

# Locust Surveillance Using Geospatial Technology



**nrsc**

No. 2020/17  
Period: 01-31 Dec.



Image courtesy: National Geographic

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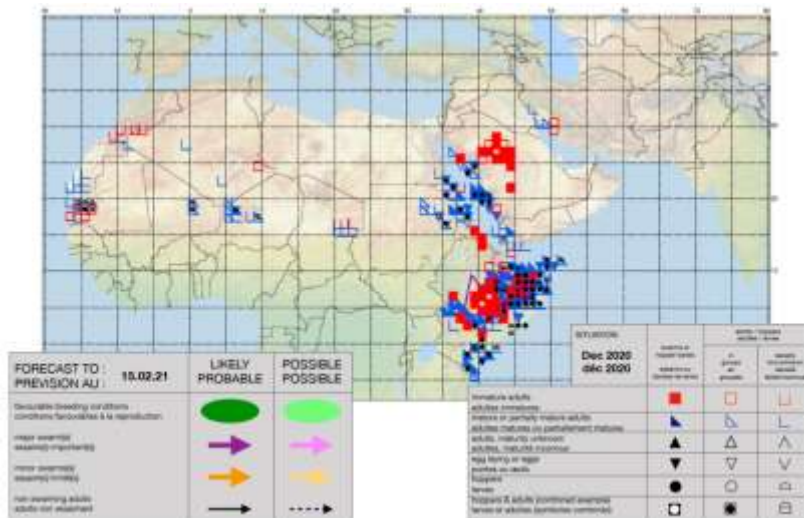
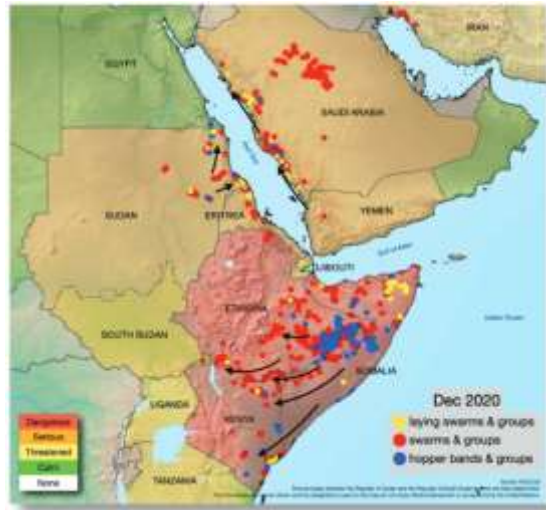
Locust Surveillance Using Geospatial Technology Bulletin is issued by Regional Remote Sensing Centre (West), NRSC/ISRO – Jodhpur. RRSC-W continuously monitors the weather and ecology to provide early warning based on survey and control results from Locust Warning Organisation (LWO), Jodhpur combined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

Please send your feedback to  
[rrsc\\_w@nrsc.gov.in](mailto:rrsc_w@nrsc.gov.in) or [ssrao@nrsc.gov.in](mailto:ssrao@nrsc.gov.in)

## Status & Forecast

**Status:** Adults groups persists on southwest coast of Iran.

**Forecast:** Eventual breeding and hopper bands likely on southwest coast of Iran; low numbers prevail in southwest Iran and southwest Pakistan.



## 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 December, 2020. Total 122 nos. of spots were observed during the surveys which are plotted on the map.

