Locust Surveillance Using Geospatial Technology

No. 2021/19
Period: 01-28 Feb.

A start-up, 'The Bug Picture' is working with communities in Kenya to harvest the locust and mill them, turning them into protein-rich animal feed.

Image courtesy: www.dailysabah.com

Contents

Locust Surveillance Using Geospatial Technology Bulletin is issued by Regional Remote Sensing Centre (West), NRSC/ISRO – Jodhpur. RRSC-W continuously monitors the weather and ecology to provide early warning based on survey and control results from Locust Warning Organisation (LWO), Jodhpur combined with remote sensing inputs.

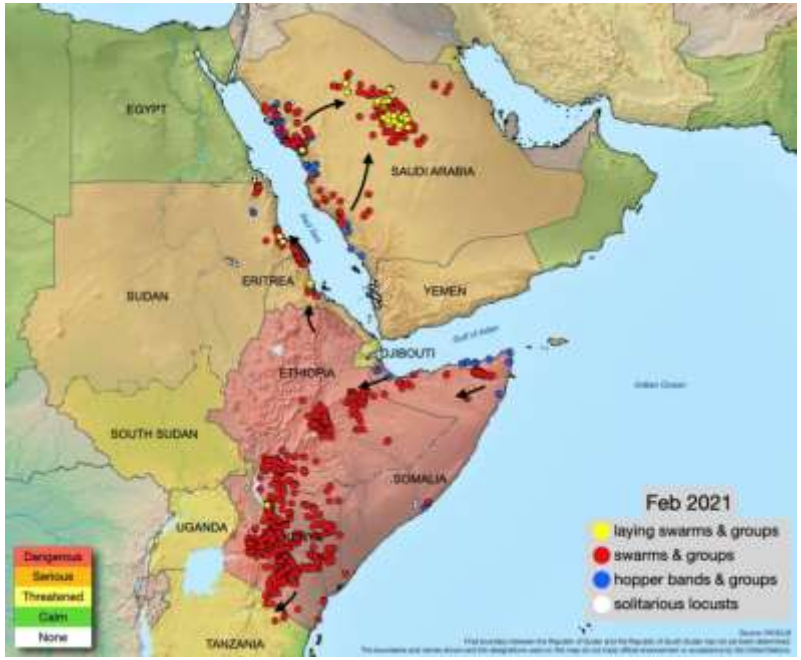
Please send your feedback to
rrsc_w@nrsc.gov.in or ssrao@nrsc.gov.in

Locust Update by Food and Agriculture Organisation, UN.

Status & Forecast

Status: The swarms that are currently present in northern and central areas are smaller and much less numerous than one year ago. In Ethiopia, immature swarms remain in the south (South Omo, Konso), east of the Rift Valley in the Bale Mountains (Arsi, Borena), and to the northeast in the Harar Highlands (East Harerghe) where swarms were seen arriving from adjacent areas of northwest Somalia in the past few days.

Forecast: Showers that fell during the last week of February may allow swarms to mature rapidly in northern Kenya and southern Ethiopia and lay eggs that could hatch in late March, causing small hopper bands to form.



Source: Desert Locust Global Situation update 3rd March 2021 by Food and Agriculture Organisation, UN.

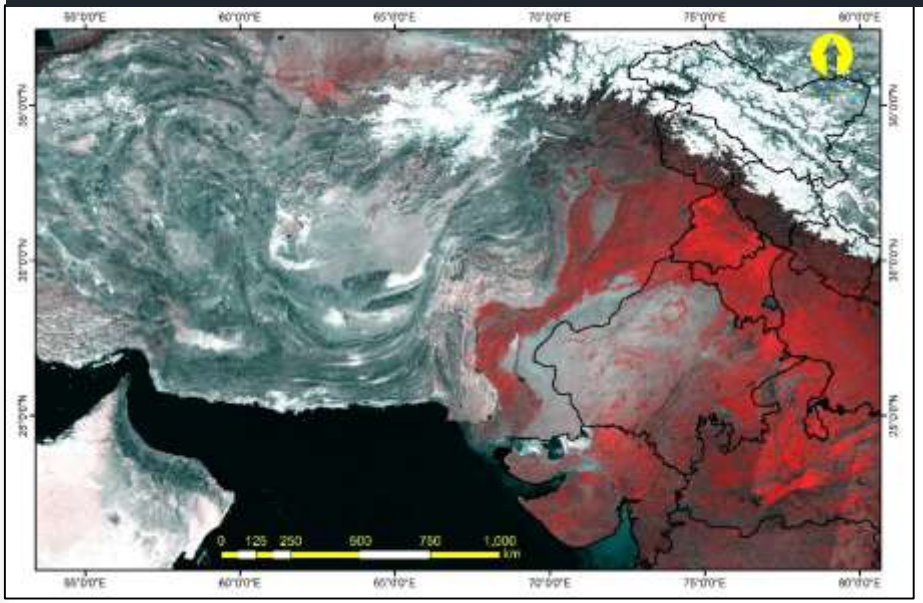
Locust Update by Locust Warning Organisation, India.

