



The 18th Session of the Forum on Regional Climate Monitoring, Assessment and Prediction for Asia (FOCRAII)

(Online session during 9 May 2022)

Consensus Statement on the Seasonal Climate Outlook over South Asia for the 2022 Southwest Monsoon Season (June – September)

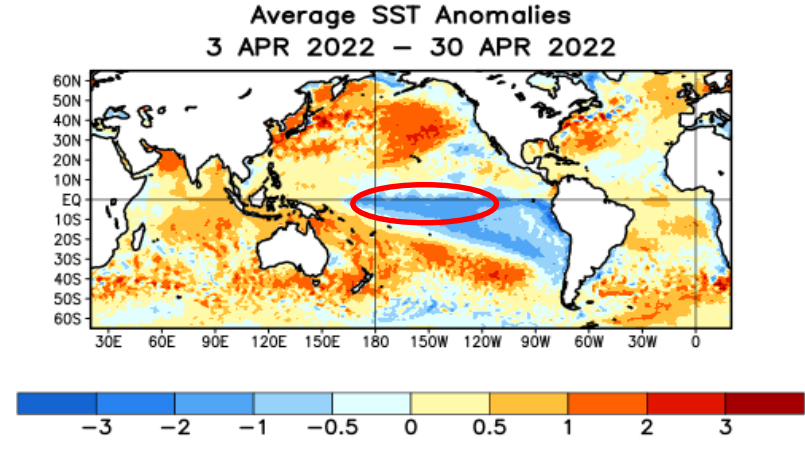
O. P. Sreejith

Op.Sreejith@imd.gov.in

RCC,IMD, Pune

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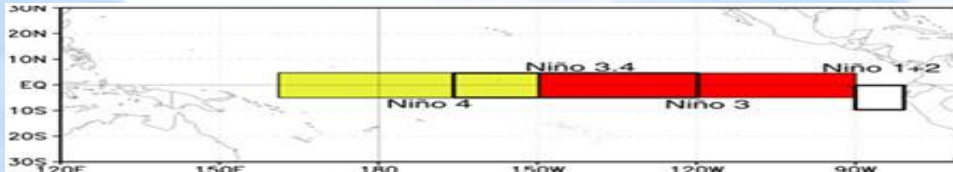
Latest Global SST Departures (°C) and ENSO Conditions over Pacific



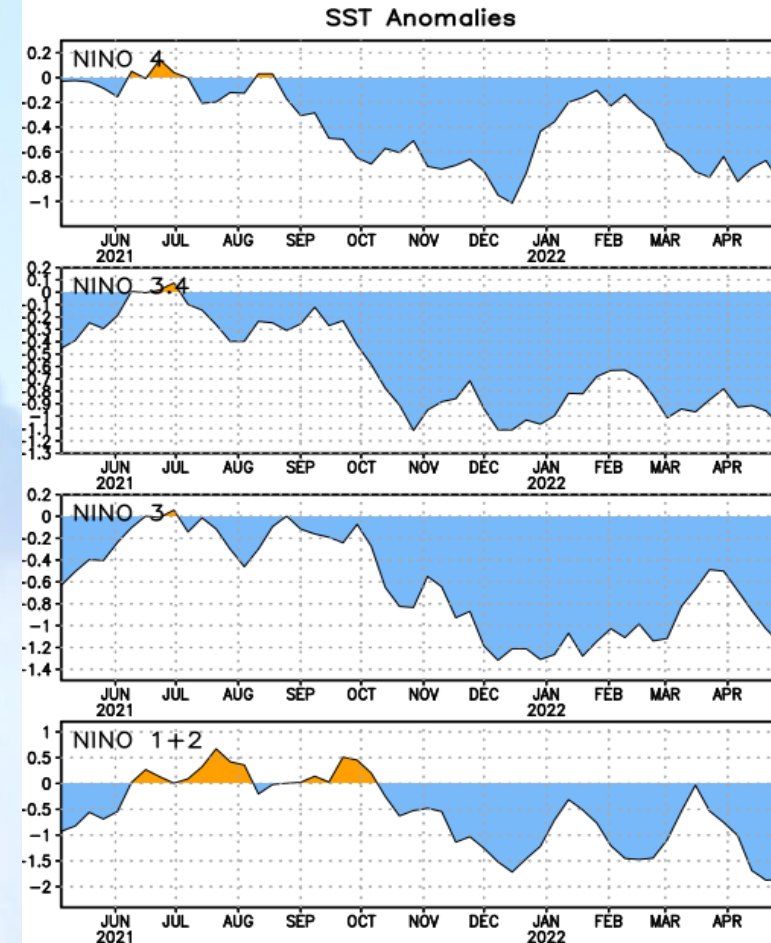
The latest weekly SST departures are:

