Government of India
Earth System Science Organization
Ministry of Earth Sciences
India Meteorological Department

Press: Dated: 8 June, 2023

Subject: Current Weather Status and Extended range Forecast for next two weeks (8-21 June 2023)

1. Salient Observed Features for week ending on 7 June 2023

- **Further Advance of Southwest Monsoon:** Southwest Monsoon has further advanced into some parts of South Arabian Sea and Maldives & Comorin area and some more parts of South Bay of Bengal and Eastcentral Bay of Bengal on 1st June 2023; it has further advanced into some more parts of South Arabian Sea, some parts of Lakshadweep area, most parts of Maldives area some more parts of Comorin area and some more parts of South Bay of Bengal and East-central Bay of Bengal on 2nd June 2023.
- The Northern Limit of Southwest Monsoon passed through Lat.7°N/Long.65°E, Lat.6.5°N/Long.70°E, Lat.6°N/ Long.75°E, Lat.6°N/Long.81°E, Lat.8°N/Long.85°E, Lat.10°N/ Long.88°E, Lat.14°N/ Long.92°E and Lat.19°N/ Long.95°E on 1st June 2023; it passed through Lat.10°N/ Long.65°E, Lat.9°N/ Long.70°E, Minicoy, Lat.7°N/ Long.81°E, Lat.11°N/ Long.87°E, Lat.14°N/ Long.90°E, Lat.17°N/ Long.93°E and Lat.19°N/ Long.95°E on 2nd June 2023 and remained the same till the end of the week.
- **Very Severe cyclonic storm "Biparjoy" (pronounced as "Biporjoy") over Arabian Sea:** A Low Pressure Area has formed over Southeast Arabian Sea in the evening of 5th June 2023; it became more marked and concentrated into a Depression over the same region in the early morning hours of 6th and lay centered at a distance of about 920 km west-southwest of Goa, 1120 km south-southwest of Mumbai and 1160 km south of Porbandar; moving nearly northwards, it intensified into a Deep Depression around noon of the same day over Southeast and adjoining Eastcentral Arabian Sea and lay

centred at a distance of about 930 km west-southwest of Goa, 1060 km southwest of Mumbai and 1150 km south-southwest of Porbandar; moving nearly northwards further, it intensified into a Cyclonic Storm "Biparjoy" (pronounced as "Biporjoy") in the evening of the same day and lay centered over Eastcentral and adjoining Southeast Arabian Sea at a distance of about 920 km west-southwest of Goa, 1050 km southwest of Mumbai, 1130 km south-southwest of Porbandar and 1430 km south of Karachi; continuing to move nearly northwards, it further intensified into a Severe Cyclonic Storm in the early morning hours of 7th and lay centered over Eastcentral and adjoining Southeast Arabian Sea at a distance of about 890 km west-southwest of Goa, 1000 km southwest of Mumbai, 1070 km south-southwest of Porbandar and 1370 km south of Karachi; then moving nearly north-northeastwards, it lay over Eastcentral and adjoining Southeast Arabian Sea, at a distance of about 880 km west-southwest of Goa, 990 km southwest of Mumbai, 1060 km south-southwest of Porbandar and 1360 km south of Karachi in the forenoon of the same day; moving nearly north-northeastwards further, it intensified into a Very Severe Cyclonic Storm around noon and lay over Eastcentral and adjoining Southeast Arabian Sea, about 860 km west-southwest of Goa, 970 km southwest of Mumbai, 1050 km south-southwest of Porbandar and 1350 km south of Karachi; moving nearly northwards initially and then nearly north-northwestwards it lay over Eastcentral Arabian Sea at a distance of about 870 km west-southwest of Goa, 930 km southwest of Mumbai, 970 km south-southwest of Porbandar and 1260 km south of Karachi around midnight of the same day; even though the Low pressure system had undergone rapid intensification from its genesis stage and attained the intensity of Very Severe Cyclonic Storm within forty eight hours, it had not caused any adverse weather over Indian region till 7 June , as it had been away from Indian coast; however, under the influence of the system in the close vicinity, Lakshadweep islands had received fairly widespread to widespread rainfall/thunderstorm activity on two days towards the end of the week.

- Due to dry westerly and absence of thunderstorms and rainfall activities, Heat Wave to Severe Heat Wave conditions prevailed in some parts of Bihar; in some parts of Gangetic West Bengal and in isolated pockets over Sub-Himalayan West Bengal & Sikkim during 31 May-7 June 2023. Heat Wave conditions also observed in isolated pockets over Coastal Andhra Pradesh and Telangana on 7 June.
- **No heat wave was observed over north and central India during the week and it was again due to movement of 2 active Western Disturbances(1-5 June and 3-7 June) across north India,** which had caused fairly widespread to widespread rainfall/thunderstorm activity over Western Himalayan Region on two to three days along with isolated to scattered rainfall/thunderstorm activity on the

remaining days of the week; passage of the systems along with cyclonic circulations in the lower tropospheric levels over the plains of northwest India supported by moisture incursion over to the areas had caused scattered to fairly widespread rainfall/thunderstorm activity over Punjab, Haryana, Chandigarh & Delhi and West Rajasthan on two to three days with isolated rainfall/thunderstorm activity over the same areas on the remaining days of the week whereas isolated rainfall activity had occurred over East Rajasthan on most of the days, over Madhya Pradesh and West Uttar Pradesh on many days and over East Uttar Pradesh on three to four days of the week; isolated hailstorm activity also had been reported over parts of Northwest India and adjoining areas of Madhya Pradesh on a few days of the week whereas thundersquall had been reported over Uttarakhand on a single day; isolated heavy rainfall also had been reported over Himachal Pradesh and West Madhya Pradesh on one or two days whereas isolated heavy to very heavy rainfall had been reported over Uttarakhand on a single day along with.