Status & Forecast

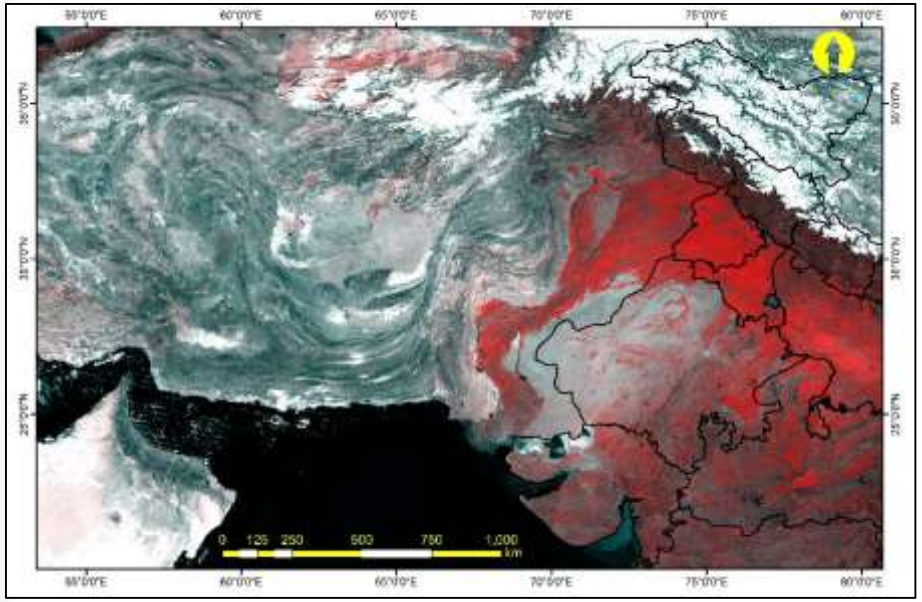
During the routine survey, it has been observed that India is free from gregarious as well as solitary desert locust activities during the 2nd fortnight of February, 2020. Total 110 nos. of spots were observed during the surveys which are plotted on the map.

Source: Desert Locust Situation Bulletin 2021/04 , LWO, Min. of Agriculture, Farmer's Welfare

False Colour Composite (FCC)