Niño 4	-0.8°C
Niño 3.4	-1.1°C
Niño 3	-1.2°C
Niño 1+2	-1.9°C

Data source
CPC, USA



Recent evolution of NINO SSTs



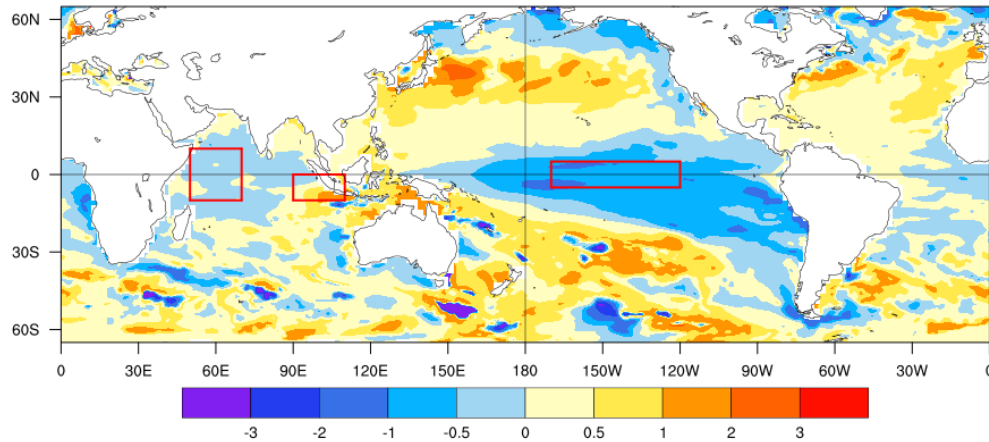
Data source
CPC, USA

Equatorial SSTs were below average across most of the Pacific Ocean and the far eastern Atlantic Ocean. Equatorial SSTs were above average near Indonesia, the eastern Indian Ocean, and the central Atlantic Ocean.



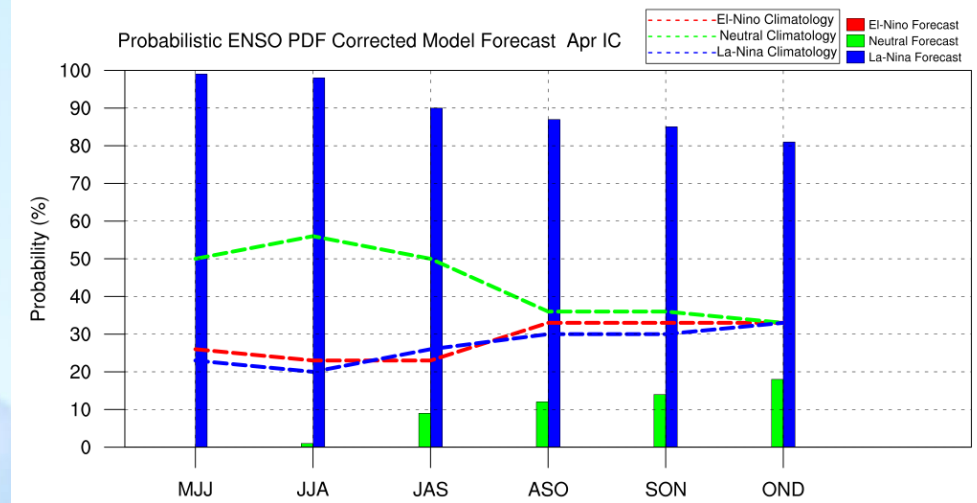
ENSO Forecast - MMCFS: Apr IC

MMCFS SST Anomaly Forecast for JJAS Season : Apr 2022 IC
JJAS 2022

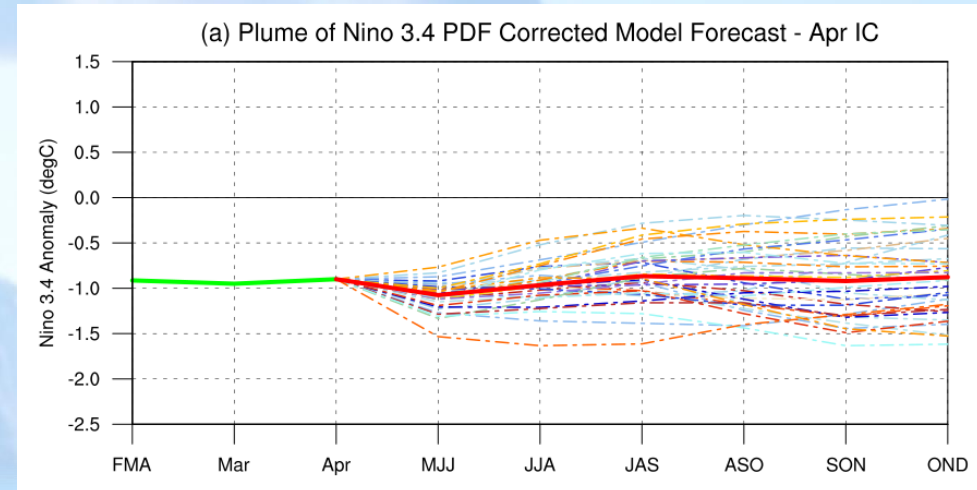


MMCFS forecast indicates La Niña conditions likely to continue during 2022 monsoon season.

