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

Dated: 5th August, 2021

Subject: Current Weather Status and Extended range Forecast for next two weeks (5-18 August 2021)

1. Salient Features

- Prolonged Spell of persistent very heavy to extremely heavy rainfall event was observed for 5-6 days over east Rajasthan and West Madhya Pradesh during 29 July-4 Aug 2021 causing large-scale flooding over these areas. The rainfall was mainly caused by both Arabian Sea and Bay of Bengal monsoonal winds at lower and middle levels in association with west-ward movement of a well-marked low pressure area which lay over Jharkhand on 30th and moved over to northwest Madhya Pradesh during 2nd to 4th August.
- Subdued rainfall activity over southern Peninsular India, Maharashtra and Gujarat during the week due to weak pressure gradient and absence of off-shore trough along West coast of India.
- Weekly cumulative rainfall departure for the country as a whole for the week ending on 4th Aug is 3% below its Long Period Average (LPA), while the Seasonal cumulative rainfall departure from LPA from 1 June to 4th Aug, 2021 is 2 % below the LPA. Details of the rainfall distribution over the four broad geographical regions of India are given Table 1 with met sub-divisions-wise rainfall both for week and season given in Annex 1.

- **Forecast for next 2 weeks based on NWP model consensus:**

a) Week 1 (5-11 Aug, 2021)

i) Expected gradual weakening of Low Pressure Area over Madhya Pradesh during 05-07 August and gradual shifting of monsoon trough to the foothills of the Himalayas by 10th August.

ii) Sub-dued rainfall activity over most parts of northwest India from today 5th August and reduced rainfall activity over Central and adjoining Peninsular India from 07th August. iii) Increase in rainfall activity along the foothills of the Himalayas and adjoining areas of northern plains and northeastern states from 10th August.

b) Week 2 (12-18 August 2021)

i)Increase in rainfall activity over Peninsular India with widespread rainfall activity and isolated heavy to very heavy falls very likely along the west coast during most of the days.

ii)Normal to above normal rainfall activity likely over south interior Peninsular & adjoining central India and northeast & adjoining East India.

iii)Sub-dued rainfall activity over northwest India likely to continue over northwest & adjoining central India.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	29.07.2021 TO 04.08.2021			01.06.2021 TO 04.08.2021		
	Actual	Normal	% Departure	Actual	Normal	% Departure
EAST & NORTH-EAST INDIA	106.0	85.2	+24%	714.6	826.1	-14%
NORTH-WEST INDIA	75.4	51.9	+45%	322.0	317.0	+2%
CENTRAL INDIA	60.1	78.1	-23%	530.3	537.1	-1%
SOUTH	13.5	48.1	-72%	449.2	404.1	+11%

PENINSULA						
country as a whole	**63.0**	**65.2**	**-3%**	**479.7**	**489.3**	**-2%**

2. Large scale features as on 5 August, 2021

- Presently, neutral ENSO conditions are seen over the equatorial Pacific along with substantially 3 warmer subsurface temperatures over the region. Atmospheric patterns also reflect neutral ENSO conditions. The latest MMCFS and other global model forecast indicate that neutral ENSO conditions will continue during the upcoming monsoon season.
- At present, neutral Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The latest forecast from the MMCFS and other global models together indicate possibility of development of negative IOD conditions during the monsoon season.
- The Index of Madden Julian Oscillation (MJO) currently lies in Phase 8 with amplitude less than 1. It is likely to traverse across Phase 1 with gradual increase in amplitude from the middle of Week 1. It would enter in Phase 2 with amplitude more than 1 from the beginning of Week 2 and further propagate eastwards towards Phase 3 during this period. Hence the Phase of MJO would support enhanced convection over the north Indian Ocean (NIO) only towards the end of Week 2.

3. Forecast for next two week

Rainfall for week 1: (05 to 11 August, 2021)

- A Low Pressure Area lies over central parts of north Madhya Pradesh & neighbourhood. The associated cyclonic circulation extends upto middle tropospheric levels. It is very likely to become less marked by tomorrow, the 06 August, 2021. However, the associated cyclonic circulation is likely to persist for subsequent 3-4 days over the same region.
- The Monsoon trough at mean sea level is near its normal position. It is likely to northwards and come close to foot hills of the Himalayas by 10th August, 2021.