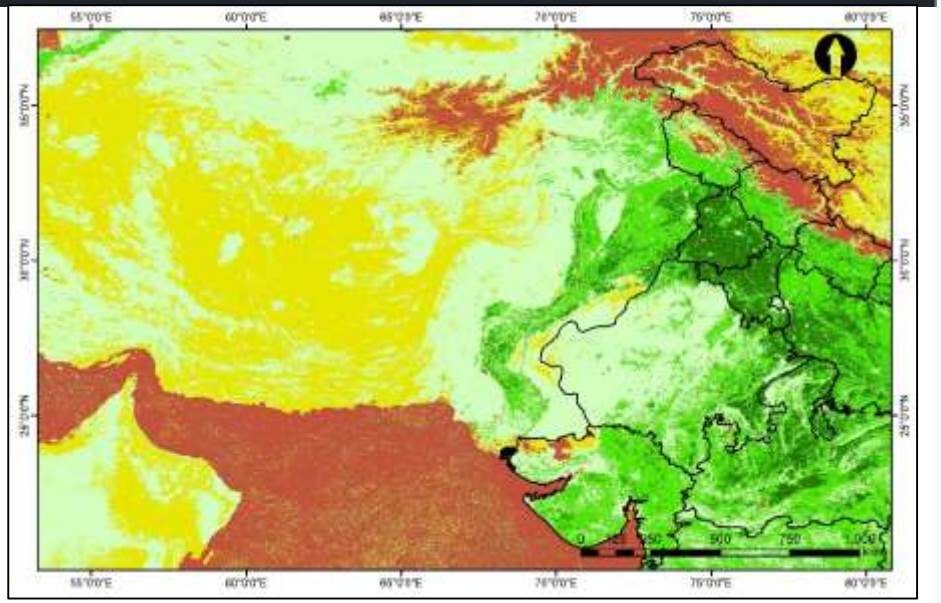
2nd Feb – 10th Feb, 2021



18th Feb – 26th Feb, 2020

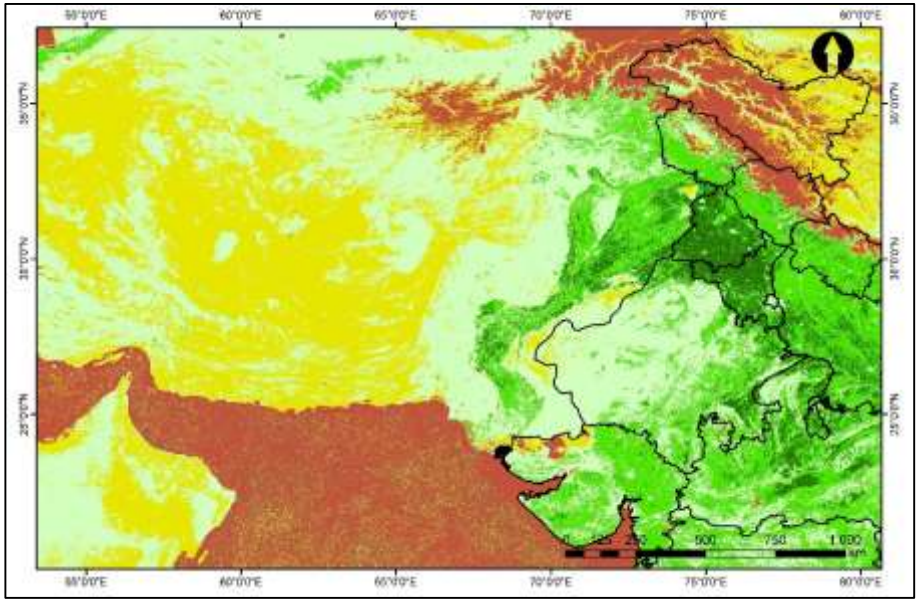
Source: MODIS 8 day Composite

Normalized Difference Vegetation Index (NDVI)



1st Feb – 10th Feb, 2021

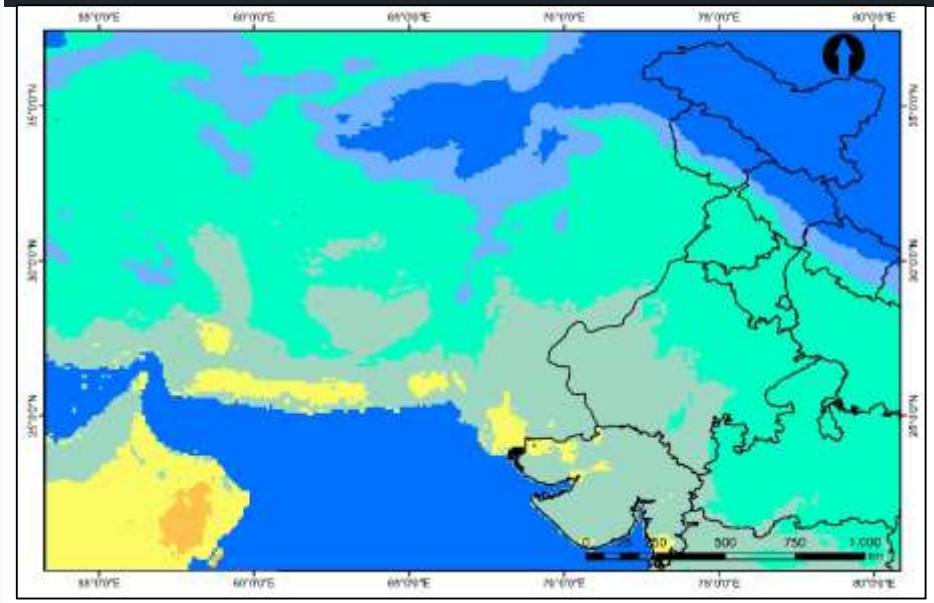
< 0.0 | 0.0 - 0.1 | 0.1 - 0.4 | 0.4 - 0.7 | 0.7 - 1.0