Probability of Nino 3.4 PDF Corrected Model Forecast – Apr IC



Plume of Nino 3.4 PDF Corrected Model Forecast – Apr IC



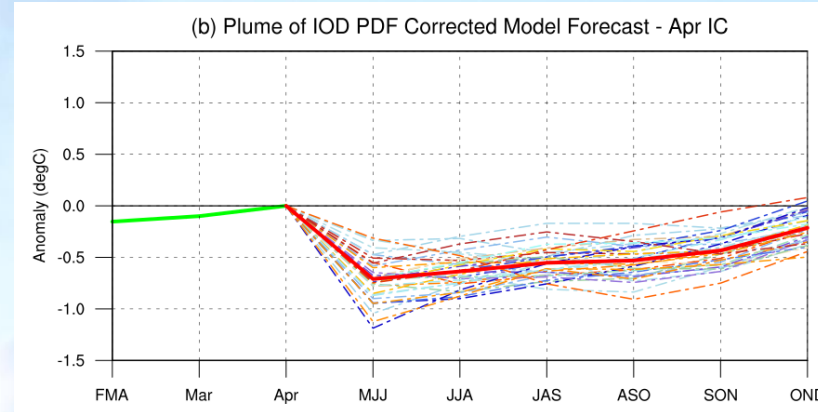
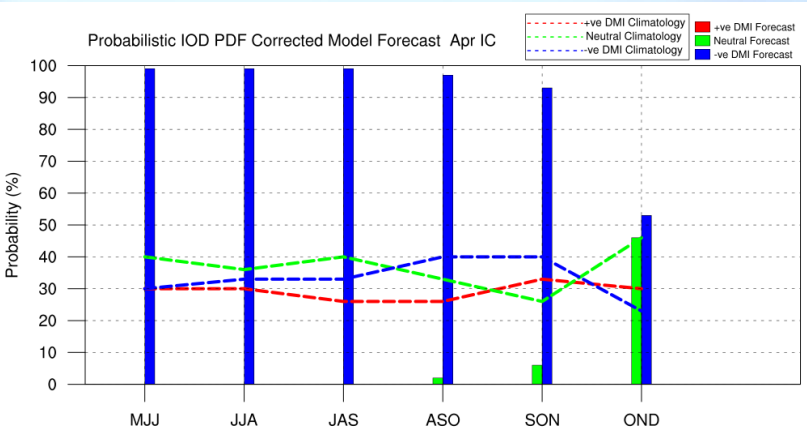
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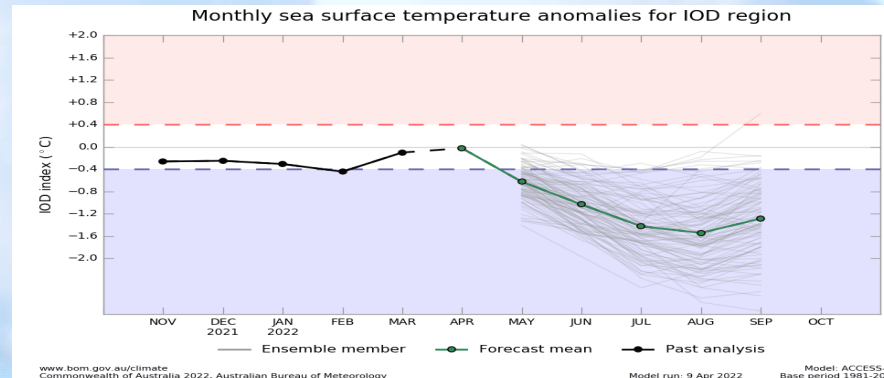
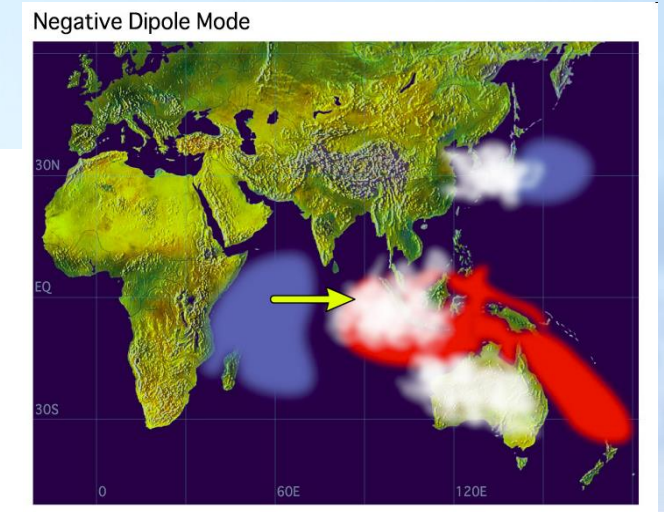
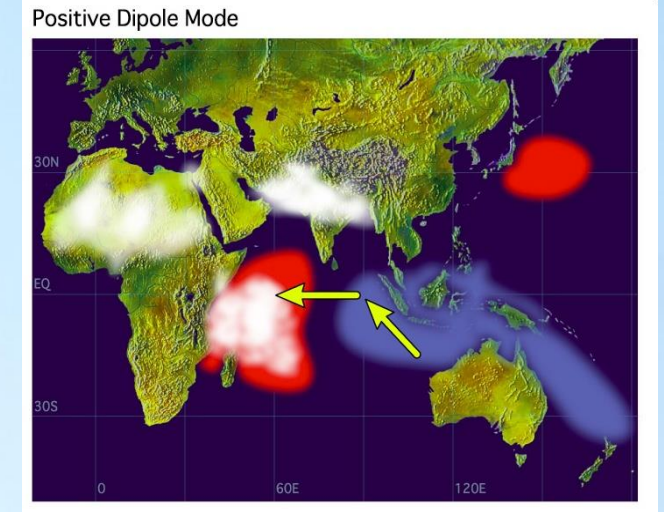


Indian Ocean Dipole: 2022

MMCFS Forecast: April IC



Neutral IOD conditions are observed over Indian Ocean and the latest MMCFS forecast indicates Negative IOD condition are likely to develop during Monsoon season.