- The highest maximum temperature of **45.0°C** had been recorded at **Bapatla (Coastal Andhra Pradesh & Yanam)** on **3rd June 2023** and the lowest minimum temperature of **16.5°C** had been recorded at **Sikar (East Rajasthan)** on **1st June 2023** and over **Una (Himachal Pradesh)** on **3rd June 2023** over **t**he plains of the country during the week.
- **Analysis of Weekly overall Rainfall distribution during the week ending on 7 June 2023 and monsoon Season's Rainfall Scenario (1 -7 June 2023):** It shows for the country as a whole, both the weekly and seasonal cumulative All India Rainfall in % departure from its long period average (LPA) till 7 June 2023 was -57%, over south Peninsula as -63%, central India as -71% and northwest India had +69 %. Details of the rainfall distribution over the four broad geographical regions of India are given in Table 1 and Meteorological sub-division-wise rainfall both for week and season are given in Annex II and III respectively.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	01.06.2023 TO 07.06.2023			01.06.2023 TO 07.06.2023		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	9.2	55.9	-84%	9.2	55.9	-84%
NORTH-	15	8.9	+69%	15	8.9	+69%

WEST INDIA						
CENTRAL INDIA	4.6	16.1	-71%	4.6	16.1	-71%
SOUTH PENINSULA	11.4	30.6	-63%	11.4	30.6	-63%
Country as a whole	9.9	23.1	-57%	9.9	23.1	-57%

2. Large scale features

- Currently, ENSO-neutral conditions prevailing over the equatorial Pacific region. Also, neutral IOD conditions are present over the Indian Ocean and the latest MMCFS forecast indicates that the neutral IOD conditions are likely to continue during the remaining period of the pre-monsoon season.
- The Madden Julian Oscillation (MJO) Index is currently in Phase 2 with amplitude less than 1. Thereafter, it would move across phase 2 and 3 during week 1 and 4 and 5 during week 2, Hence, MJO is likely to support strongly further the enhancement of current convective activity over both the the Bay of Bengal (BoB) and Arabian Sea (AS) during both week 1 and 2.

3. Forecast for next two week

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (08 to 14 June, 2023) and Week 2 (15 to 21 June, 2023)

Forecast for week 1 (08 to 14 June, 2023):

Advance of southwest monsoon:

- The Southwest Monsoon has advanced into remaining parts of south Arabian Sea and some parts of central Arabian Sea, entire Lakshadweep area, most parts of Kerala, most parts of south Tamil Nadu, remaining parts of Comorin area, Gulf of Mannar and some more parts of southwest, central and northeast Bay of Bengal today, the 08th June 2023. **Thus, Southwest Monsoon has set in over Kerala today, the 08th June, 2023 against the normal date of 01st June**.
- During past 24 hours, clouding has increased over Southeast Arabian sea with

Outgoing Long wave Radiation(OLR) being <200 w/m2. The depth of westerlies over Southeast Arabian sea extends upto mid tropospheric levels. The strength of Westerlies in the lower levels has increased to about 19 knots. Thus, there has been widespread rainfall over Kerala during past 24 hours. Considering all the above satisfied conditions, Southwest Monsoon has set in over Kerala today, the 08th June, 2023.

- ❖ The Northern Limit of Monsoon (NLM) now passes through lat. 13.5°N/ Long. 55°E, lat. 14.0°N/ Long. 60°E, lat. 13.5°N/ Long. 65°E, lat. 13°N/ Long. 70°E, Cannur, Kodaikanal, Adirampattinam, lat. 12.0°N/ Long. 83.0°E, 16.0°N/88.0°E, 18.5°N/90.0°E, 22.0°N/93.0°E. (**Annexure I**).
- ❖ Conditions are favourable for further advance of Southwest monsoon into some more parts of central Arabian Sea, remaining parts of Kerala, some more parts of Tamil Nadu, some parts of Karnataka and some more parts of southwest, Central and northeast Bay of Bengal and some parts of northeastern states during next 48 hours.

Very Severe Cyclonic Storm "Biparjoy" (pronounced as "Biporjoy") over eastcentral Arabian Sea

A **very severe cyclonic storm "Biparjoy"** (pronounced as "Biporjoy") lay centered at 1430 hours IST of today, the 08th June, 2023 over eastcentral Arabian Sea near latitude 14.3°N and longitude 66.0°E, about 850 km west of Goa, 890 km southwest of Mumbai, 900 km south-southwest of Porbandar and 1180 km south of Karachi.

It would intensify further gradually during next 18 hours and move nearly north-northwestwards during next 3 days.

(i) Wind warning:

8th June: Gale wind speed reaching 135-145 kmph gusting to 160 kmph is prevailing over eastcentral Arabian Sea and adjoining areas of westcentral Arabian Sea. It is likely to increase and become 145-155 kmph gusting to 170 kmph over the same area from night of 8th June over the same area. Gale wind speed reaching 90-100 kmph gusting to 110 kmph is likely to prevail over the adjoining areas of south Arabian Sea.

Squally weather with wind speed reaching 35-45 kmph gusting to 55 kmph is likely along & off Karnataka-Goa-Maharashtra coasts.

9th June: Gale wind speed reaching 145-155 kmph gusting to 170 kmph is likely to prevail over central Arabian Sea.

Squally wind speed reaching 50-60 kmph gusting to 70 kmph is likely over adjoining areas of South Arabian Sea. Squally weather with wind speed reaching 35-45 kmph gusting to 55 kmph is likely along & off Karnataka-Goa-Maharashtra coasts.

10th June: Gale wind speed reaching 145-155 kmph gusting to 170 kmph is likely to prevail over central Arabian Sea.

Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely over adjoining areas of north & south Arabian Sea. Squally weather with wind speed reaching 35-45 kmph gusting to 55 kmph is likely along & off Goa-Maharashtra coasts.