11th Feb – 20th Feb, 2021

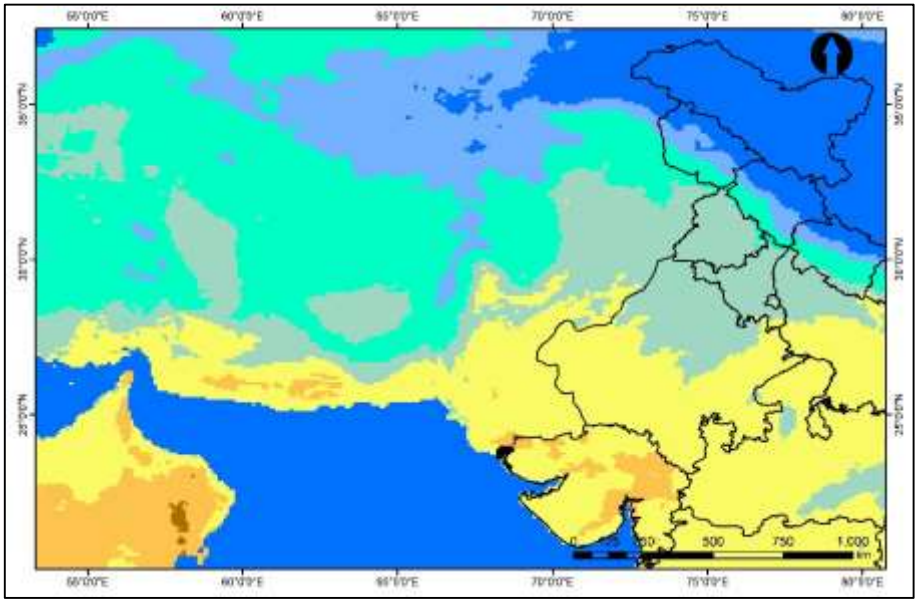
Source: eMODIS Ver. 6

Land Surface Temperature (^{0}C)



19:00 Hrs. IST of 1st Feb - 2021

< 0 | 0 - 10 | 10 - 20 | 20 - 25 | 25 - 30 | 30 - 35 | 35 - 40



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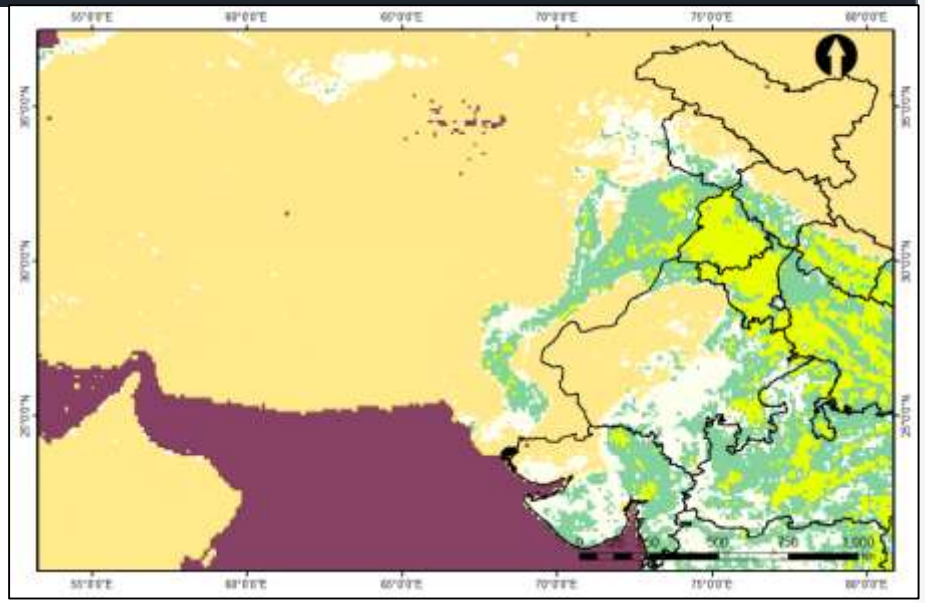
Leaf Area Index (LAI)