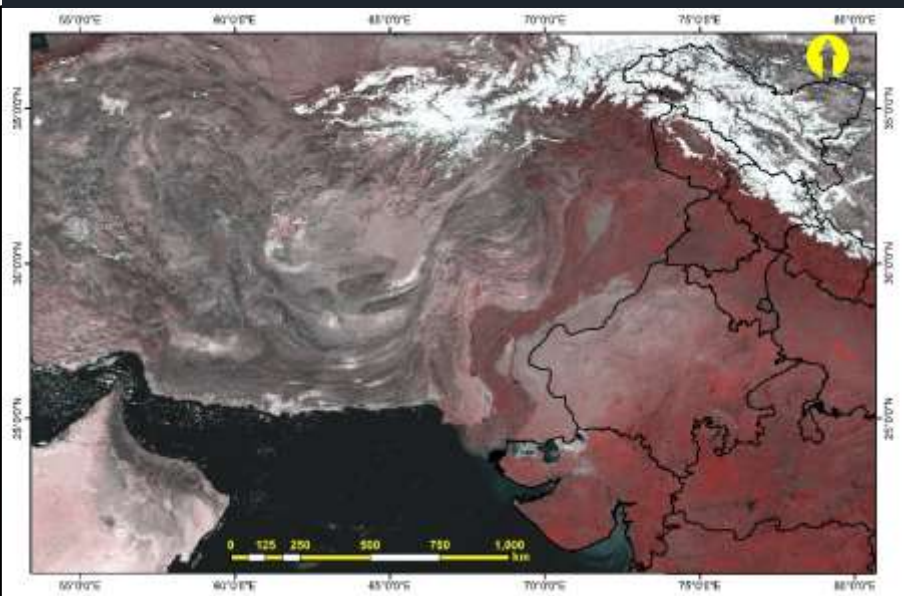


India is free from gregarious as well as solitary desert locust activities

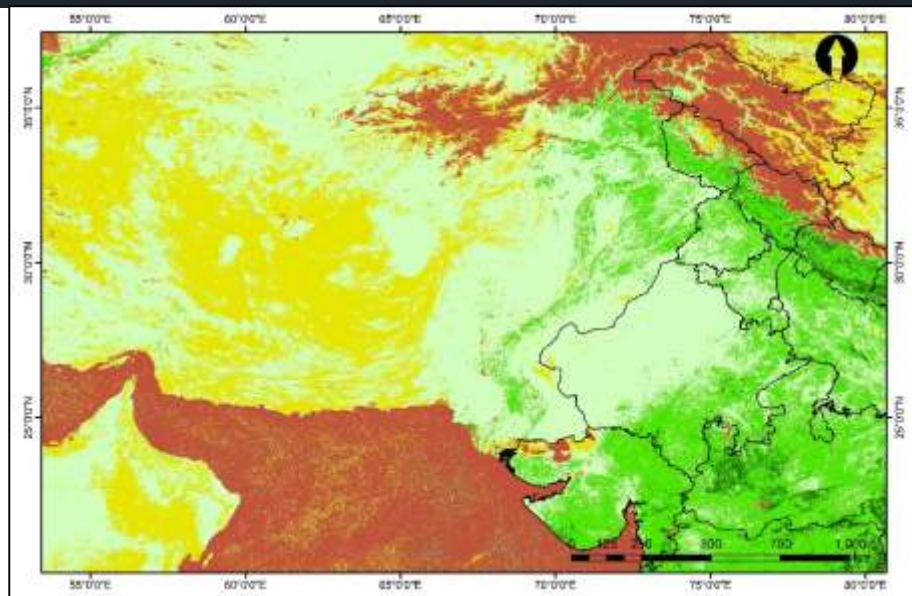


## False Colour Composite (FCC)

## Normalized Difference Vegetation Index (NDVI)



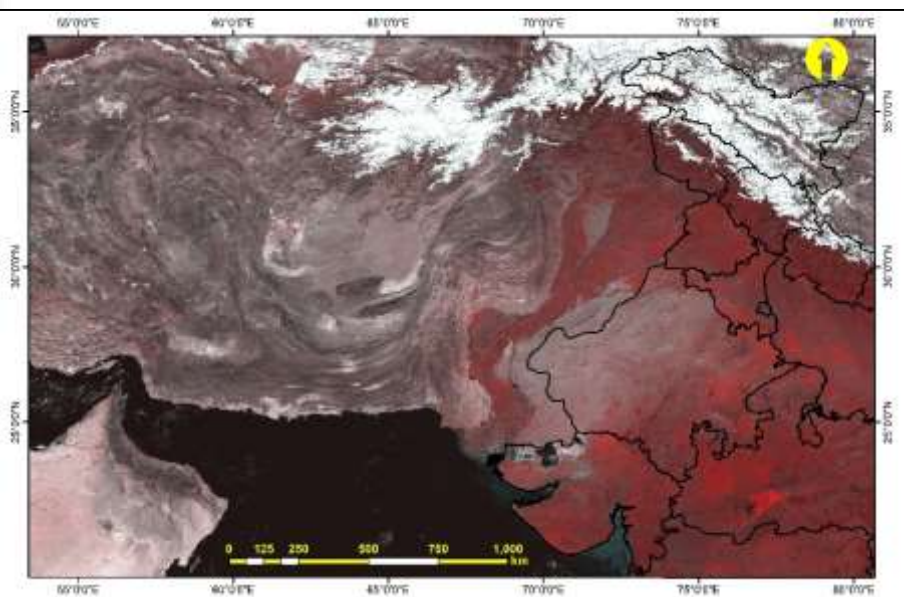
3<sup>rd</sup> Dec – 11<sup>th</sup> Dec, 2020



