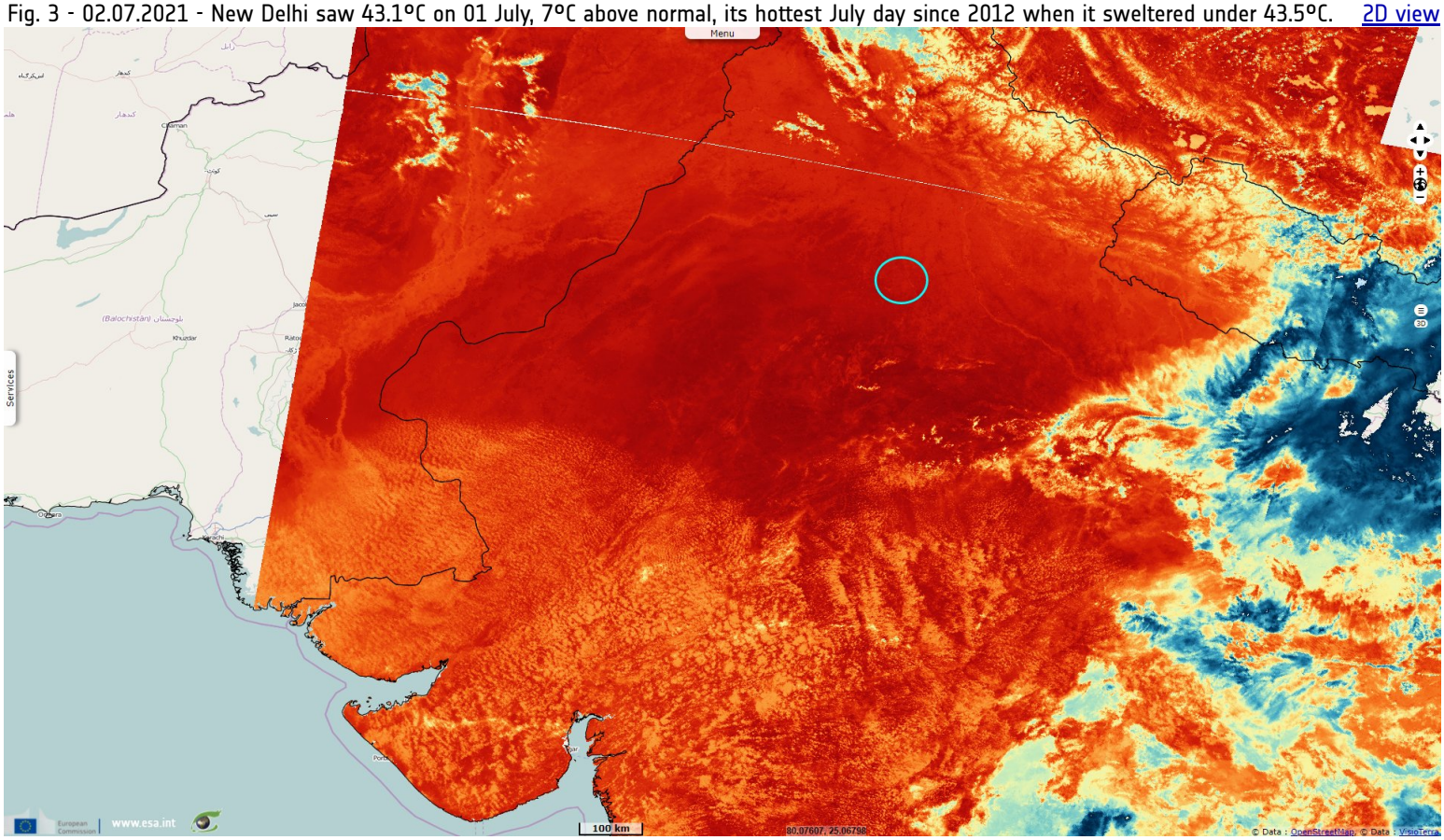


Fig. 2 - 01.07.2021 - Open water shows as cooler ribbons & areas; cities form a network of warmer dots due to urban heat islands. 2D view