- A cyclonic circulation lies over north Bay of Bengal & neighbourhood extends upto middle tropospheric levels, it is likely to move over northern parts of West Bengal by tomorrow, the 06 August, 2021 and become less marked thereafter.
- **Under the influence of above meteorological conditions:**
  - ✓ Fairly widespread to widespread rainfall with **isolated heavy to very heavy falls** very likely over West Madhya Pradesh on 05th; with isolated heavy falls on 6th & -7th August and decrease in intensity & distribution thereafter.
  - ✓ Fairly widespread to widespread rainfall with **isolated heavy falls** very likely over West Bengal on today the 5th August; over Odisha & Jharkhand on 05th & 06th and over Bihar and Sub-Himalayan West Bengal & Sikkim during 07th to 11th August, 2021. **Isolated heavy to very heavy falls also very likely over Sub-Himalayan West Bengal & Sikkim on 10th & 11th August, 2021.**
  - ✓ Fairly widespread to widespread rainfall with **isolated heavy falls** very likely over northeastern states during the week. However, its intensity is likely to increase with **heavy to very heavy falls** over Assam & Meghalaya on 10th & 11th August, 2021.
  - ✓ Scattered to fairly widespread rainfall over Uttarakhand and Uttar Pradesh till 09th and increase in intensity & distribution thereafter. **Isolated heavy rainfall** also likely over Uttarakhand during the week; over West Uttar Pradesh on 06th, 07th & 11th and over East Uttar Pradesh on 10th & 11th August, 2021. Isolated to scattered rainfall very likely over remaining parts of northwest India during the week. Isolated heavy falls is also likely over East Rajasthan on 05th & 06th August, 2021.
- Fairly widespread to widespread rainfall very likely to continue along west coast during the week. The **isolated heavy falls** also very likely over Kerala & Mahe from 06th to 08th and over coastal Karnataka on 06th & 07th August, 2021.
- Light/moderate isolated to scatted rainfall activity is likely over remaining parts of the country during the week **(Annexure IV**).

Rainfall for week 2: (12 to 18 August, 2021)

- The monsoon trough is very likely to be north of its normal or near normal position during most days of the week.

- Off-shore is likely along West coast during most days of the week
- Increase in rainfall activity over Peninsular India with widespread rainfall activity with isolated heavy to very heavy falls very likely along the west coast during most of the days.
- Light/moderate scattered to fairly widespread rainfall likely over rest parts of south Peninsular & adjoining central India.
- Fairly widespread to widespread rainfall with isolated heavy falls very likely over northeast & adjoining east India during most days of the week.
- Normal to above normal rainfall activity likely over south Peninsular & adjoining central India and northeast & adjoining East India.
- Sub-dued rainfall activity over northwest India likely to continue over northwest & adjoining central India in Week2. It is likely to be below normal rainfall activity over northwest & adjoining central India during week2.

4. Cyclogenesis:

Most of the numerical models including IMD GFS, GEFS, NCUM & NEPS and ECMWF deterministic models are not indicating any fresh cyclogenesis over NIO during their respective forecast periods. ECMWF EPS is indicating a very low probability of cyclogenesis over the north BoB during the latter half of week 2. Also NCEP GFS is indicating the development of a fresh low pressure area over west-central BoB towards the middle part of Week 2. The cyclogenesis and evolution probability based on MME ($CFSV_2$) is not indicating a genesis potential for the forecast period. Considering all the above, it may be concluded that no cyclogenesis is likely over the north Indian Ocean during the forecast period. **However, a low pressure area is likely to form over North Bay of Bengal during 2nd half of week 2.**

https://rsmcnewdelhi.imd.gov.in/uploads/archive/24/24_b8d889_Extended%20Range%20Outlook_05082021.pdf