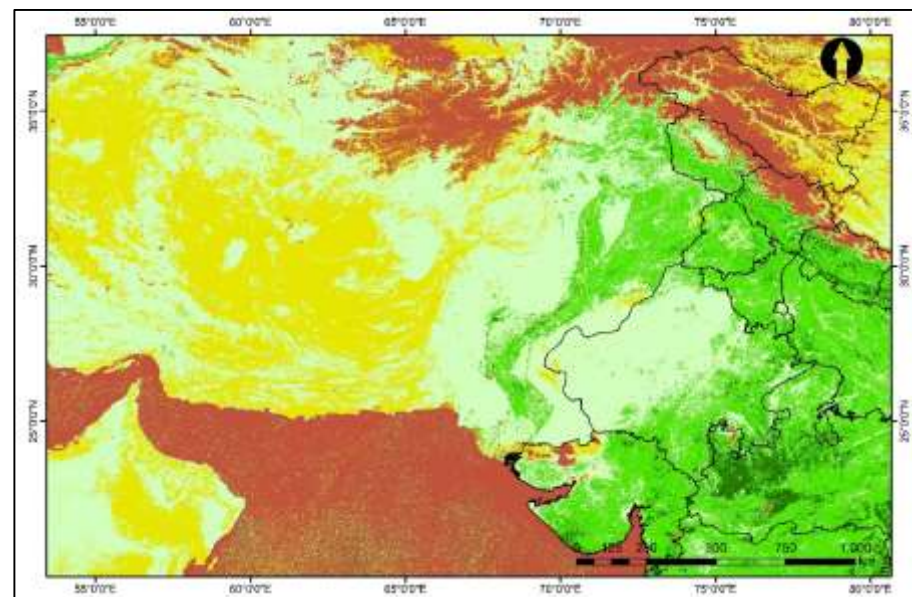
1<sup>st</sup> Dec – 10<sup>th</sup> Dec, 2020

Legend for NDVI values:

< 0.0	0.0 - 0.1	0.1 - 0.4	0.4 - 0.7	0.7 - 1.0
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18<sup>th</sup> Dec – 27<sup>th</sup> Dec, 2020



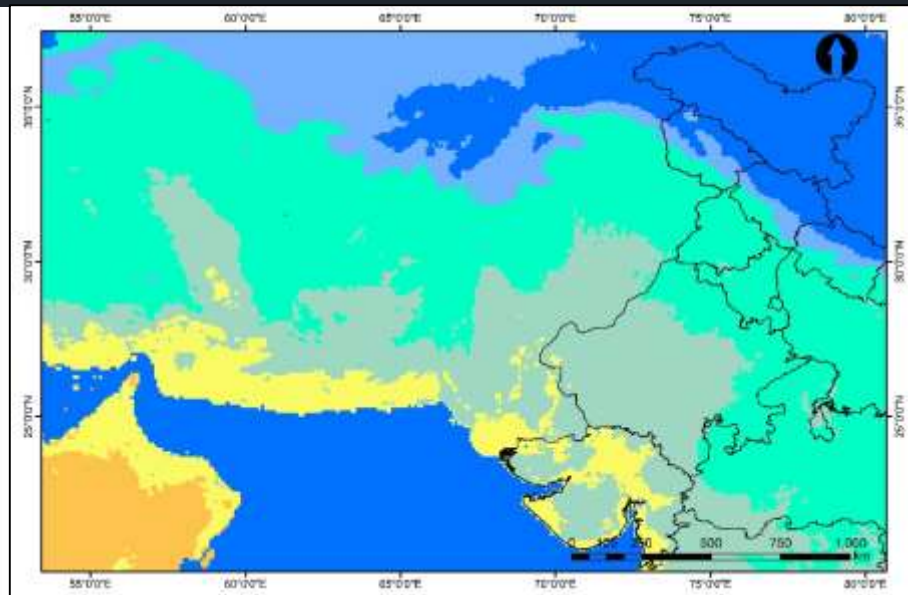
21<sup>st</sup> Dec – 31<sup>st</sup> Dec, 2020