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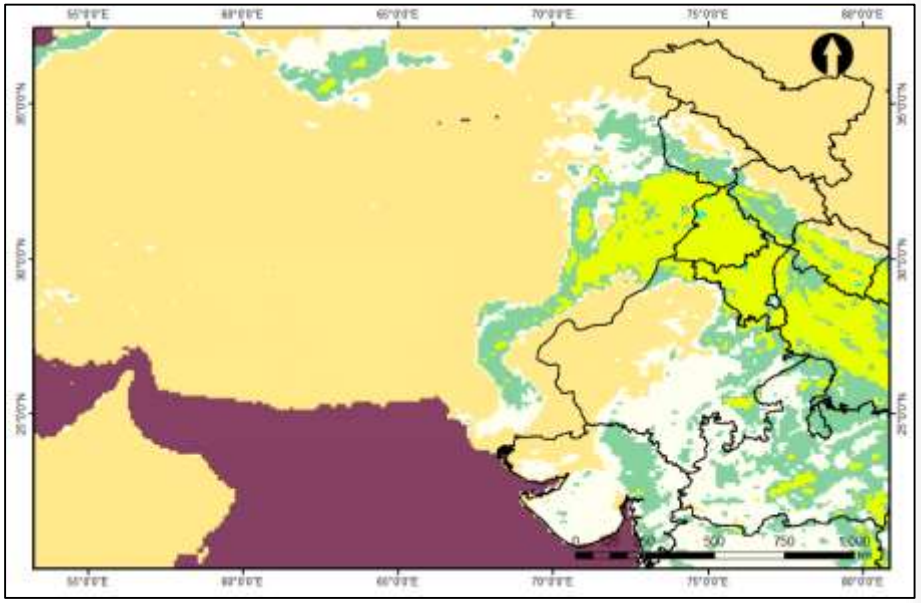
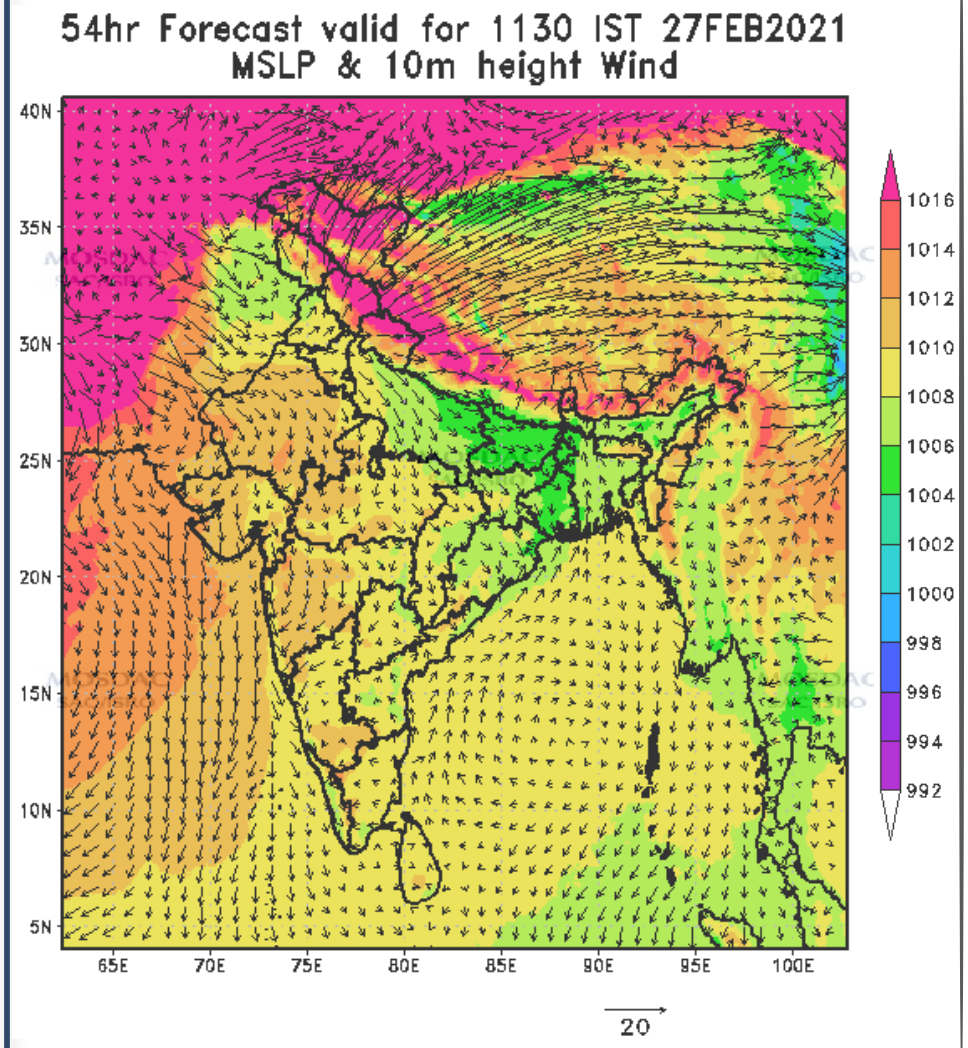
< 0 | 0 - 0.25 | 0.25 - 0.50 | 0.50 - 1.00 | 1.00 - 3.00 | 3.00 - 5.00