Next weekly update will be issued on next Thursday i.e. 12 August 2021

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

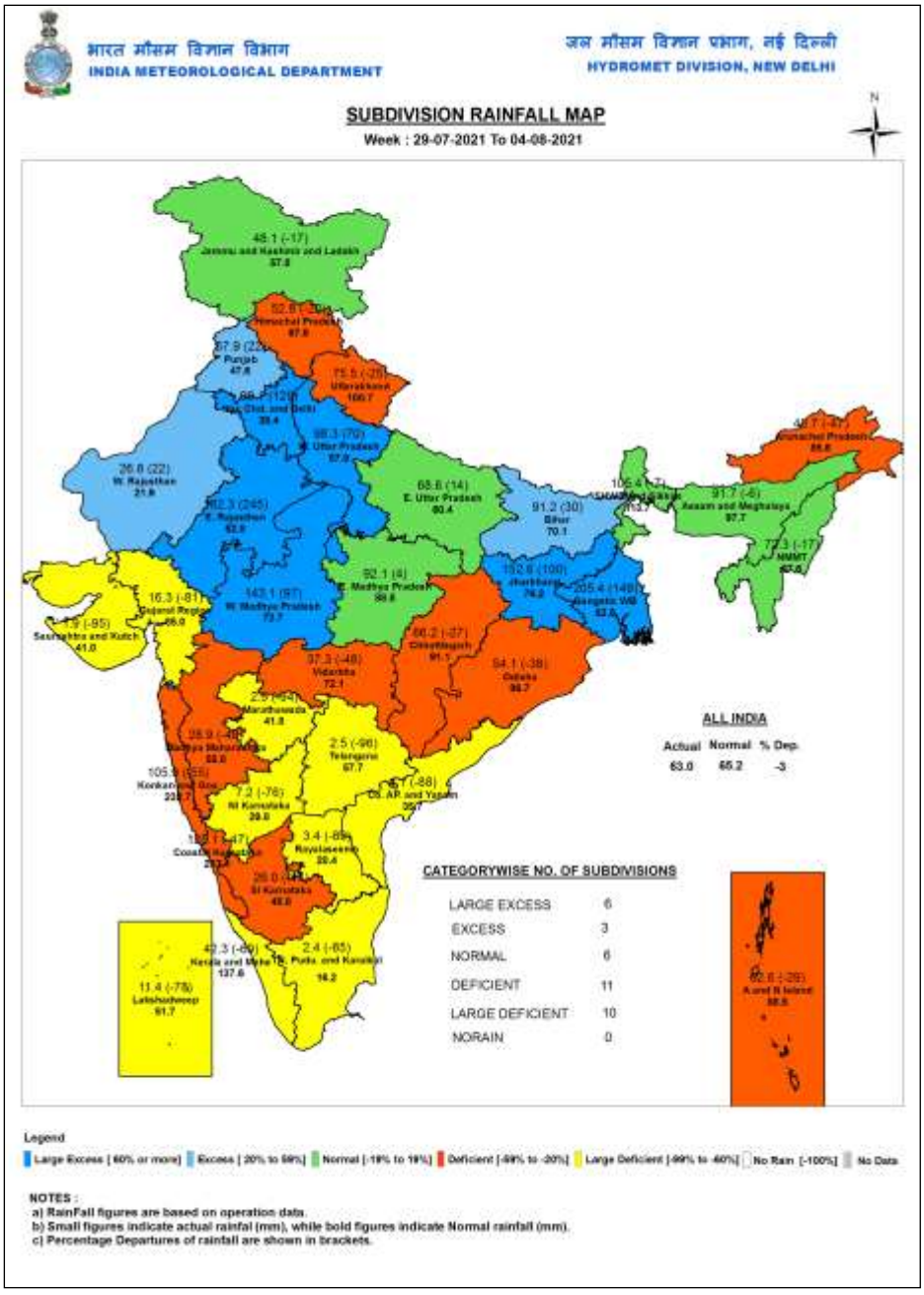
SPATIAL DISTRIBUTION (% of Stations reporting)

