

Hundreds of square kilometres flooded since August in Pakistan

Sentinel-3 SLSTR RBT acquired on 06 June 2022 from 05:13:17 to 05:16:17 UTC

Sentinel-1 CSAR IW acquired on 07 June 2022 from 01:25:21 to 01:26:36 UTC

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Sentinel-1 CSAR IW acquired on 29 November 2022 from 01:15:54 to 01:17:34 UTC

Sentinel-3 SLSTR RBT acquired on 30 November 2022 from 05:24:21 to 05:27:21 UTC

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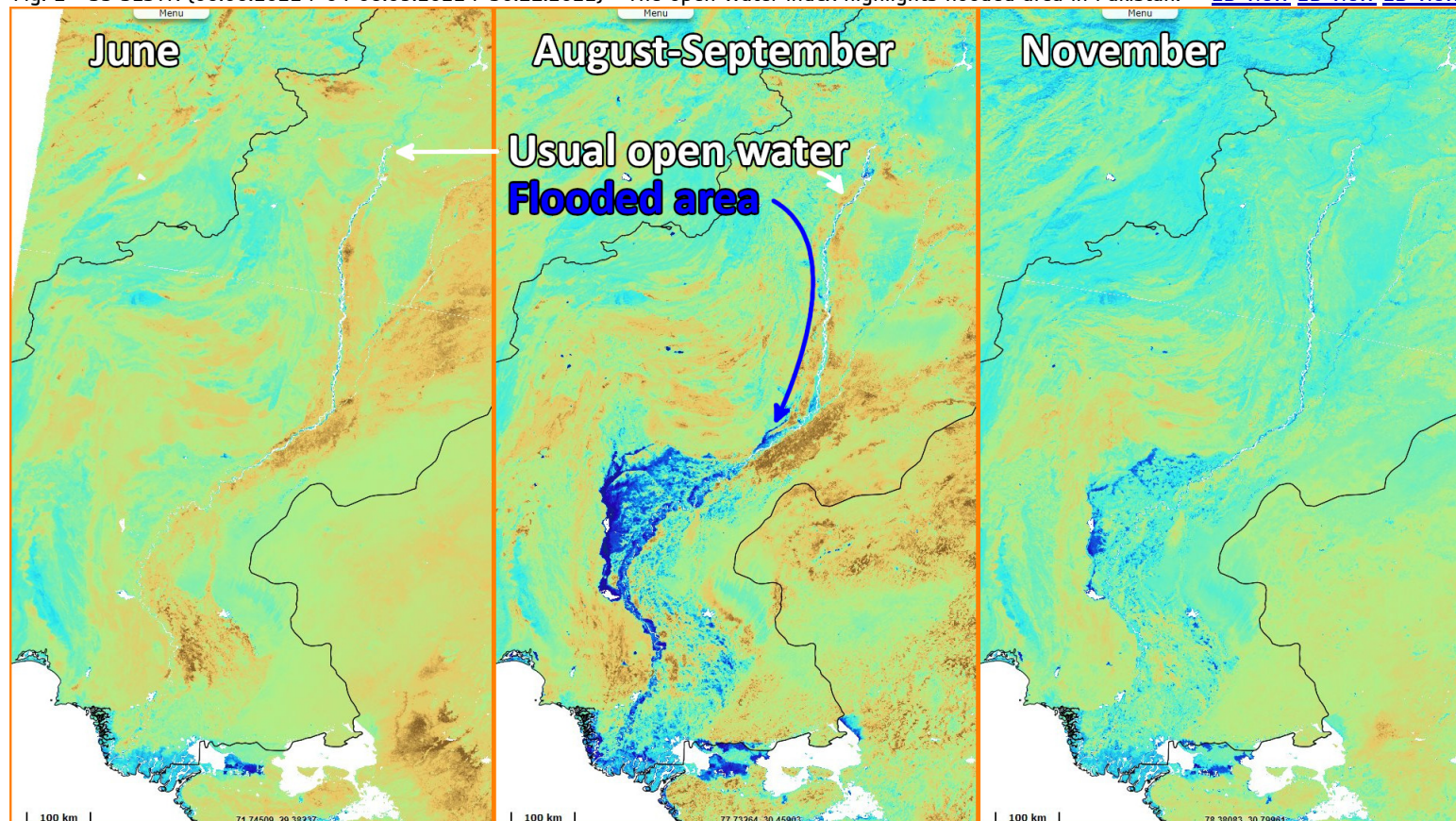
Keyword(s): Emergency, climate change, rainfall, flooding, hydrology, floodplain, health, food security, Indus, Pakistan