11th June: Gale wind speed reaching 135-145 kmph gusting to 160 kmph is likely to prevail over central & adjoining north Arabian Sea.

Squally weather with wind speed reaching 35-45 kmph gusting to 55 kmph is likely along & off Maharashtra-Gujarat coasts.

12th June: Gale wind speed reaching 125-135 kmph gusting to 150 kmph is likely to prevail over central & adjoining north Arabian Sea and become 120-130 kmph gusting to 145 kmph from evening of 12th June.

Squally weather with wind speed reaching 35-45 kmph gusting to 55 kmph is likely along & off Maharashtra-Gujarat coasts.

13th June: Gale wind speed reaching 115-125 kmph gusting to 140 kmph is likely to prevail over north & adjoining central Arabian Sea.

Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely along & off Maharashtra-Gujarat coasts.

(iii) Sea condition

8th June: Sea condition is likely to be phenomenal over eastcentral & and adjoining westecnetral Arabian Sea. Very rough to high sea condition is likely to prevail over the adjoining areas of south Arabian Sea. Sea condition is likely to be rough along & off Karnataka-Goa-Maharashtra coasts.

9th June: Sea condition is likely to be phenomenal over central Arabian Sea. Very rough to rough sea condition is likely to prevail over the adjoining areas of south Arabian Sea. Sea condition is likely to be rough along & off Karnataka-Goa- Maharashtra coasts.

10th June: Sea condition is likely to be phenomenal over central Arabian Sea. Sea condition is likely to be rough to very rough over adjoining areas of north Arabian Sea and rough along & off Goa- Maharashtra coasts.

11th June & 12th June: Sea condition is likely to be phenomenal to very high over central & adjoining north Arabian Sea. Sea condition is likely to be rough along & off Maharashtra-Gujarat coasts.

13th June: Sea condition is likely to be phenomenal to very high over north & adjoining central Arabian Sea. Sea condition is likely to be rough to very rough along & off Maharashtra-Gujarat coasts.

(iv) Fishermen Warning (Graphics Attached)

- Total suspension of fishing operations over
  - eastcentral and adjoining westcentral & south Arabian Sea till 12th June.
  - north and adjoining central Arabian Sea during 12th -14th June
- Fishermen are advised not to venture into:
  - Central Arabian Sea till 13th June.
  - Adjoining areas of north Arabian Sea during 12th -14th June.
- Those out at sea are advised to return to coast.

Other Significant Meteorological features

- A Western Disturbance lies over Uttarakhand at middle tropospheric levels.
- A cyclonic circulation lies over north Coastal Andhra Pradesh & neighbourhood at middle tropospheric levels.

Forecast and warning over the country during the week:

South India:

- Light/moderate fairly widespread rainfall with thunderstorm/lightning/gusty winds very

likely over Kerala, Lakshadweep, Coastal & South Interior Karnataka; isolated to scattered activity over North Interior Karnataka, Tamil Nadu and Andhra Pradesh during the week.

❖ **Very Heavy rainfall** very likely at isolated places over Kerala on 08th; **Heavy rainfall** at isolated places over Andaman & Nicobar Islands during 08th-10th; Kerala during 08th-12th; Lakshadweep during 09th-11th; and Coastal & South Interior Karnataka during 10th-12th June.

Northeast India:

❖ Light/moderate scattered to fairly widespread rainfall with thunderstorm/lightning very likely over the region during the week. **Very Heavy rainfall** very likely at isolated places over Manipur, Mizoram & Tripura on 09th and Assam & Meghalaya on 12th; isolated **heavy rainfall** over Arunachal Pradesh and Assam & Meghalaya during 09th-14th; Nagaland, Manipur, Mizoram & Tripura during 08th-14th June.

Northwest India:

❖ Light/moderate isolated to scattered rainfall with thunderstorm/lightning very likely over Western Himalayan Region& adjoining plains during 2nd half of the week.

No significant weather is likely over rest parts of the country during the week.

Rainfall for week 2 (15 to 21 June, 2023):

✓ Light to moderate scattered/fairly widespread rainfall/thunderstorm is likely over along west coast and rest parts of south Peninsular India during most days of the week. Isolated heavy rainfall is also likely over above areas during some days of the week.

✓ Light to moderate scattered/fairly widespread rainfall/thunderstorm is likely over east & northeast India during the week. Isolated heavy rainfall is also likely over northeast India during many days of the week.

✓ Isolated to scattered rainfall/thundershower is also likely over many parts of northwest India during days of the week.

✓ **Overall, rainfall activity is likely to be above normal over northeast & southeast Peninsular India; near normal over northeast India and many parts of northwest India and below normal over rest parts of the country.**

✓ **Monsoon likely to further advance over more parts of Arabian Sea, Peninsular India and Most parts of Bay of Bengal and eastern parts of India during week 2**

Maximum Temperatures and its forecast during Week 1 (08 to 14 June, 2023) and Week 2 (15 to 21 June, 2023):

Maximum Temperature Forecast and Heat Wave Warnings for week 1 (08 to 14 June, 2023):

✓ Yesterday, **Maximum Temperatures** were in the range of 40-42°C over parts of Vidarbha, Chhattisgarh, East India, Andhra Pradesh and Telangana. **Maximum temperatures** are **above normal** by 3-5°C over parts of Northeast India, Bihar and West Bengal**.**

✓ Yesterday, **Heat Wave to Severe Heat Wave** conditions prevailed in some parts of Bihar; **Heat Wave conditions** in some parts of Gangetic West Bengal and in isolated pockets over Sub-Himalayan West Bengal & Sikkim. This was 08th day of **Heat Wave conditions** over the above areas. **Heat Wave conditions** also observed in isolated pockets over Coastal Andhra Pradesh and Telangana.