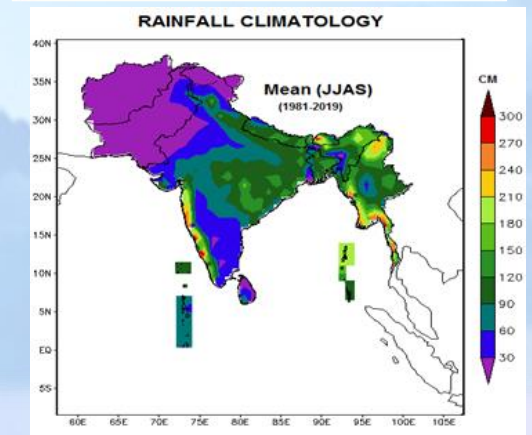
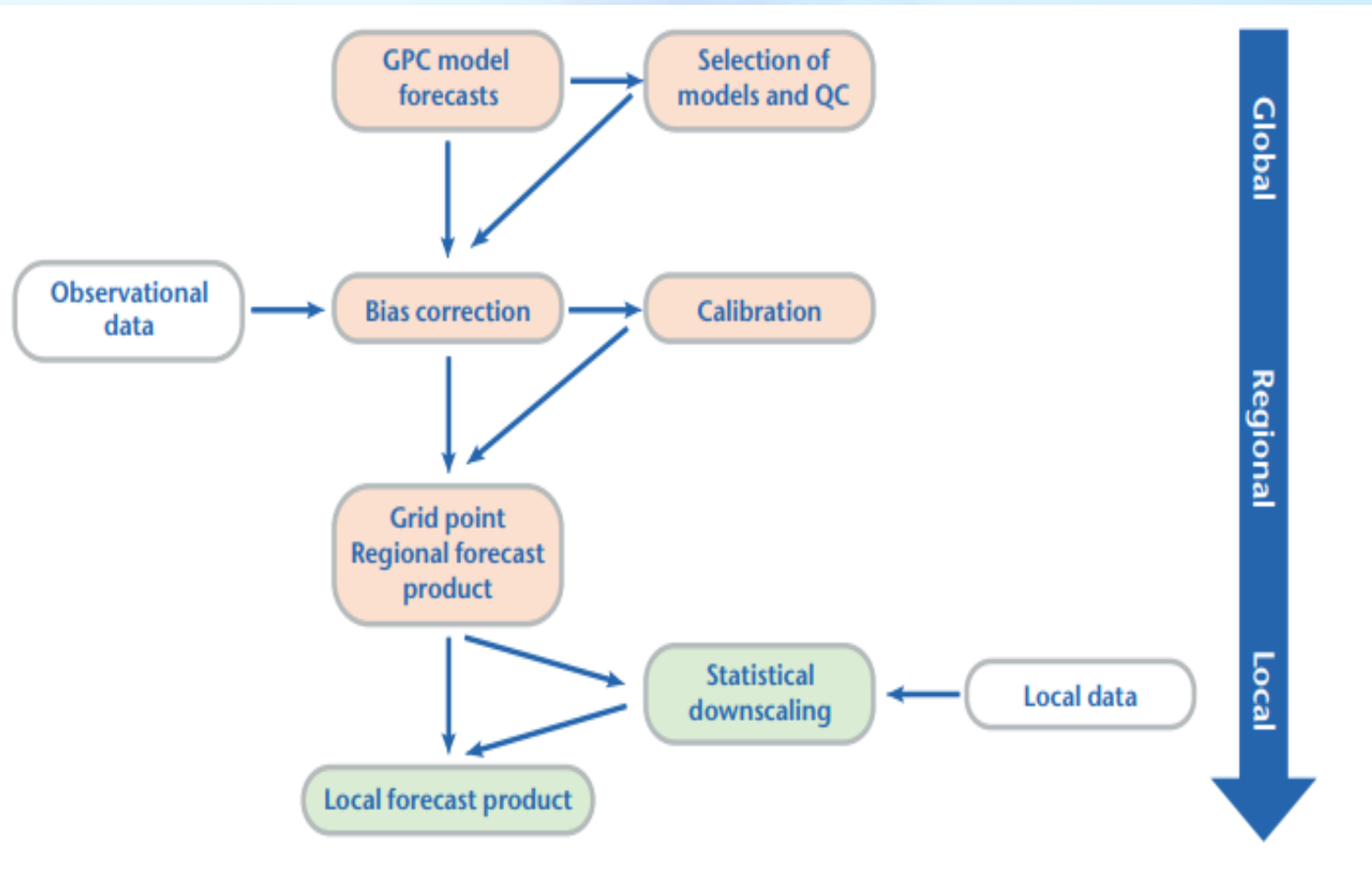
Bureau of Meteorology, Australia forecast indicates Negative IOD conditions are likely to develop during the monsoon season



Implementation of objective forecast approach

WMO Guideline for objective seasonal forecast procedure.

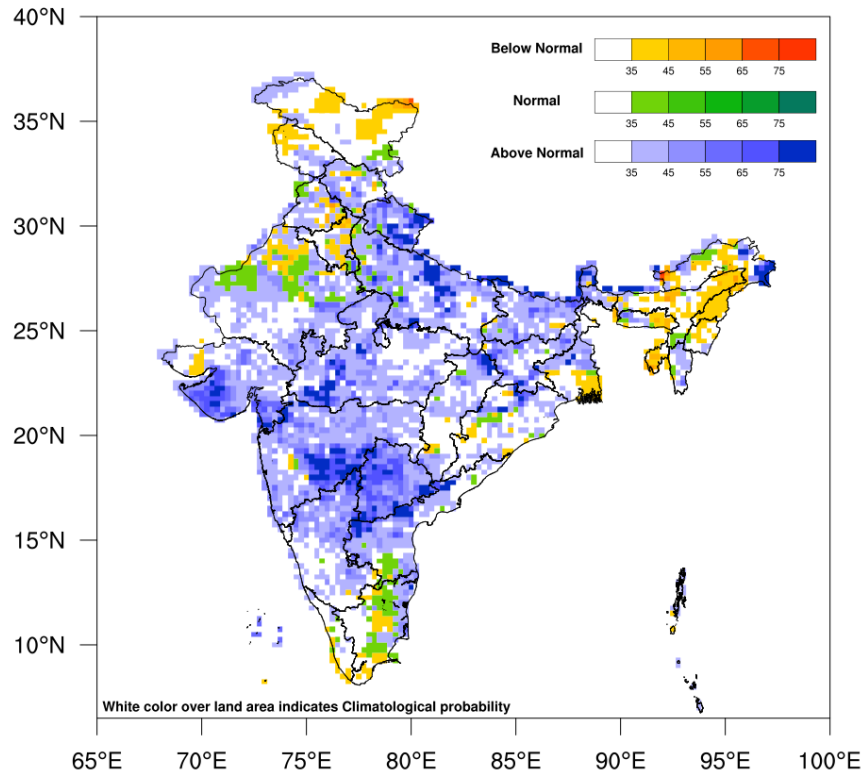
Gridded Data Set for South Asia



Probability forecast for the seasonal rainfall over India: 2022 SW monsoon season

issued on 14th April 2022

Tercile probability rainfall forecast for 2022 southwest monsoon season



The MME forecast also suggests that the monsoon rainfall during the 2022 monsoon season (June to September) averaged over the country as a whole is likely to be normal (96-104% of LPA). The LPA of the June to September period rainfall over the country as a whole for the period 1971-2020 is 87cm.