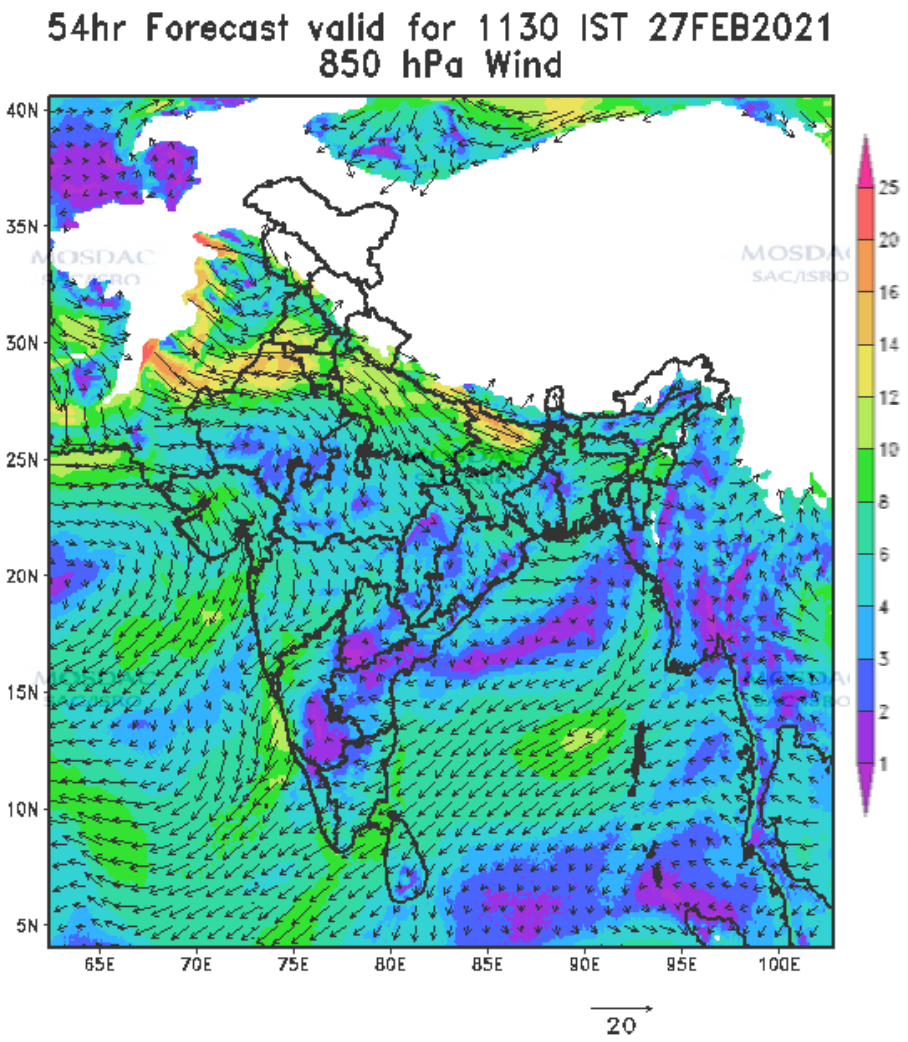


19:00 Hrs. IST of 28th Feb 2021.

Source: SMAP Enhanced L4 Global 3 Hourly 9 km Product

Wind Vectors

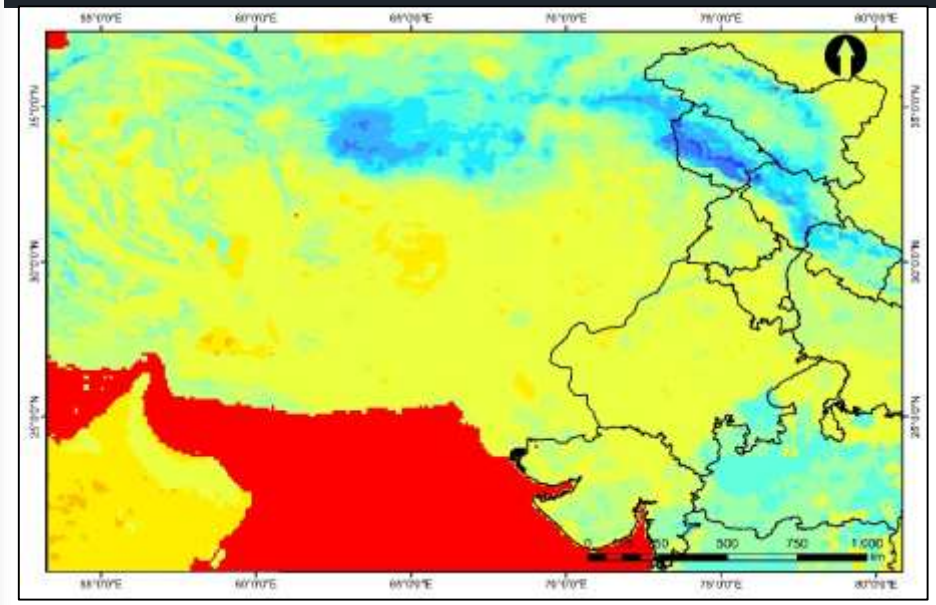




Source: MOSDAC web portal

Wind speed @ 1.46 km from msl.