Fig. 1 - S3 SLSTR (06.06.2022 / 04-08.09.2022 / 30.11.2022) - Months after the monsoon, large areas are still drowned under flood water. [2D view](#)
[2D view](#) [2D view](#)



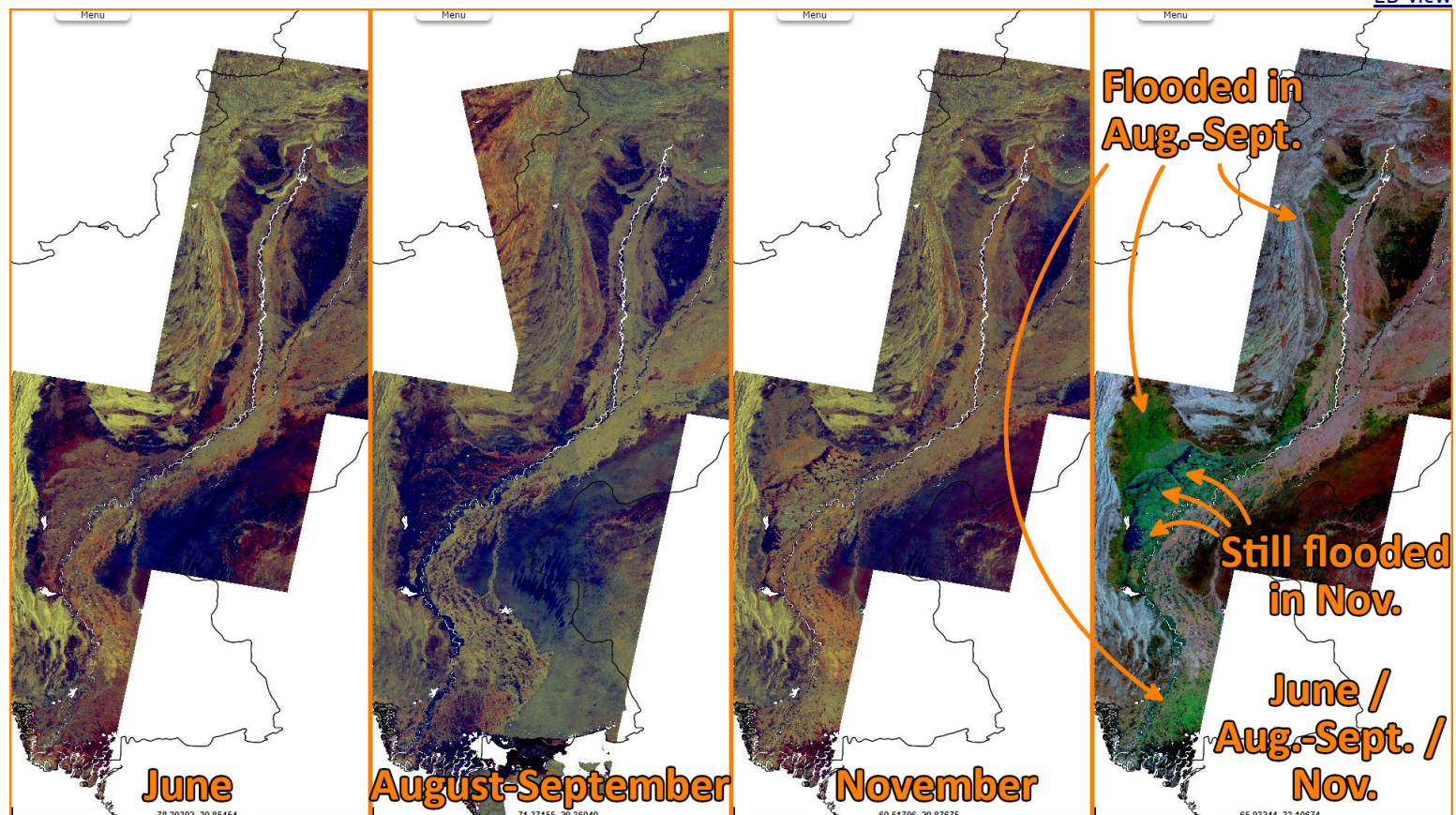
According to a [report](#) published on 30 November by ACAPS team of independent information provider in humanitarian needs analysis and assessment: "Since June 2022, heavy monsoon rainfall has led to an unprecedented crisis in Pakistan, causing floods, flash floods, and landslides. The disaster has significantly affected southern and central Pakistan, mostly affecting Balochistan, Khyber Pakhtunkhwa, and Sindh provinces. As at 18 November 2022, the flooding had killed over 1730 people and injured more than 12 800."