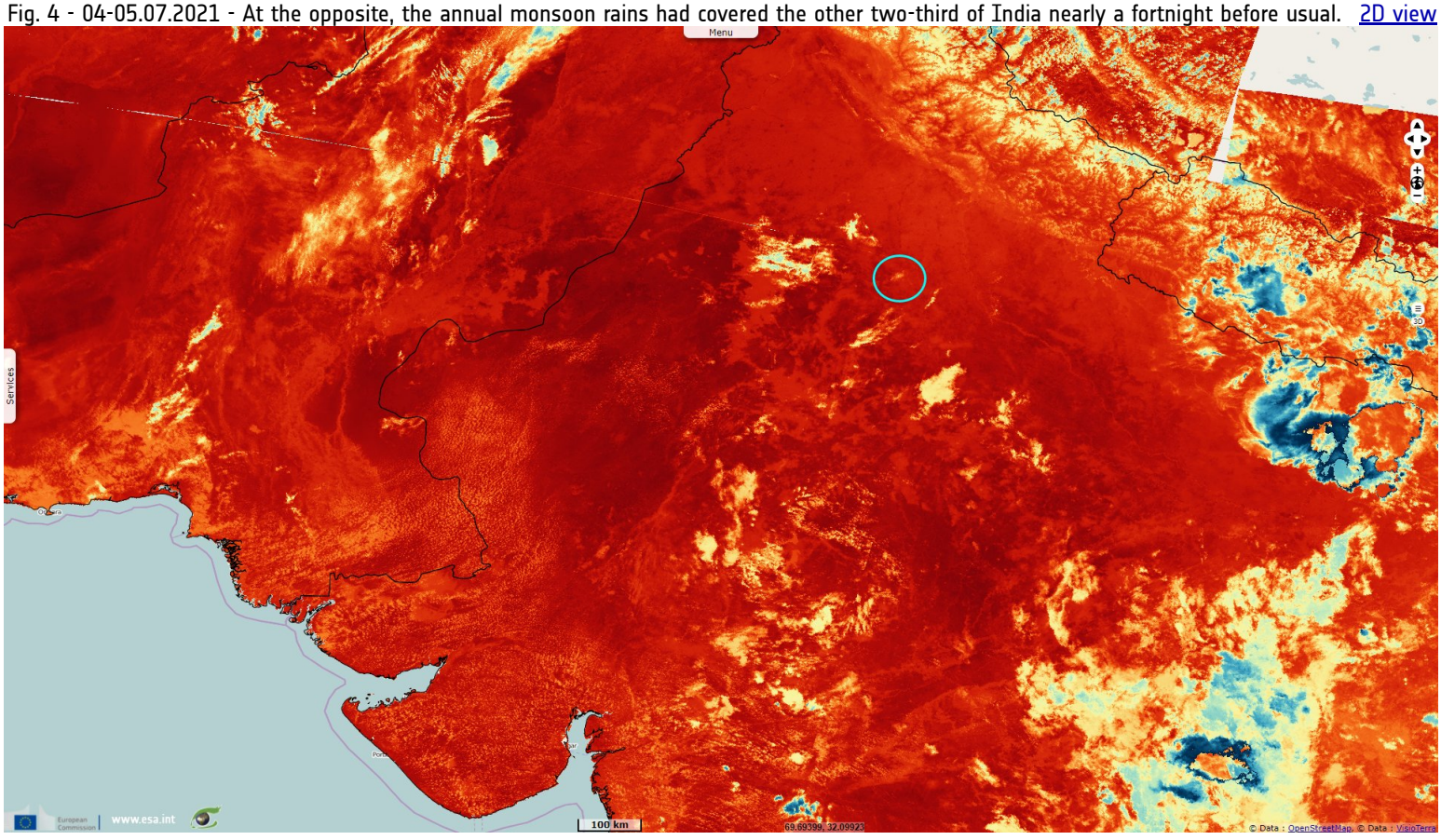
The mercury has stayed above 40°C because of the late arrival of the southwest monsoon and a hot wind blowing in from the desert state of Rajasthan and Pakistan. Forecasters have predicted that the annual rains would not hit New Delhi before July 7, making it the most delayed monsoon in the national capital since 2006. It has been delayed since.