Surface Soil Moisture Map (%)



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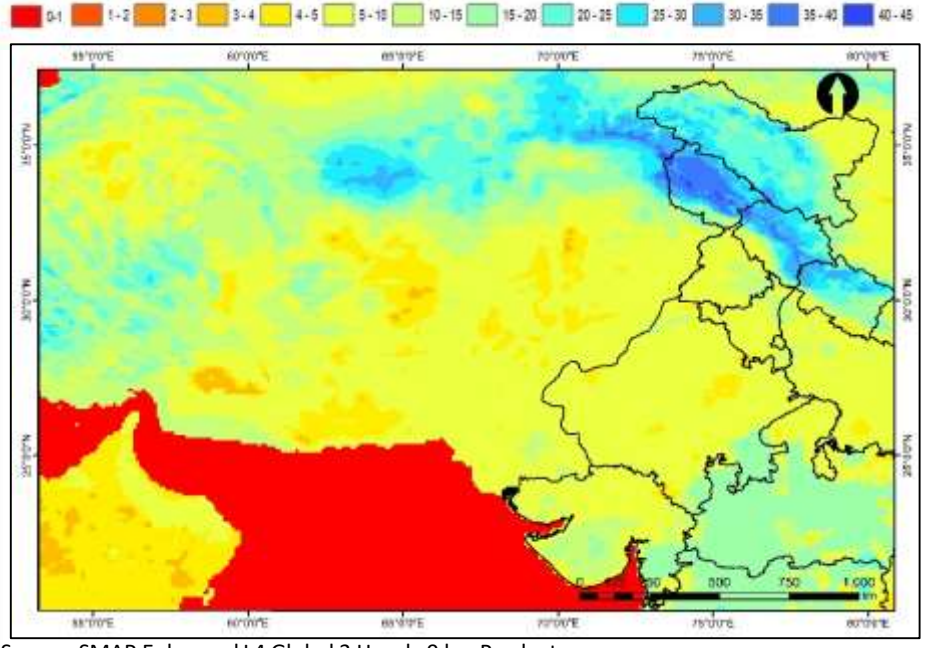

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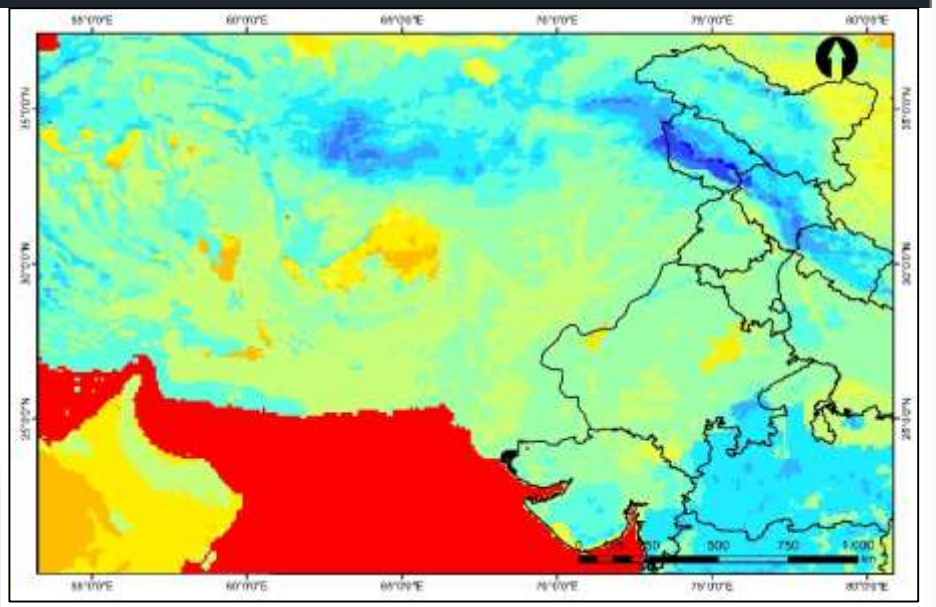
Root-Zone Soil Moisture Map (%)



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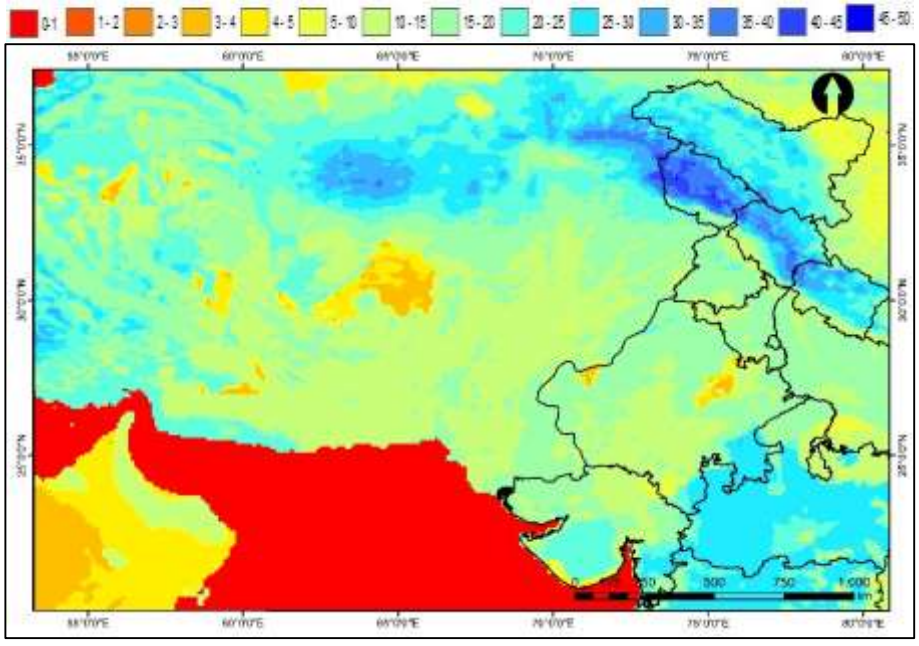