Fig. 2 - S3 SLSTR [06.06.2022 / 04-08.09.2022 / 30.11.2022] - The open water index highlights flooded area in Pakistan. [2D view](#) [2D view](#) [2D view](#)



Floodwater has started receding in many areas, but affected people will still need assistance to recover from the impact of the flood. "The floods have destroyed water infrastructure, affecting the availability of clean water for daily use. Families have resorted to using contaminated water, increasing the number of cases of waterborne diseases. These issues have added pressure on a country already facing water availability and sanitation challenges even before the floods." "Damage to infrastructure, including roads, railways, and bridges, has made aid delivery a challenge. Telecommunication infrastructure, like fibre optic transmission lines, feeder cables, and transmission towers, also suffered damages, meaning communication could be an additional challenge."

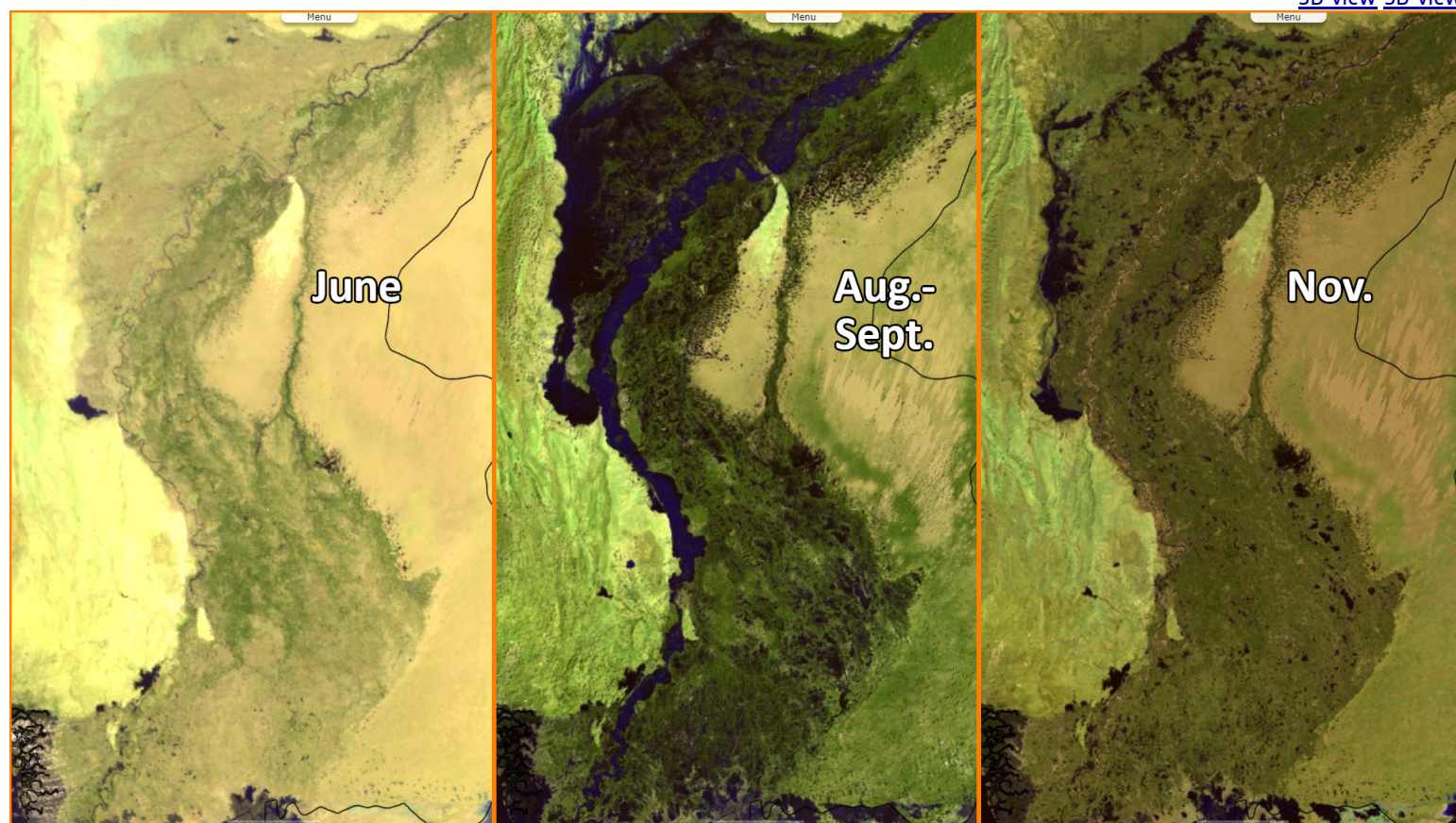
Fig. 3 - S1 [07-14.06.2022 / 08.07.2022-11.09.2022 / 22-29.11.2022] - Most are located in a middle bend of the floodplain. [2D view](#) [2D view](#) [2D view](#) [2D view](#)