✓ **Rise in maximum temperatures** by 2°C very likely over plains of Northwest India (except Rajasthan) during 1st half of the week and no significant change thereafter.

✓ **Heat wave to severe heat wave conditions** very likely to continue in some pockets over Bihar during 08th to 11th June and **heat wave** in isolated pockets on 12th June.

✓ **Heat wave conditions** very likely to continue in isolated pockets over West Uttar Pradesh during 09th-11th; over East Uttar Pradesh during 08th-11th; over Jharkhand & Gangetic West Bengal 08th-11th; over Sub-Himalayan West Bengal & Sikkim and Odisha during 08th-10th June.

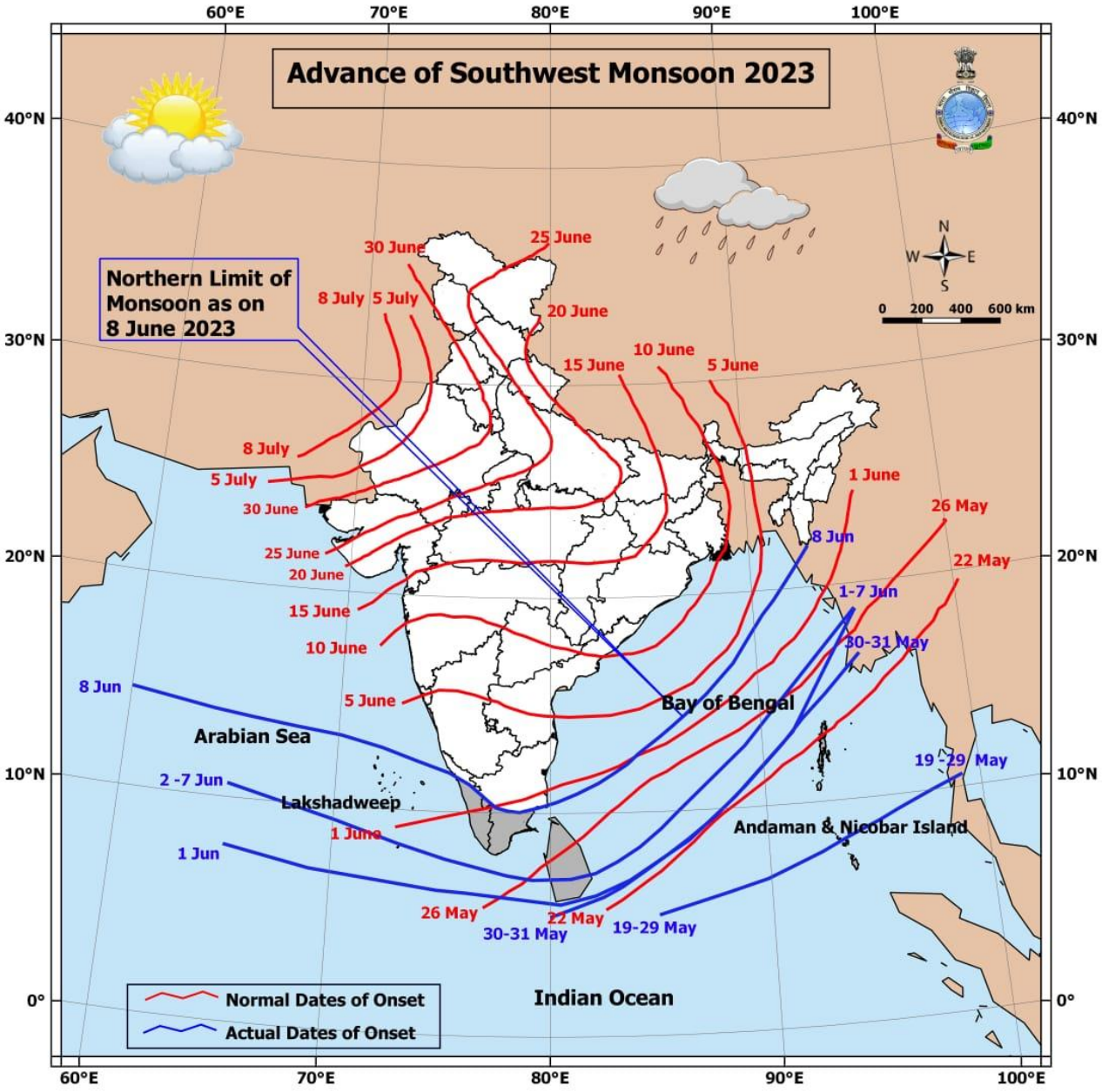
Maximum Temperature for week 2 (15 to 21 June, 2023):

- Maximum temperatures likely to be above normal by 2-4°C over east & north Peninsular India. It is below normal to near normal over rest parts of the country.
- **Heat wave conditions likely to occur over isolated pockets over East & north**