Source: MODIS 8 day Composite

Source: eMODIS Ver. 6



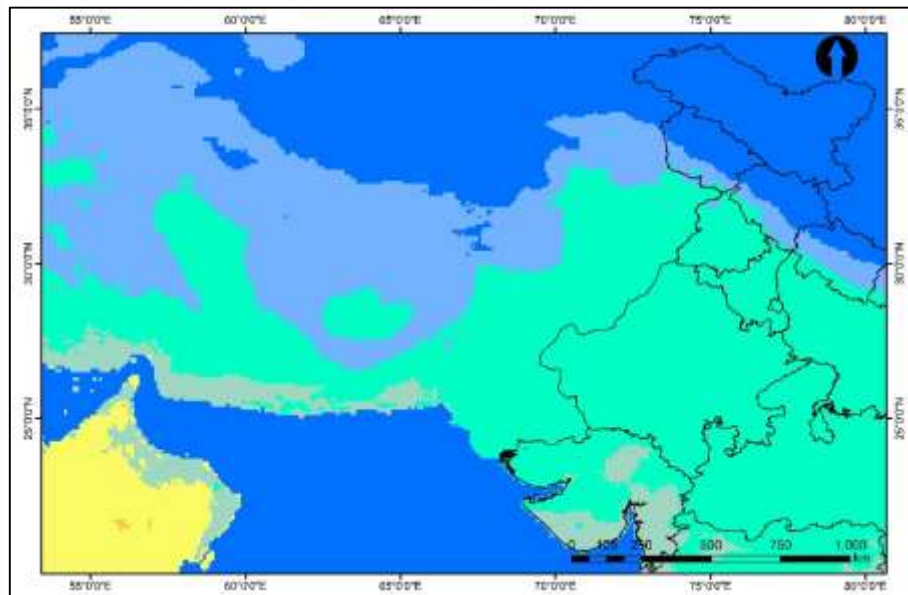
# Land Surface Temperature (°C)



19:00 Hrs. IST of 1<sup>st</sup> Dec - 2020

Legend for LST (°C):

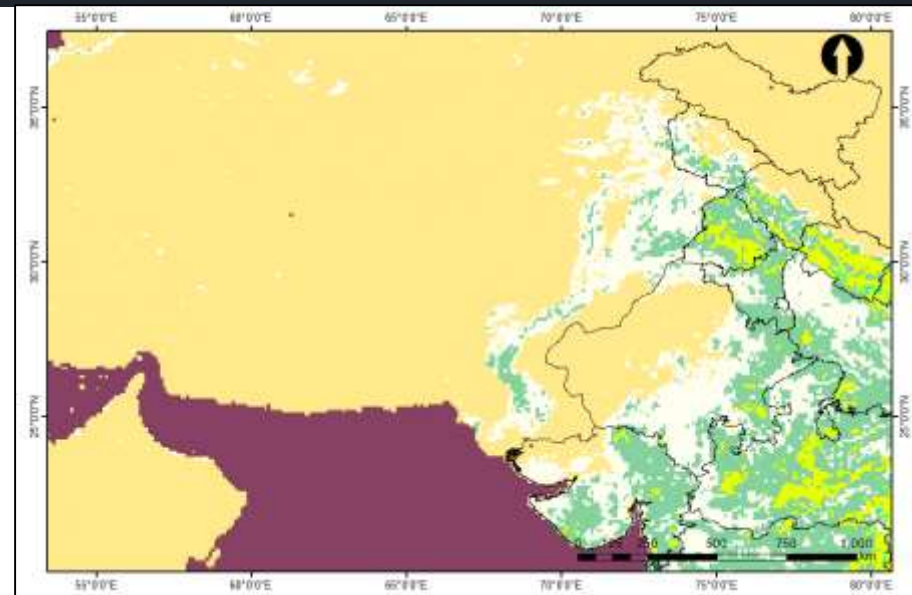
Blue	Light Blue	Cyan	Green	Yellow	Orange	Brown
< 0	0 - 10	10 - 20	20 - 25	25 - 30	30 - 35	35 - 40



19:00 Hrs. IST of 31<sup>st</sup> Dec 2020.