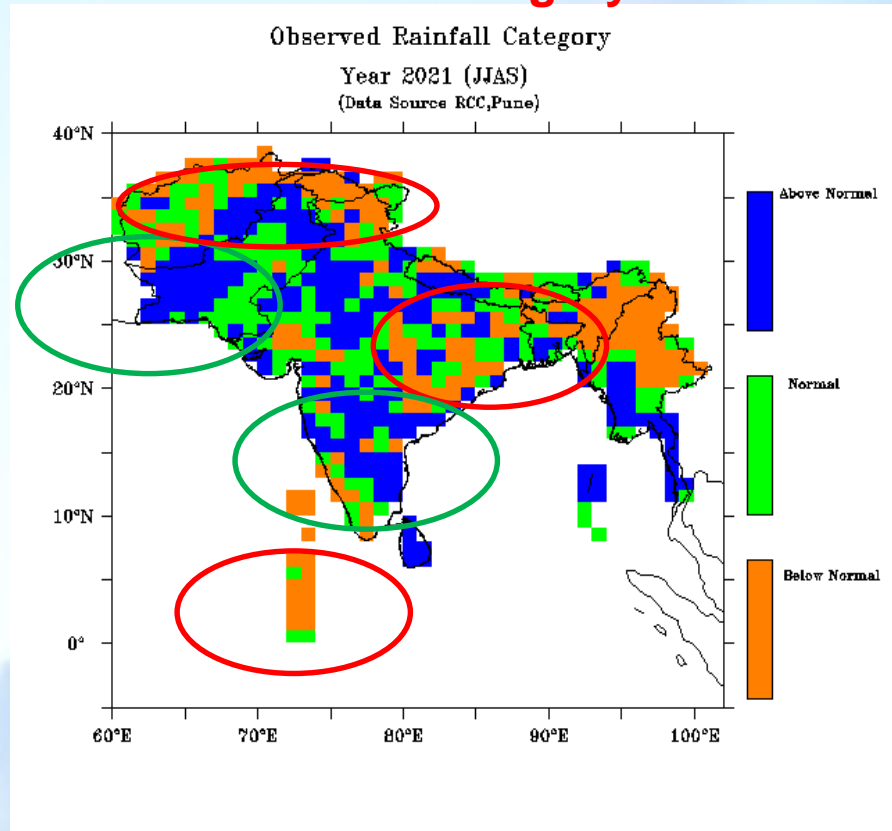
The spatial distribution suggests normal to above normal seasonal rainfall is most likely over many areas of northern parts of peninsular India and adjoining central India, over foothills of the Himalayas and some parts of northwest India. Normal to below normal rainfall is likely over some areas of Northeast India, north India and southern parts of the South Peninsula. The white shaded areas within the land area represent climatological probabilities

The figure illustrates the most likely categories as well as their probabilities. The white shaded areas represent climatological probabilities. The probabilities were derived using the MME forecast prepared from a group of coupled climate models having good skill over the Indian monsoon region. (*Tercile categories have equal climatological probabilities, of 33.33% each).



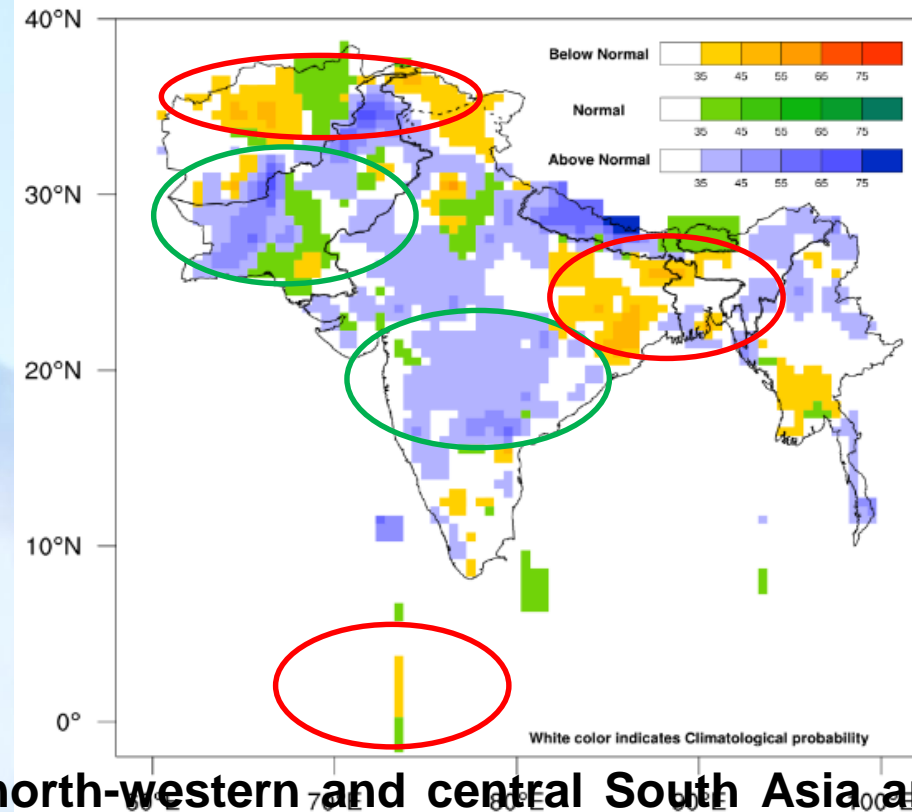
Verification SASCOF Outlook 2021

Observed Rainfall Category JJAS 2021



SASCOF-19 Rainfall Outlook JJAS 2021

Tercile probability rainfall forecast for 2021 southwest monsoon season



Above normal rainfall was observed over the parts of north-western and central South Asia and foothills of Himalaya matched well with forecast. The below normal rainfall observed over north, northwest, and central-east parts of South Asia also matched well with the forecast. However, there were differences between the observed and forecasted rainfall patterns over the northeast regions of South Asia, where above normal rainfall was forecasted.