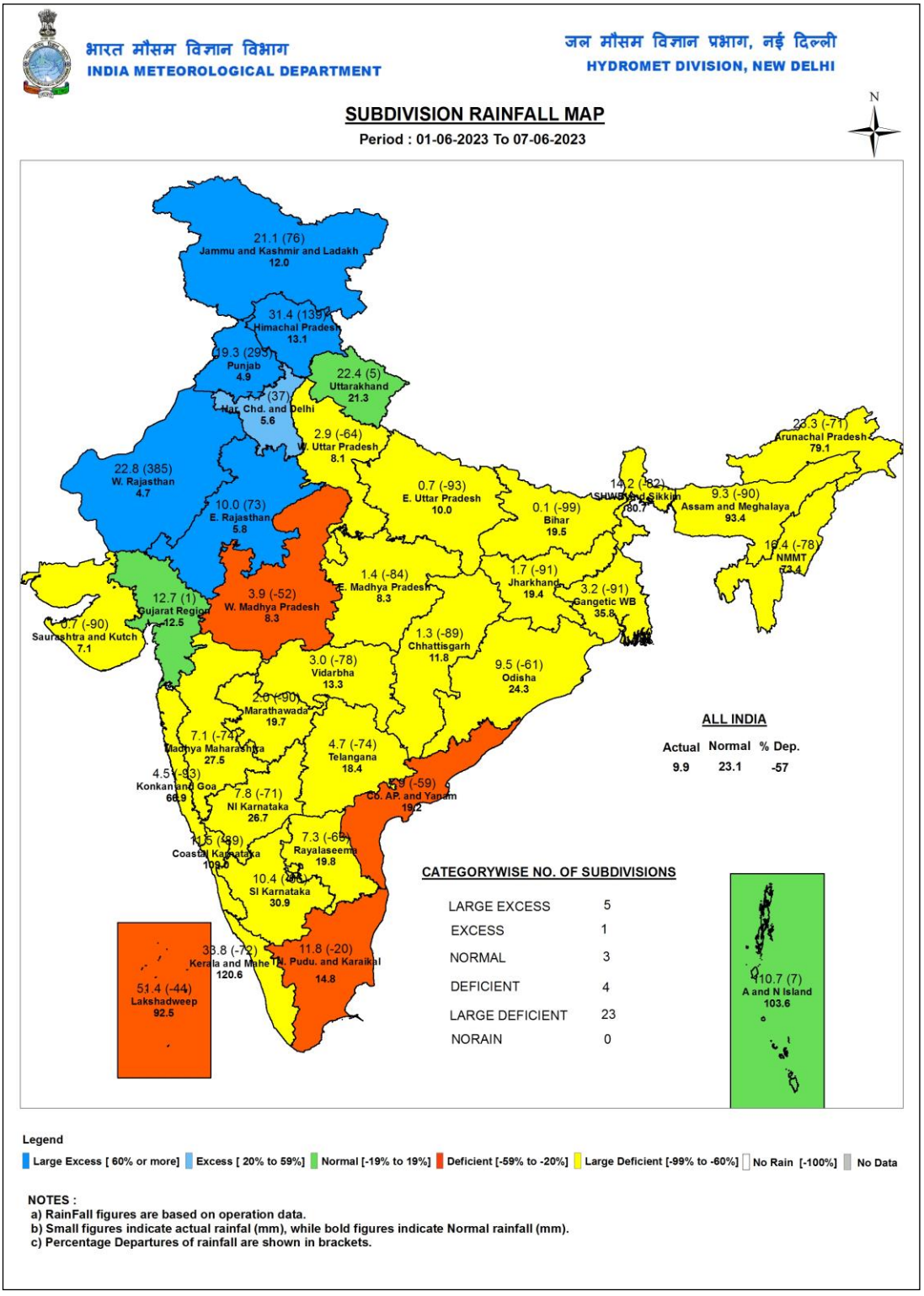
Peninsular India during some days of the week.

Legends: **Heavy Rain:** 64.5 to 115.5 mm **Very Heavy Rain:** 115.6 to 204.4 mm, **Extremely Heavy Rain**> 204.4 mm