Source: SMAP Enhanced L4 Global 3 Hourly 9 km Product

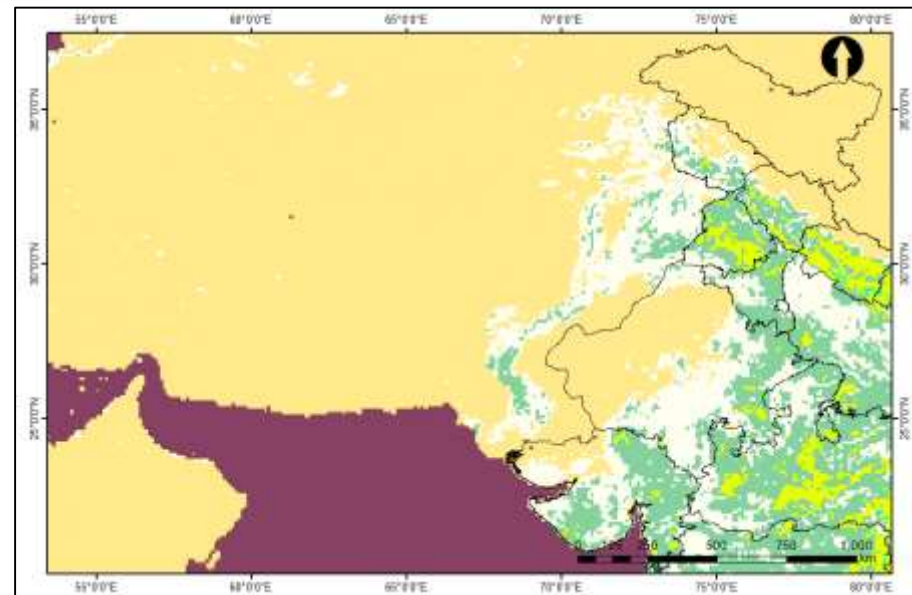
# Leaf Area Index (LAI)



19:00 Hrs. IST of 1<sup>st</sup> Dec 2020.

Legend for LAI:

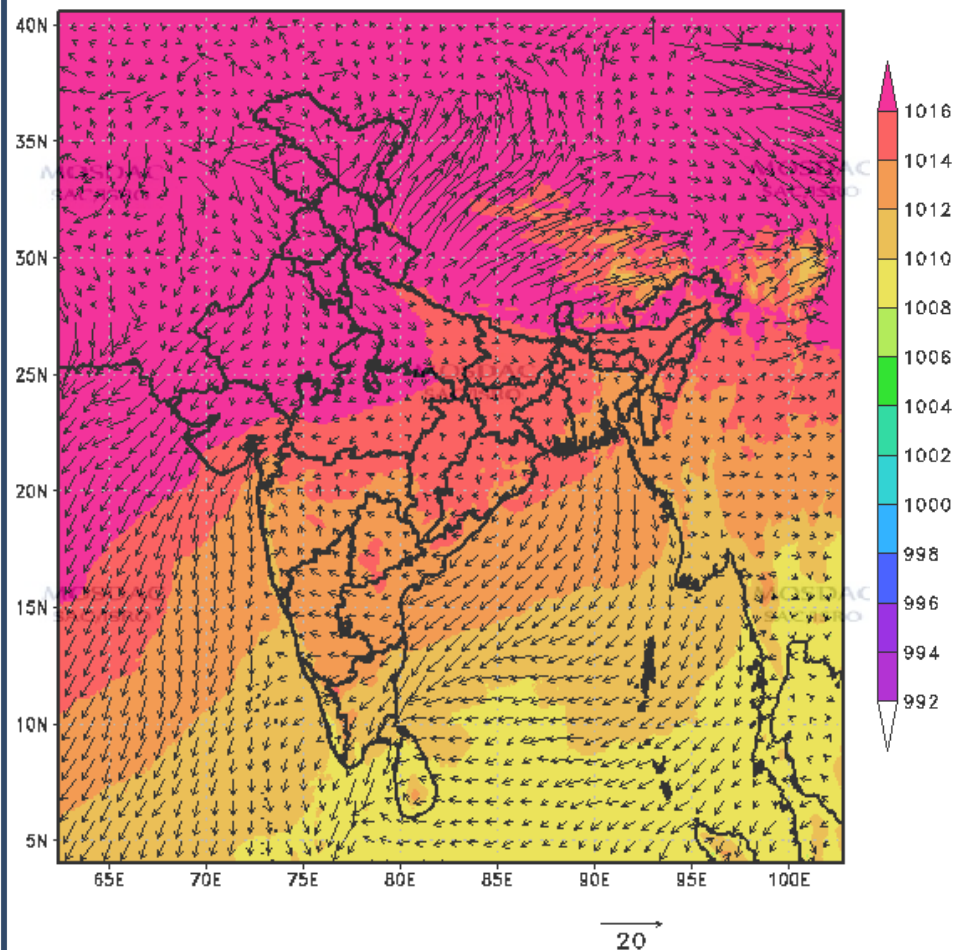
Dark Purple	Light Purple	Yellow	Green	Light Green	Dark Green
< 0	0 - 0.25	0.25 - 0.50	0.50 - 1.00	1.00 - 3.00	3.00 - 5.00



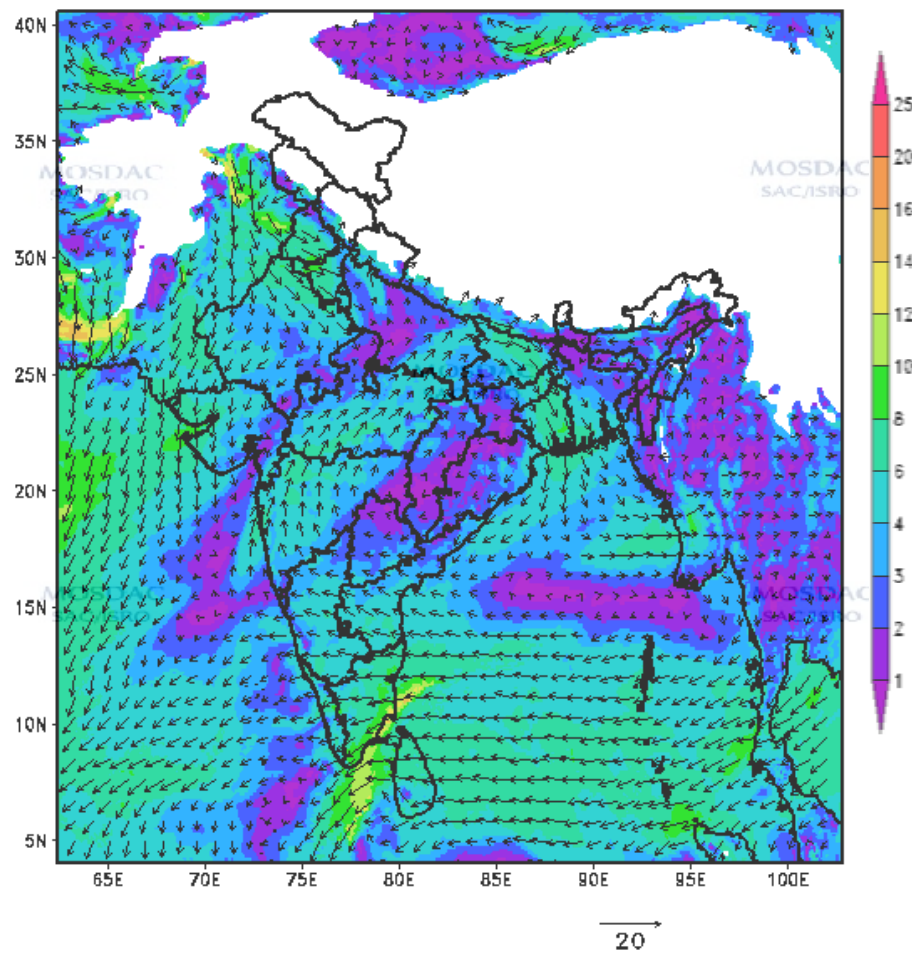
19:00 Hrs. IST of 31<sup>st</sup> Dec 2020.