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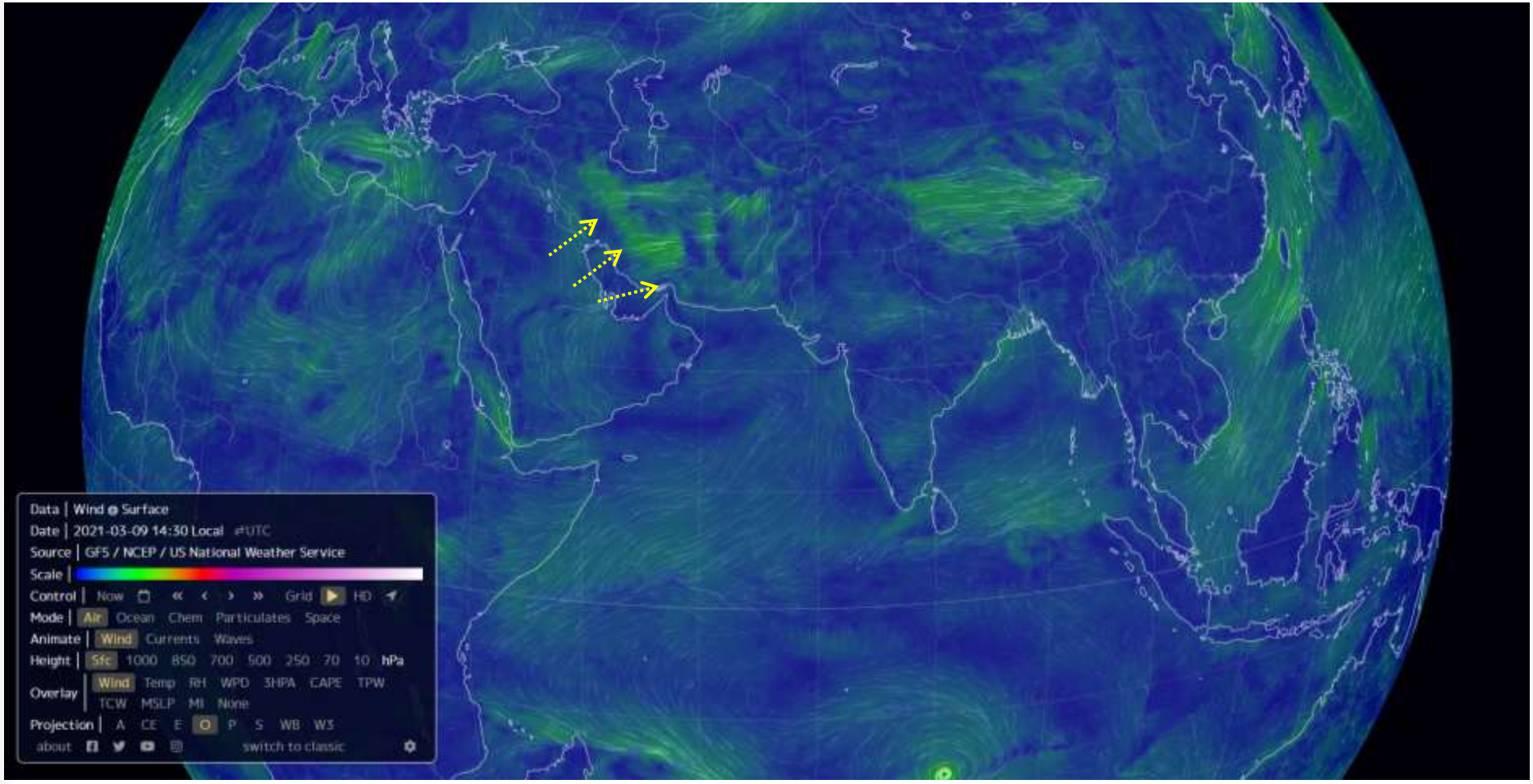
Source: SMAP Enhanced L4 Global 3 Hourly 9 km Product

Wind Speed and Direction Modelled By Global Forecast System



Till 09 March, 2021

Source: earth.nullschool.net

Wind speed/direction @ 850 hPa.