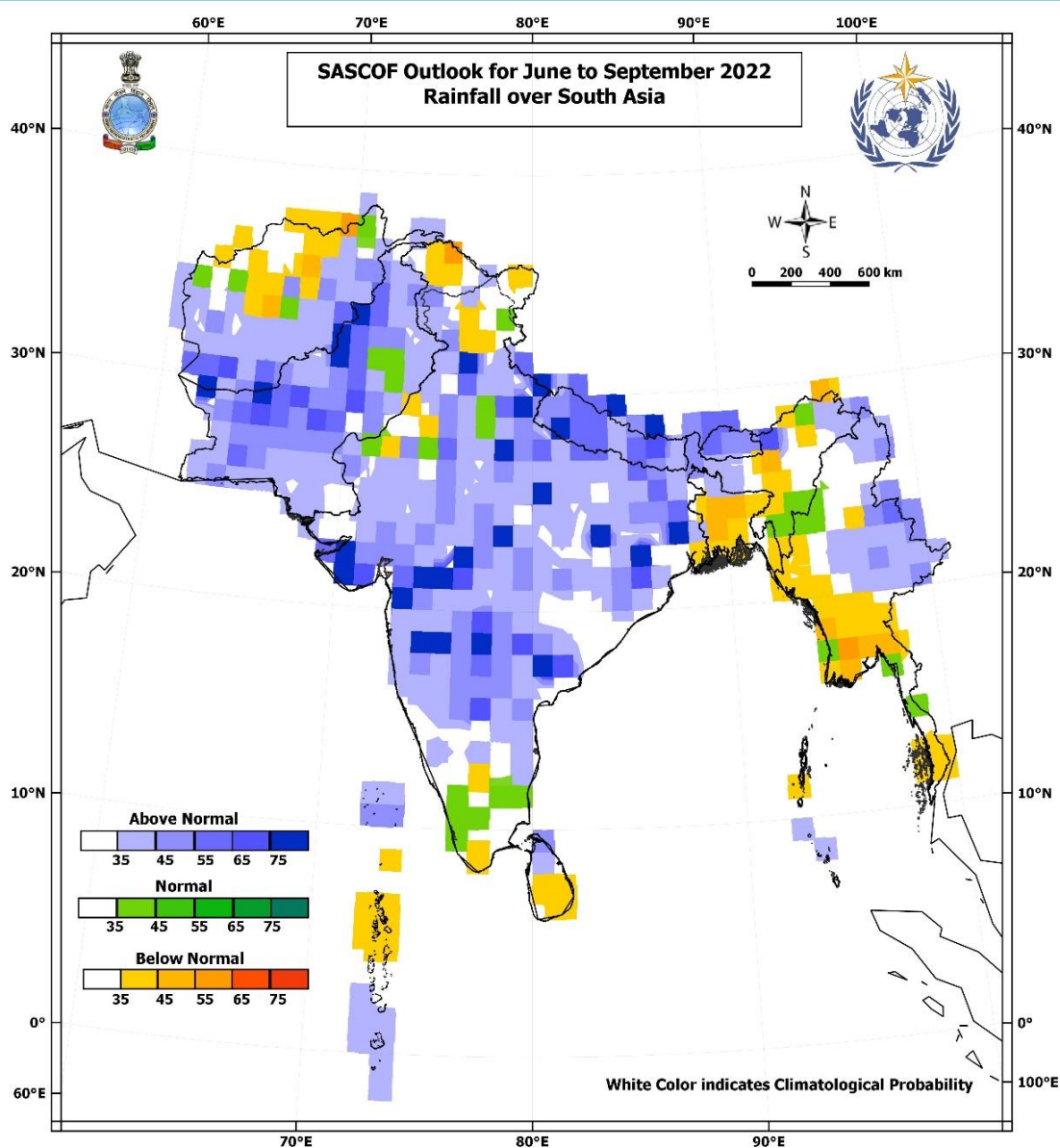


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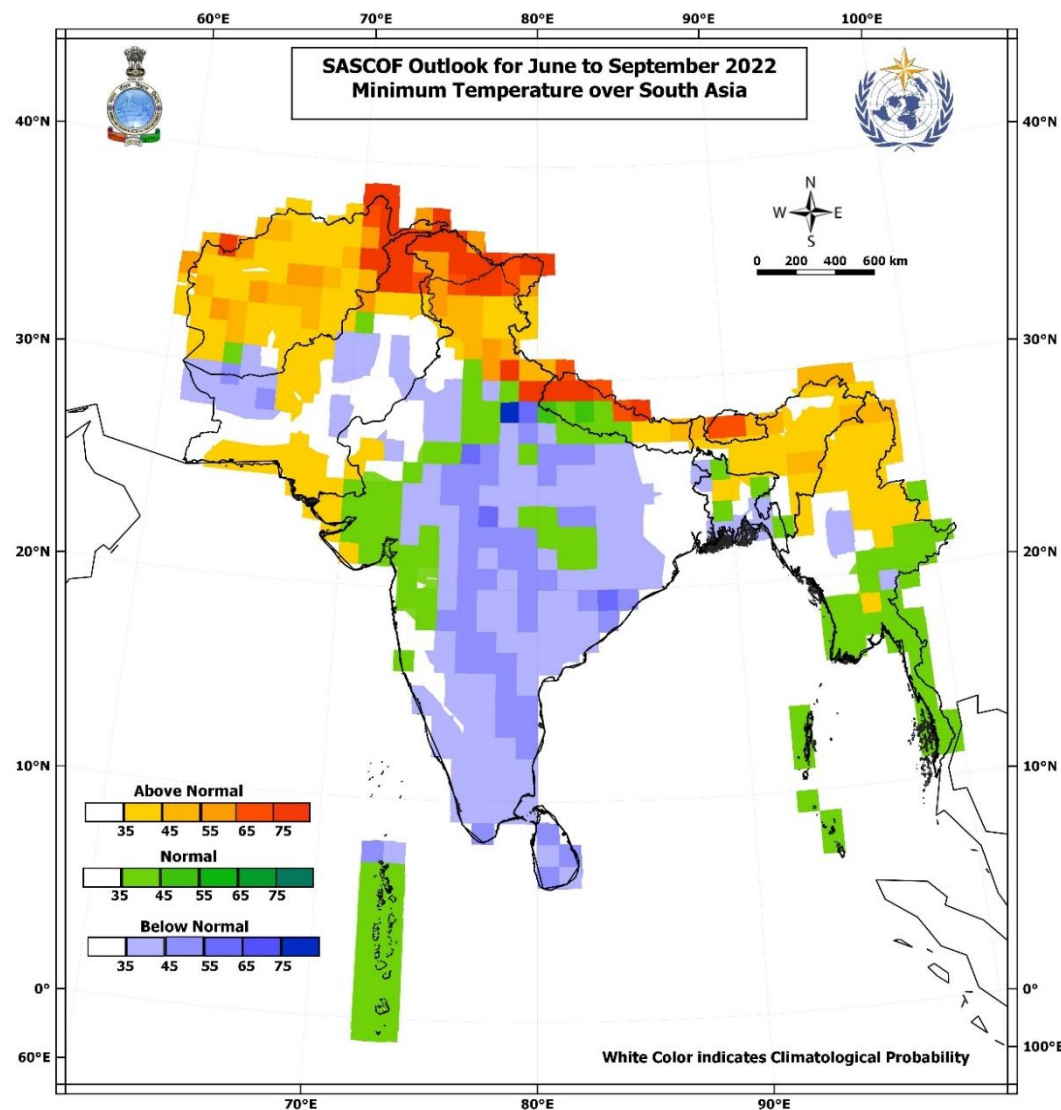
SASCOF Consensus outlook for Rainfall for the Southwest Monsoon Season (June to September) 2022 (released on 27th April 2022)



Normal to above normal rainfall is most likely during the 2022 southwest monsoon season (June – September) over most parts of the South Asia. Geographically, above-normal rainfall is most likely along the foot hills of Himalayas, many areas of northwestern and central parts of the region, and some areas of east and southern parts of the region. However, below normal rainfall is most likely over some areas of extreme north, northwest, and south, and southeastern parts of the region. The seasonal rainfall is most likely to be normal or of climatological probabilities over the remaining areas of the region.



Consensus outlook for Minimum Temperature for the Southwest Monsoon Season (June to September) 2022



During the season above normal minimum temperatures are likely over many areas along foothills of Himalayas, northern, northwestern and northeastern parts of the South Asia. Below normal to normal minimum temperatures are most likely over most areas of central, southern and southeastern part of South Asia. The seasonal minimum temperatures have climatological probabilities over remaining parts of the region.