# Wind Vectors

06hr Forecast valid for 1130 IST 29DEC2020  
MSLP & 10m height Wind

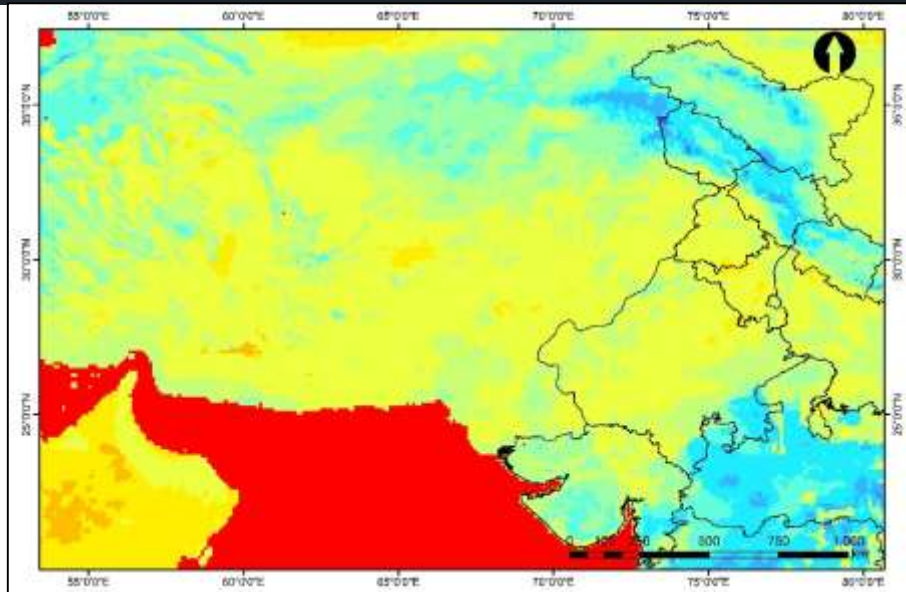


06hr Forecast valid for 1130 IST 29DEC2020  
850 hPa Wind

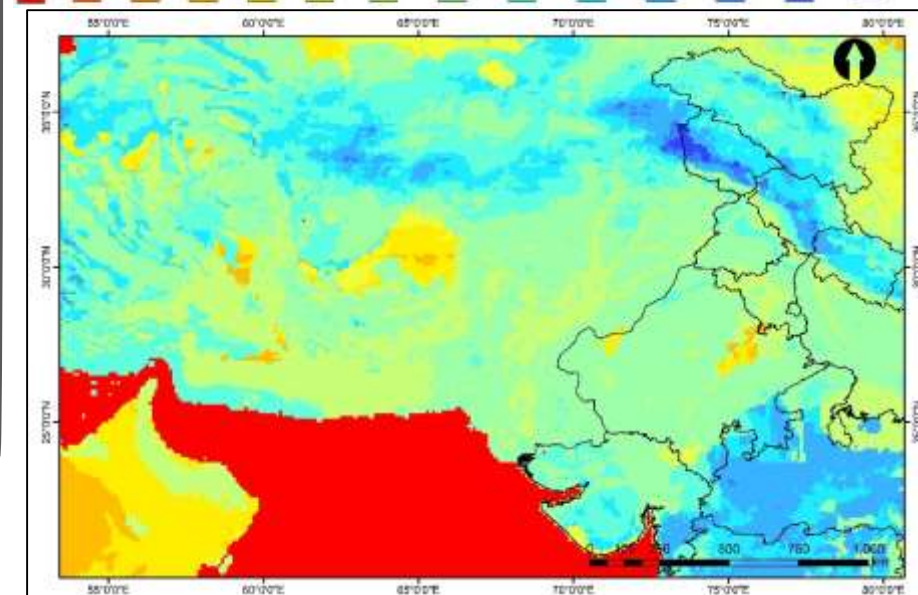
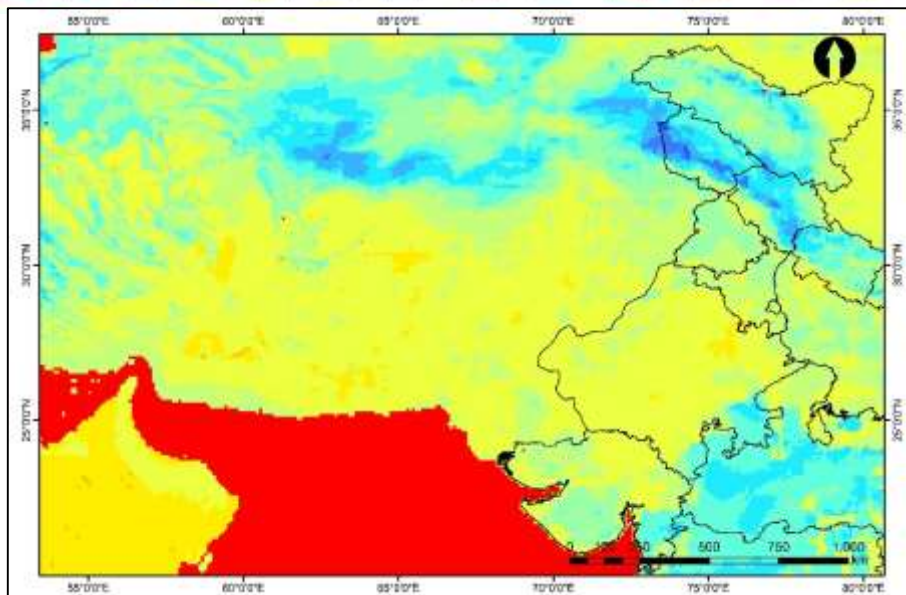