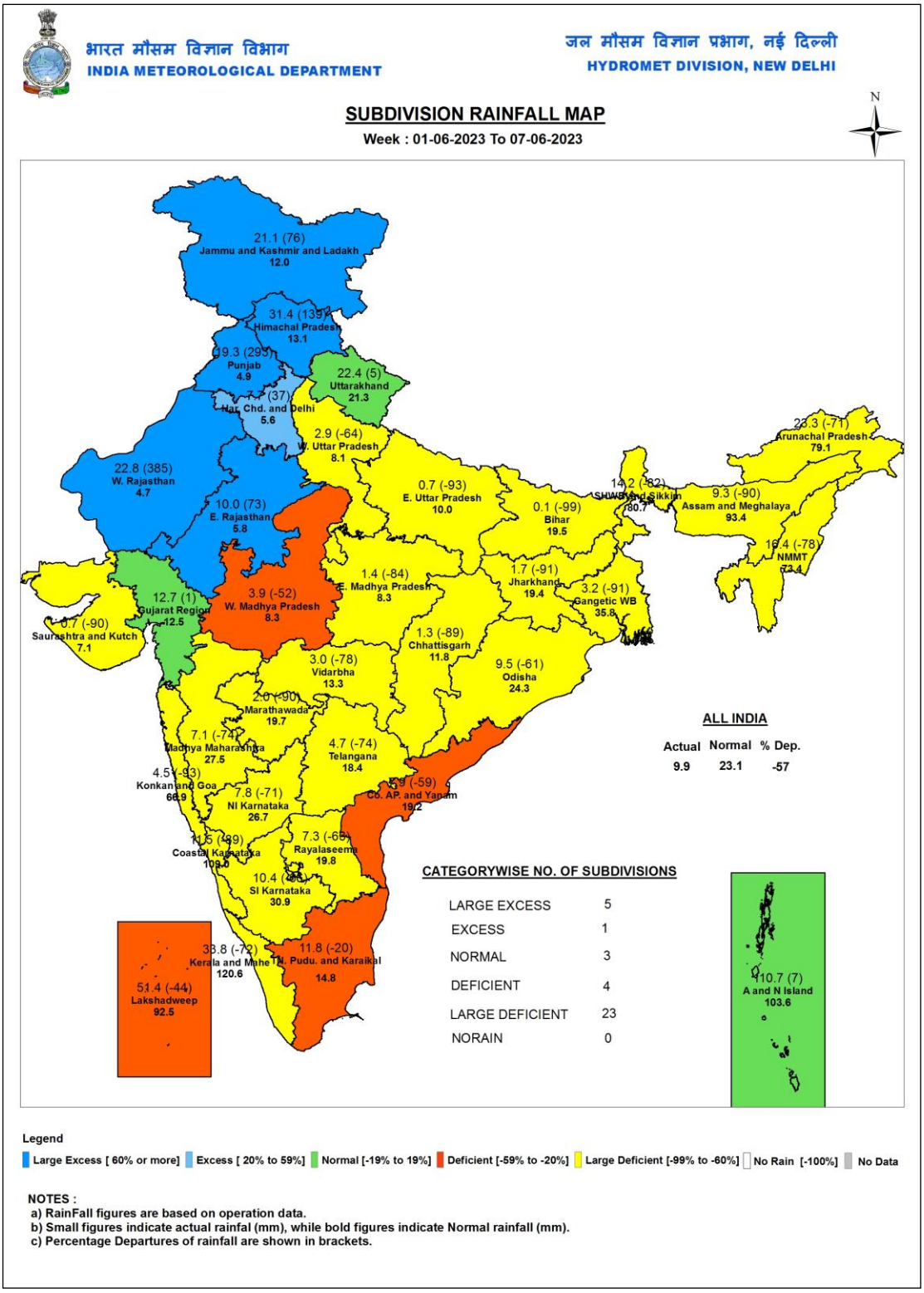
Annex: I



Annex II



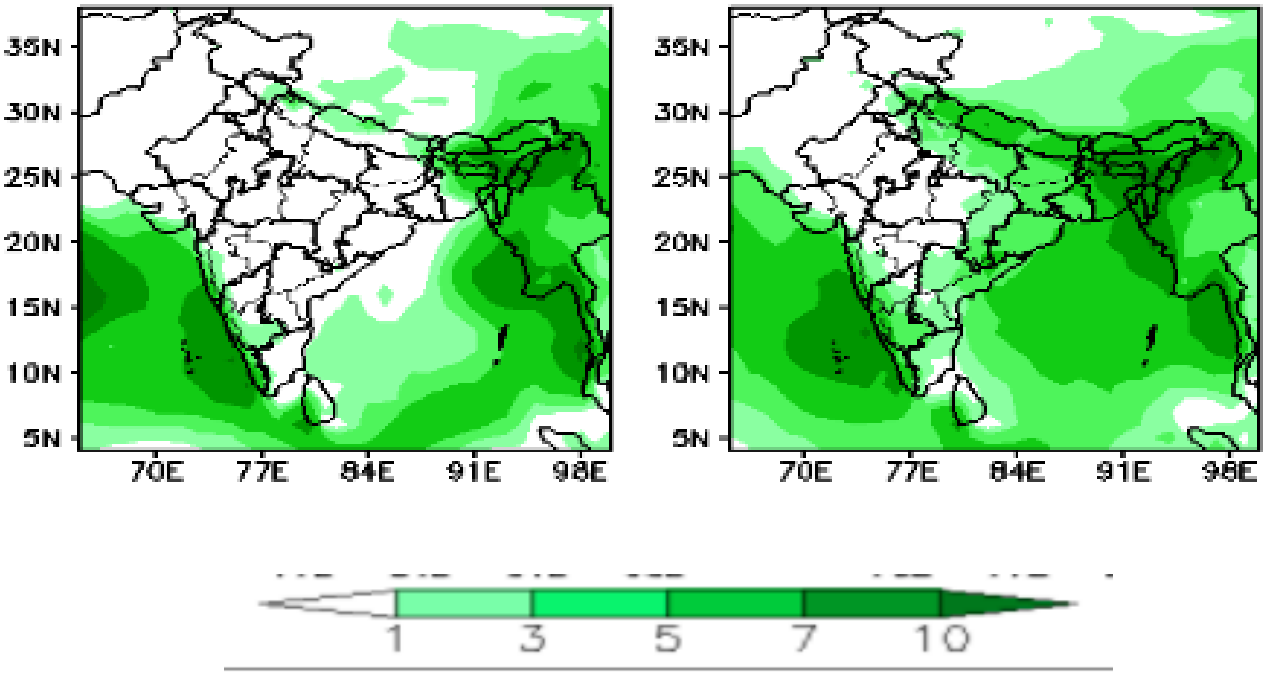
Annex III


भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT
जल मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI
SUBDIVISION RAINFALL MAP
Week : 01-06-2023 To 07-06-2023
N
21.1 (76)
Jammu and Kashmir and Ladakh
12.0
31.4 (139)
Himachal Pradesh
13.1
99.3 (295)
Punjab
4.9
22.4 (5)
Uttarakhand
21.3
7 (37)
Har. Chd. and Delhi
5.6
2.9 (-64)
W. Uttar Pradesh
8.1
22.8 (385)
W. Rajasthan
4.7
10.0 (73)
E. Rajasthan
5.8
0.7 (-93)
E. Uttar Pradesh
10.0
0.1 (-99)
Bihar
19.5
14.2 (-82)
Sikkim
80.7
9.3 (-90)
Assam and Meghalaya
93.4
28.3 (-71)
Arunachal Pradesh
79.1
16.4 (-78)
NMMT
73.4
1.4 (-84)
E. Madhya Pradesh
8.3
1.7 (-91)
Jharkhand
19.4
3.2 (-91)
Gangetic WB
35.8
12.7 (1)
Gujarat Region
12.5
3.9 (-52)
W. Madhya Pradesh
8.3
0.7 (-90)
Saurashtra and Kutch
7.1
1.3 (-89)
Chhattisgarh
11.8
9.5 (-61)
Odisha
24.3
3.0 (-78)
Vidarbha
13.3
2.0 (-90)
Marathawada
19.7
7.1 (-74)
Madhya Maharashtra
27.5
4.7 (-74)
Telangana
18.4
4.5 (-93)
Konkan and Goa
66.9
7.8 (-71)
NI Karnataka
26.7
4.9 (-59)
Co. AP. and Yanam
19.2
7.3 (-68)
Rayalaseema
19.8
10.4 (-66)
SI Karnataka
30.9
33.8 (-72)
Kerala and Mahe
120.6
11.8 (-20)
TN. Pudu. and Karaikal
14.8
51.4 (-44)
Lakshadweep
92.5
10.7 (7)
A and N Island
103.6
ALL INDIA
Actual Normal % Dep.
9.9 23.1 -57
CATEGORYWISE NO. OF SUBDIVISIONS
LARGE EXCESS 5
EXCESS 1
NORMAL 3
DEFICIENT 4
LARGE DEFICIENT 23
NORAIN 0
Legend
Large Excess [60% or more]
Excess [20% to 59%]
Normal [-19% to 19%]
Deficient [-59% to -20%]
Large Deficient [-99% to -60%]
No Rain [-100%]
No Data
NOTES :
a) RainFall figures are based on operation data.
b) Small figures indicate actual rainfal (mm), while bold figures indicate Normal rainfall (mm).
c) Percentage Departures of rainfall are shown in brackets.