Fig. 3 - 02.07.2021 - New Delhi saw 43.1°C on 01 July, 7°C above normal, its hottest July day since 2012 when it sweltered under 43.5°C. 2D view



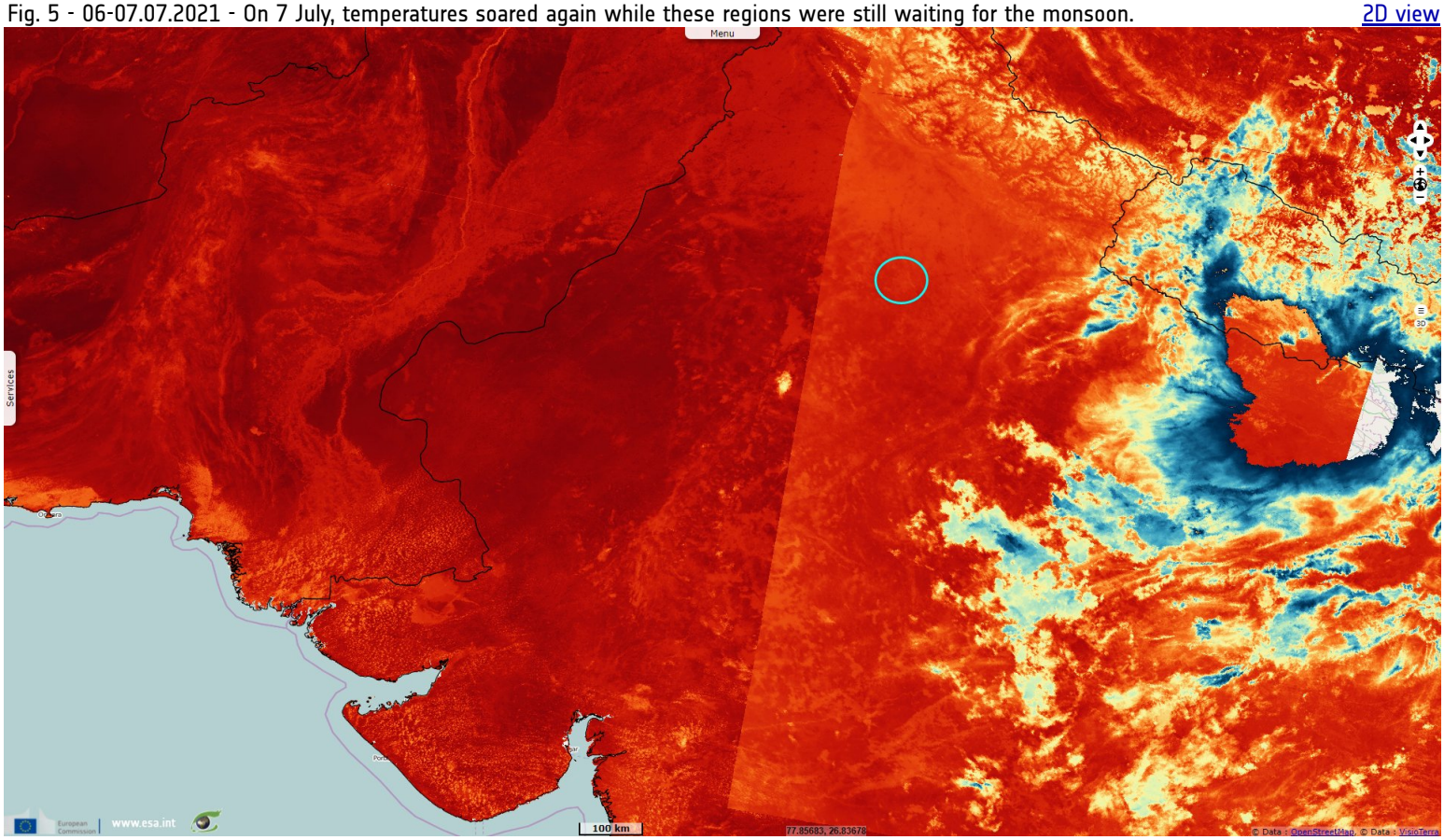
Heatwaves have killed over 6500 people in the world's second-most populous nation since 2010, and scientists say climate change is making them harsher and more frequent.

Fig. 4 - 04-05.07.2021 - At the opposite, the annual monsoon rains had covered the other two-third of India nearly a fortnight before usual. 2D view



The intense heat has driven up power consumption as more and more people turned to air-conditioners and air coolers. Delhi's power consumption peaked to nearly 7000 MW this week, 10 to 15% higher than the average demand at this time of the year.

Fig. 5 - 06-07.07.2021 - On 7 July, temperatures soared again while these regions were still waiting for the monsoon. 2D view



Currently just 5% of Indian households have air conditioning compared to 90% in the United States and 60% in China. But the market is forecast to boom in the coming years, driving up energy consumption in what is already the world's third-largest emitter of carbon dioxide. Simultaneously, the country of 1.3 billion people also suffers from severe water shortages with tens of millions lacking running water.

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