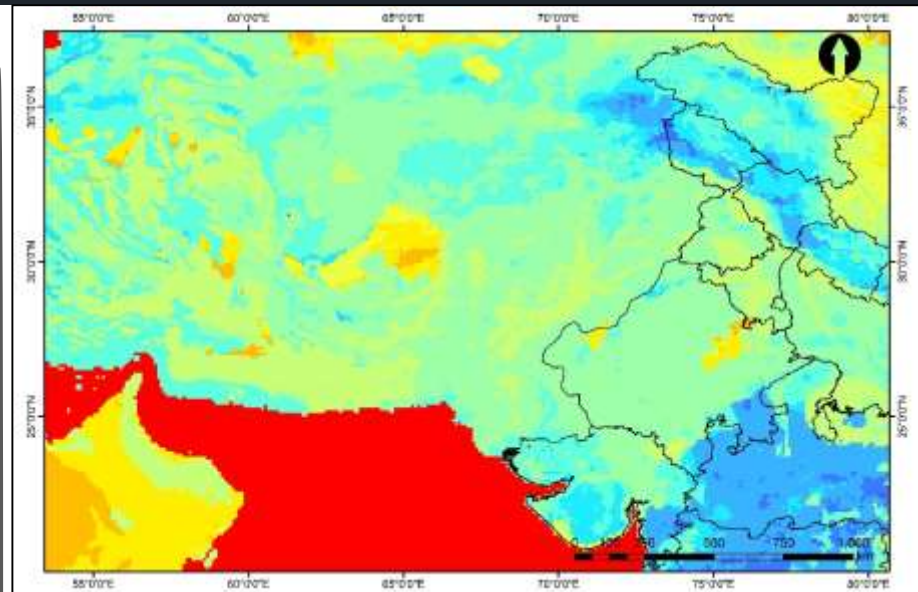




## Surface Soil Moisture Map (%)



## Root-Zone Soil Moisture Map (%)



Source: SMAP Enhanced L4 Global 3 Hourly 9 km Product

19:00 Hrs. IST of 31<sup>st</sup> Dec 2020.

19:00 Hrs. IST of 31<sup>st</sup> Dec 2020.