Annexure IV

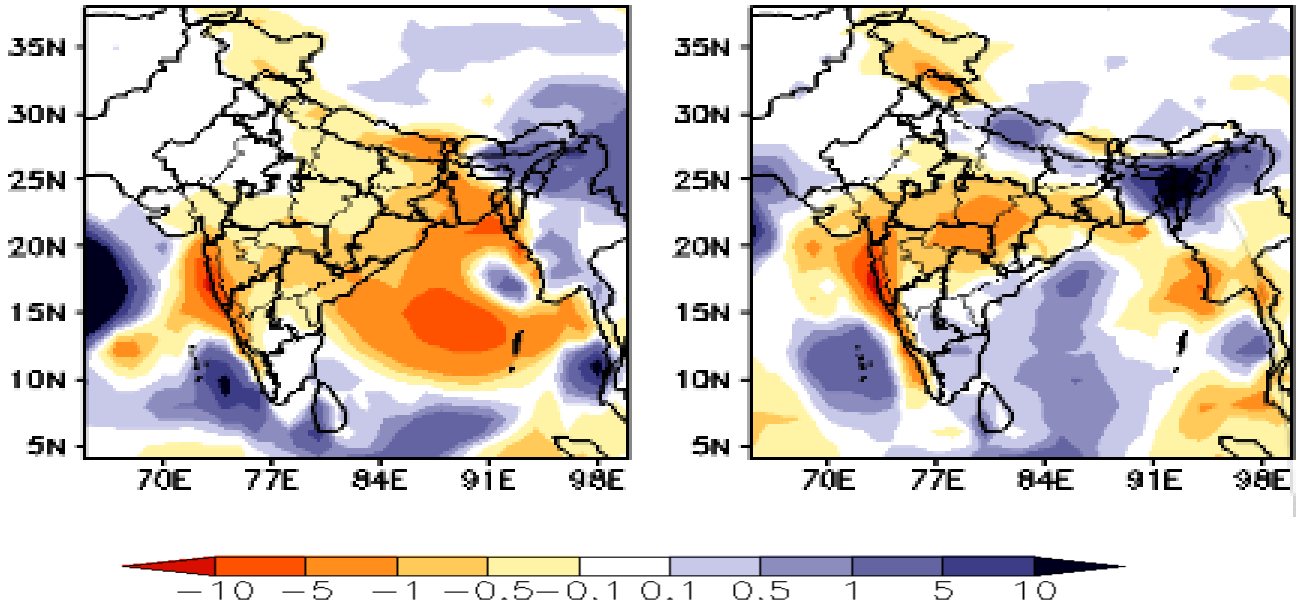
Forecast Rainfall (mm/day)

(Week1: 09Jun–15Jun) (Week2: 16Jun–22Jun)