"As at 18 November, rains and flooding had damaged more than 2.3 millions houses, with roughly 1.4 million partially damaged and 900 000 fully damaged with over five million people still displaced. Sindh is the most affected region, with approximately 83% (or 1,9 millions houses) of the total number of affected houses. With about 1.85 million people living in self settled camps with poor conditions as at 28 November, they will need shelter to offer them protection from the harsh weather conditions of the upcoming winter season."

"As a result, shelter and NFIs, such as blankets, will likely be priority needs to offer adequate protection against the cold. These resources will also help prevent common seasonal diseases, such as flu and pneumonia, as people wait for their lands to dry."

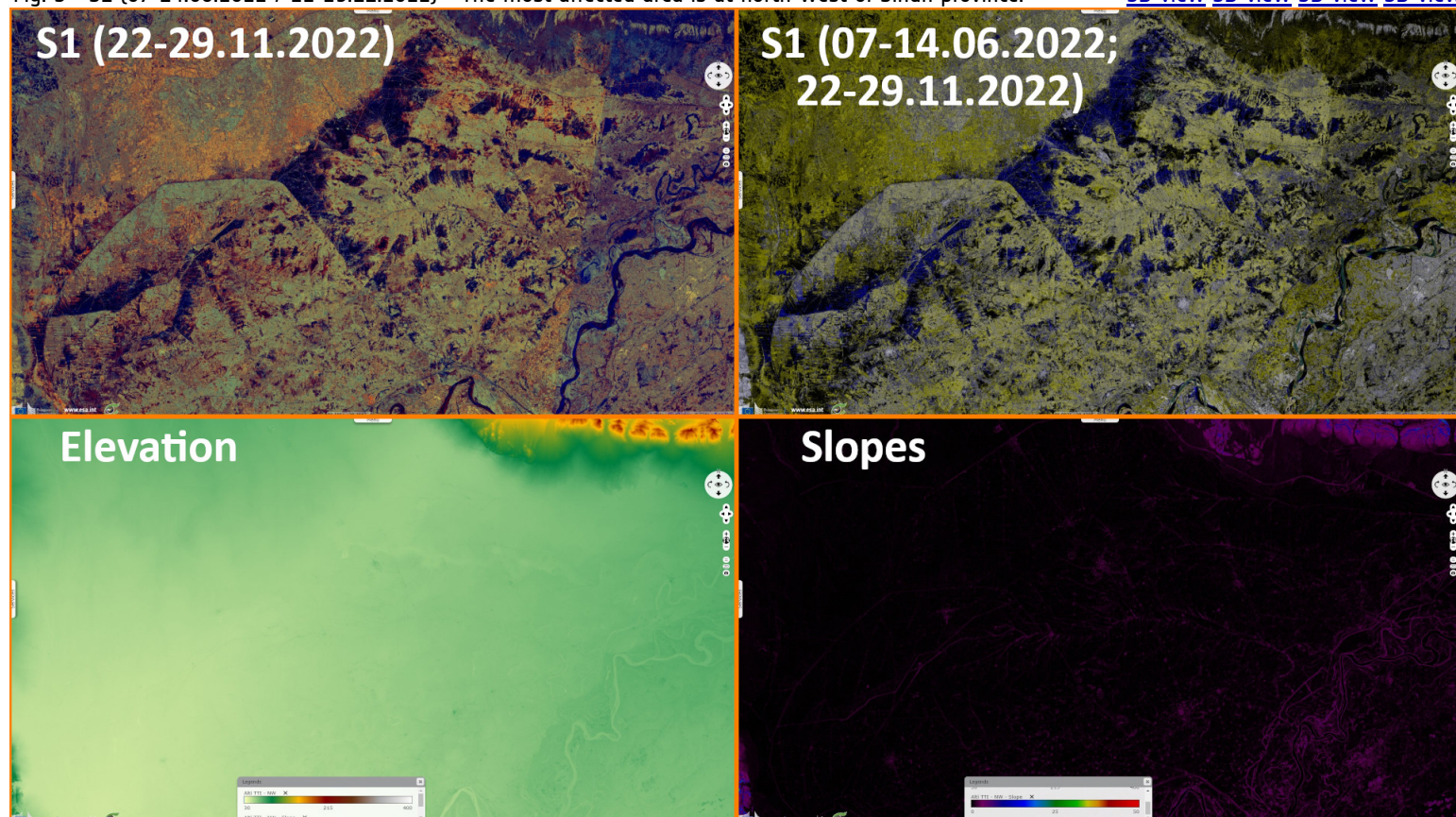
Fig. 4 - S3 SLSTR (06.06.2022 / 04-08.09.2022 / 30.11.2022) - It is a fraction of the original flood, which covered one third of the country. [3D view](#) [3D view](#) [3D view](#)