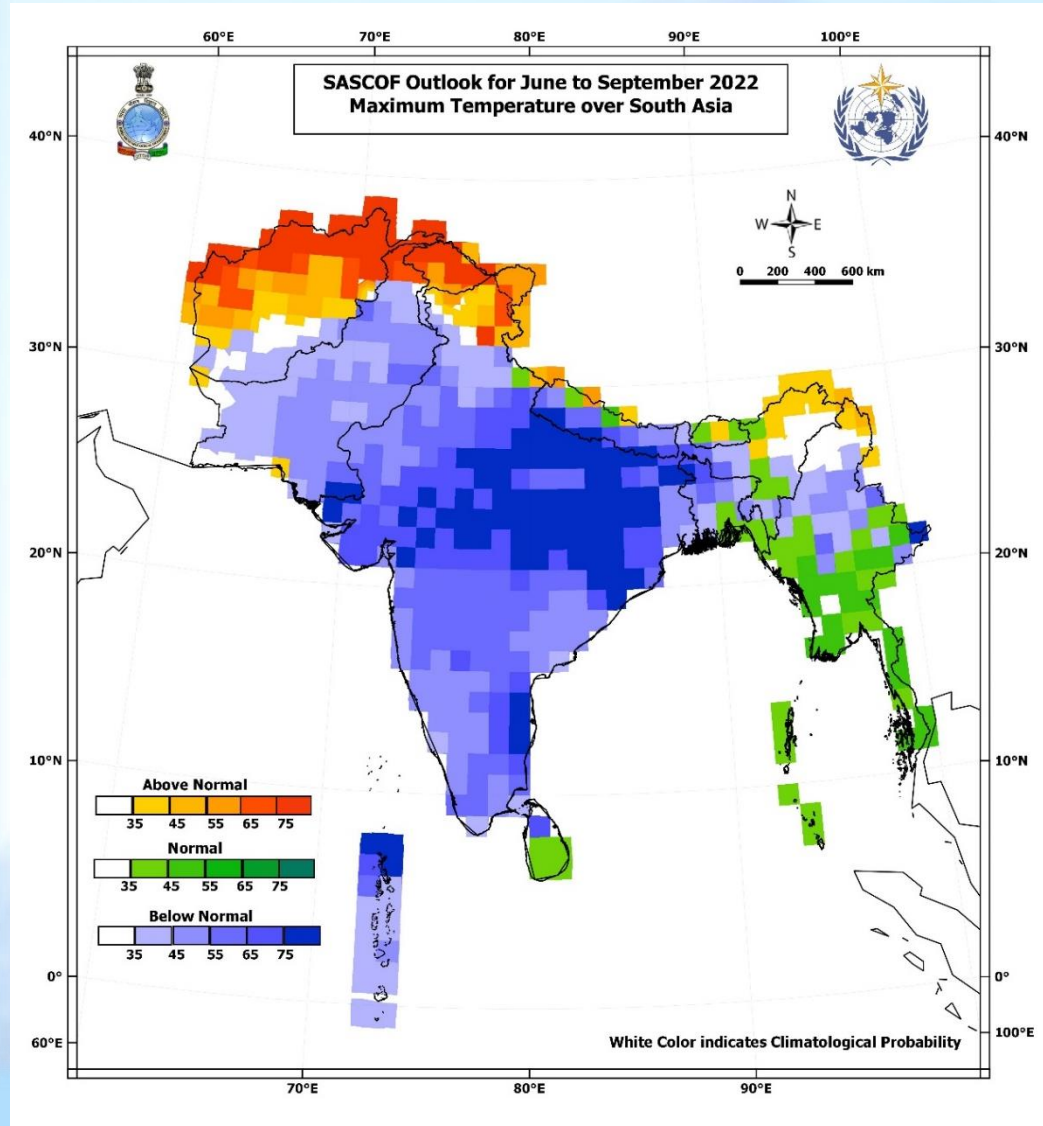


5-May-22

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Consensus outlook for Maximum Temperature for the Southwest Monsoon Season (June to September) 2022



The seasonal maximum temperatures are most likely to be normal to below normal over most parts of the region except over extreme northwest and some areas of northern and northeastern parts of the region. Maximum temperatures have climatological probabilities over remaining parts of the region.



5-May-22

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Summary

Southwest Monsoon Season Rainfall: Normal to above normal rainfall is most likely during the 2022 southwest monsoon season (June – September) over most parts of the South Asia. Geographically, above-normal rainfall is most likely along the foot hills of Himalayas, many areas of northwestern and central parts of the region, and some areas of east and southern parts of the region. However, below normal rainfall is most likely over some areas of extreme north, northwest, and south, and southeastern parts of the region. The seasonal rainfall is most likely to be normal or of climatological probabilities over the remaining areas of the region.

Minimum Temperature: During the season, above normal minimum temperatures are likely over many areas along foothills of Himalayas, northern, northwestern and northeastern parts of the South Asia. Below normal to normal minimum temperatures are most likely over most areas of central, southern and southeastern part of South Asia.

Maximum Temperature: The seasonal minimum temperatures have climatological probabilities over remaining parts of the region. The seasonal maximum temperatures are most likely to be normal to below normal over most parts of the region except over extreme northwest and some areas of northern and northeastern parts of the region. Maximum temperatures have climatological probabilities over remaining parts of the region.



5-May-22

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Summary

This regional climate outlook for the 2022 southwest monsoon season over South Asia has been collaboratively developed by all nine National Meteorological and Hydrological Services (NMHSs) of South Asia with the support from international experts at the 22nd session of the South Asian Climate Outlook Forum (SASCOF-22) conducted online. The process involved an expert assessment of the prevailing global climate conditions and forecasts from different climate models from around the world.

The moderate La Niña conditions that prevailed over the Pacific since September remained at same strength in March/April 2022. Based on the global climate model forecasts, there is strong consensus among experts that the La Niña conditions are likely to prevail during the southwest monsoon season.

It is recognized that the global climate model predictions prior to and during the spring season generally have noticeable uncertainty due to spring barrier in the seasonal predictability. It is also recognized that other regional and global factors as well as the intra-seasonal features of the region can also affect the seasonal climate patterns over the region.

For more information and further updates on the southwest monsoon outlook on national scale, the respective National Meteorological and Hydrological Services (NMHSs) may be consulted.



5-May-22

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Consensus outlook for Rainfall for the Southwest Monsoon Season (June to September)

<http://rcc.imdpune.gov.in/Products.html>

Regional Climate Centre (RA II Region)
India Meteorological Department, Pune

WMO

Home Monitoring Prediction Climate Projection ERF for South Asia Climate of South Asia Regional Products Data Download **SASCOF**

SASCOF-22

Announcement

Consensus Statement

SASCOF-21

SASCOF-20

SASCOF-19

SASCOF-18

SASCOF-17

SASCOF-16

SASCOF-15

SASCOF-14

SASCOF-13

SASCOF-12

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WMO RIMES Met Office ARRCC UKaid

22nd Session of South Asian Climate Outlook Forum (SASCOF-22) for the Summer Season and Climate Services User Forum (CSUF)

April 26-28, 2022
(to be held online due to CoViD-19 pandemic)

Concept Note

Background:

South Asia is home to about one fourth of the world's population and occupies only 3% of the global land area, making it the most densely populated geographical region in the world. Predominantly, the weather and climate of South Asia is prevailed by the Southwest monsoon. Almost 70-80% of the total annual rainfall in most parts of the region occurs during the monsoon season (June–September) and the monsoon can have great socioeconomic impacts of this region. Seasonal to inter-annual variability of monsoon rainfall, both in amount and



5-May-22





Thank you



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