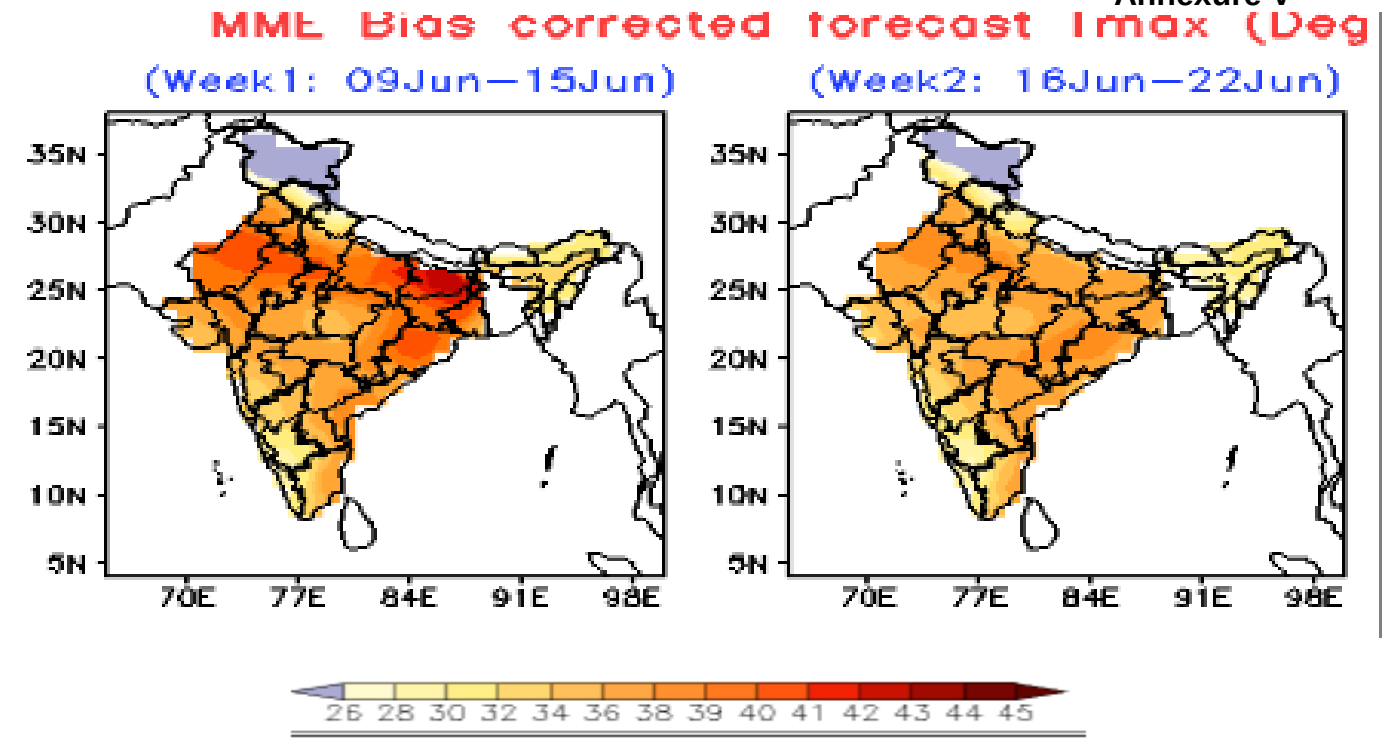


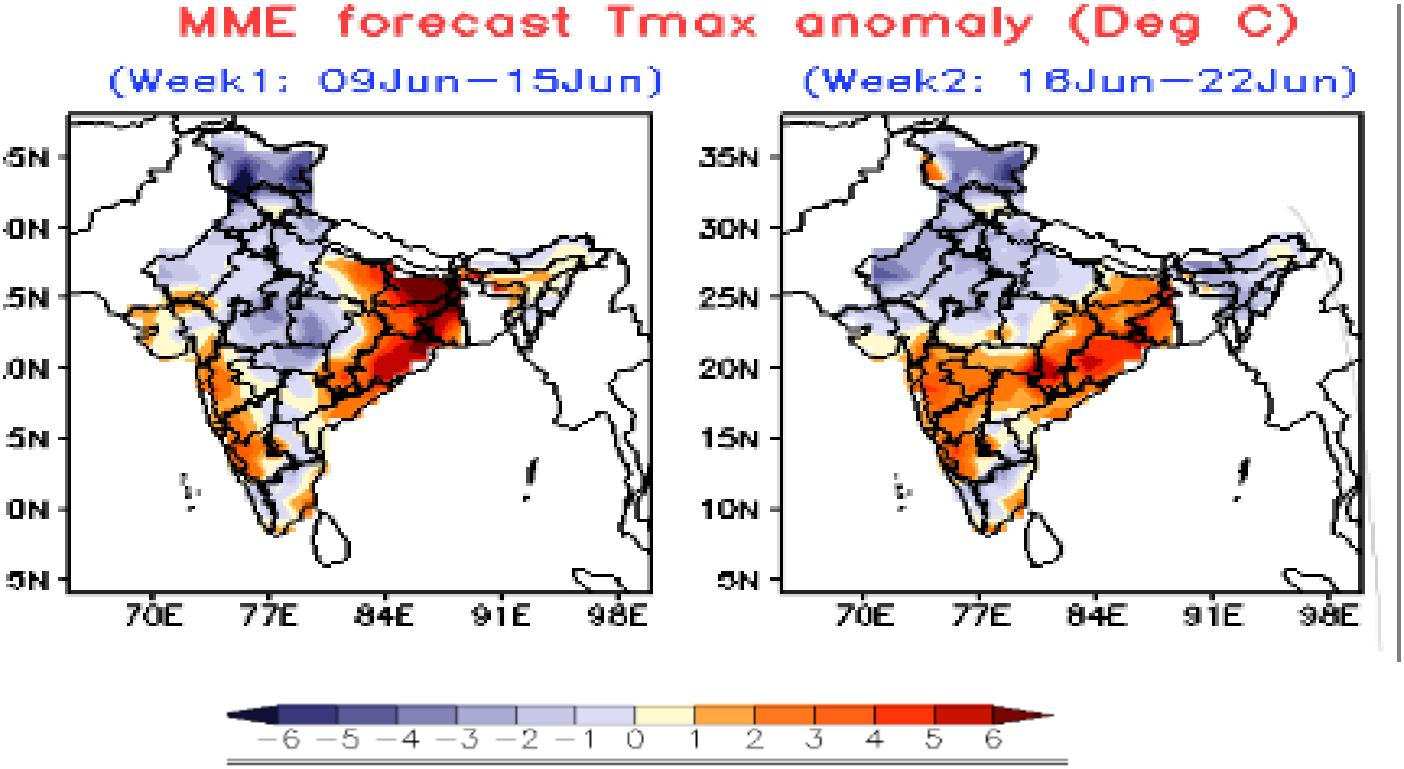
Forecast Rainfall Anomaly (mm/day)

(Week1: 09Jun–15Jun) (Week2: 16Jun–22Jun)



Annexure V


MME Bias corrected forecast Tmax (Deg
(Week1: 09Jun–15Jun)
(Week2: 16Jun–22Jun)
35N
30N
25N
20N
15N
10N
5N
70E
77E
84E
91E
98E
26 28 30 32 34 36 38 39 40 41 42 43 44 45


MME forecast Tmax anomaly (Deg C)
(Week1: 09Jun–15Jun)
(Week2: 16Jun–22Jun)
35N
30N
25N
20N
15N
10N
5N
70E
77E
84E
91E
98E
−6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6