"As at 18 November, more than 12 800 people were injured and required medical assistance, but the destruction of health facilities limited access to primary healthcare. As at 5 October, about 2000 health facilities were either damaged or destroyed. As at 25 October, 59 health facilities in Sindh were fully damaged, and 461 were partially damaged)." [3D view](#) [3D view](#) [3D view](#)

"Overall, eight million flood-affected people need health assistance as water- and vector-borne diseases, acute respiratory illnesses, and skin diseases continue to affect the population."

Fig. 5 - S1 (07-14.06.2022 / 22-29.11.2022) - The most affected area is at north-west of Sindh province. [3D view](#) [3D view](#) [3D view](#) [3D view](#)

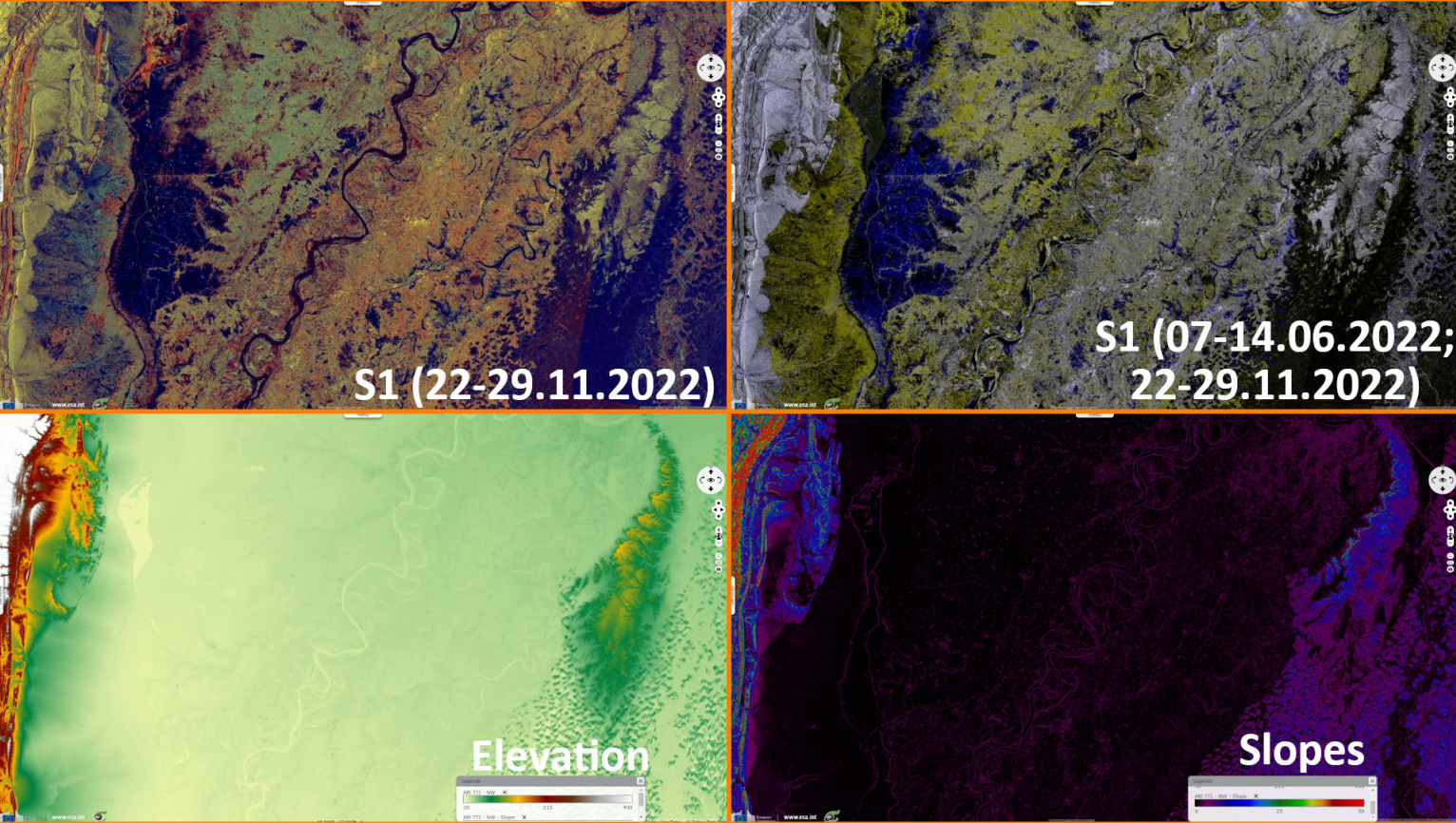


"Dengue fever and malaria are endemic in Pakistan, and the stagnating floodwaters have provided a conducive environment for mosquito-breeding. There is a malaria outbreak in 32 districts, and Sindh and Balochistan account for 78% of confirmed cases in 2022. The floods may also aggravate a cholera outbreak. In Sindh province, there are 350 000 suspected malaria cases, 700 000 people present with some form of diarrhoea, and over

770 000 people have skin-related diseases."

"The displacement of people to areas far from health facilities, a number of which have been destroyed, will likely disrupt access to reproductive healthcare. As at 10 November, there were about 410 800 pregnant women, with an estimated 137 000 births likely to happen in the next three months. These births will all require access to healthcare services."













Fig. 6 - S1 (07-14.06.2022 / 22-29.11.2022) - Water stagnates in a flat depressed area of the Indus bend. [3D view](#) [3D view](#) [3D view](#) [3D view](#)



Regarding food security, the report [report](#) adds "Nearly 1.6 million children are projected to face severe acute malnutrition in Sindh and Balochistan provinces based on the estimated pre-existing malnutrition prevalence indicated in the latest National Nutrition Survey. Children born of malnourished pregnant women also face the same risk of severe acute malnutrition."

"Sindh, the most flood-affected province in the country, produces 31% of its sugarcane, 42% of its rice, and 23% of its cotton. The percentage loss of total production is 61%, 82%, and 88% for sugarcane, rice, and cotton, respectively, representing USD 1.30 billion in total. The situation is likely to reduce livelihoods, employment, and agricultural income and lead to a potential decline in exports. These declines will likely cause an increase in poverty levels and pose a challenge to the Government's ability to recover from a potential economic crisis. From the pre-flood period in June to the post-flood period in September, food commodity prices hugely increased. Less land is available for agriculture as sections are still flooded."

*The views expressed herein can in no way be taken to reflect the official opinion of the European Space Agency or the European Union.
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