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespred (FWS/ Many Places)	1-25	Isolated (ISOL)

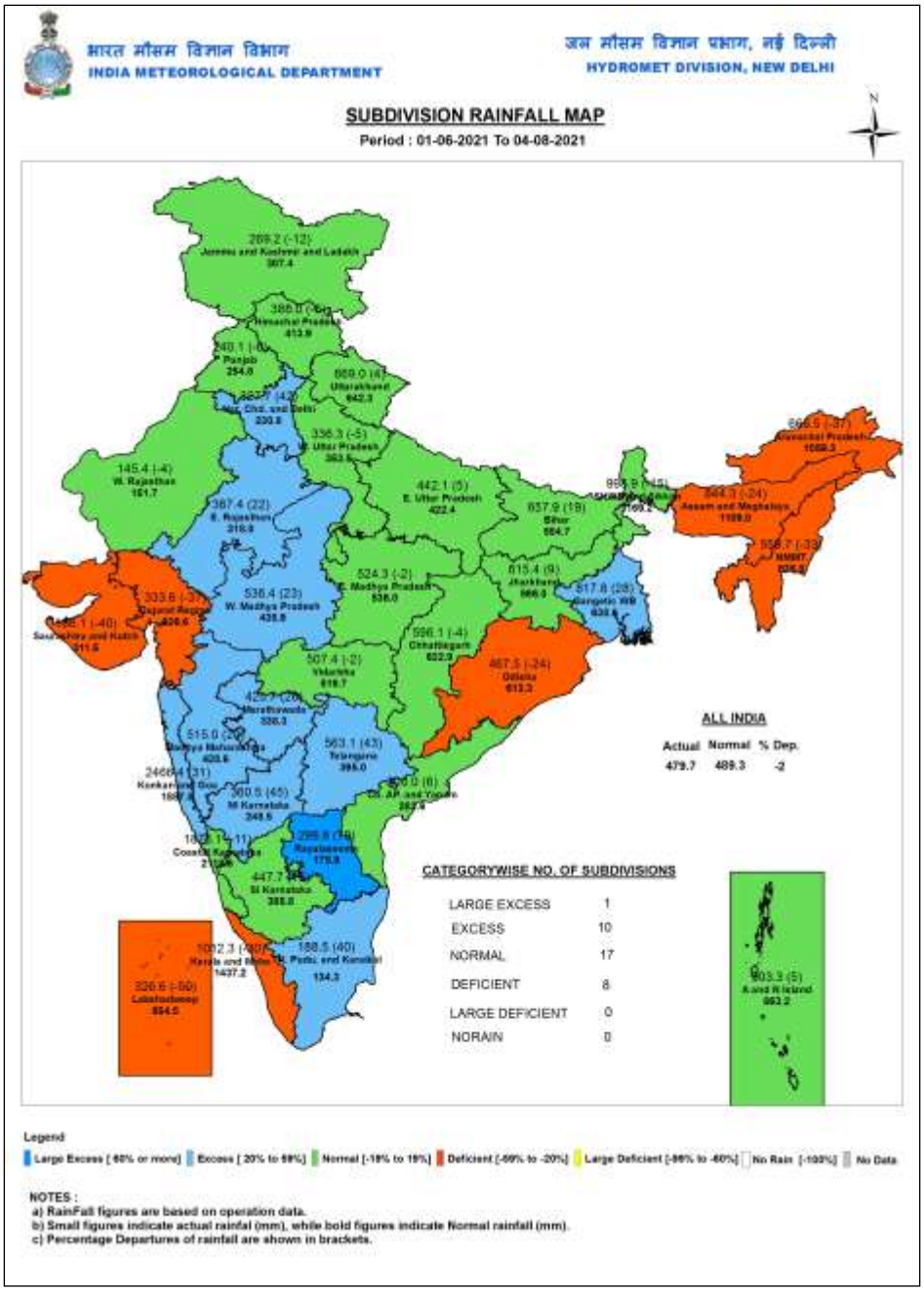
Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

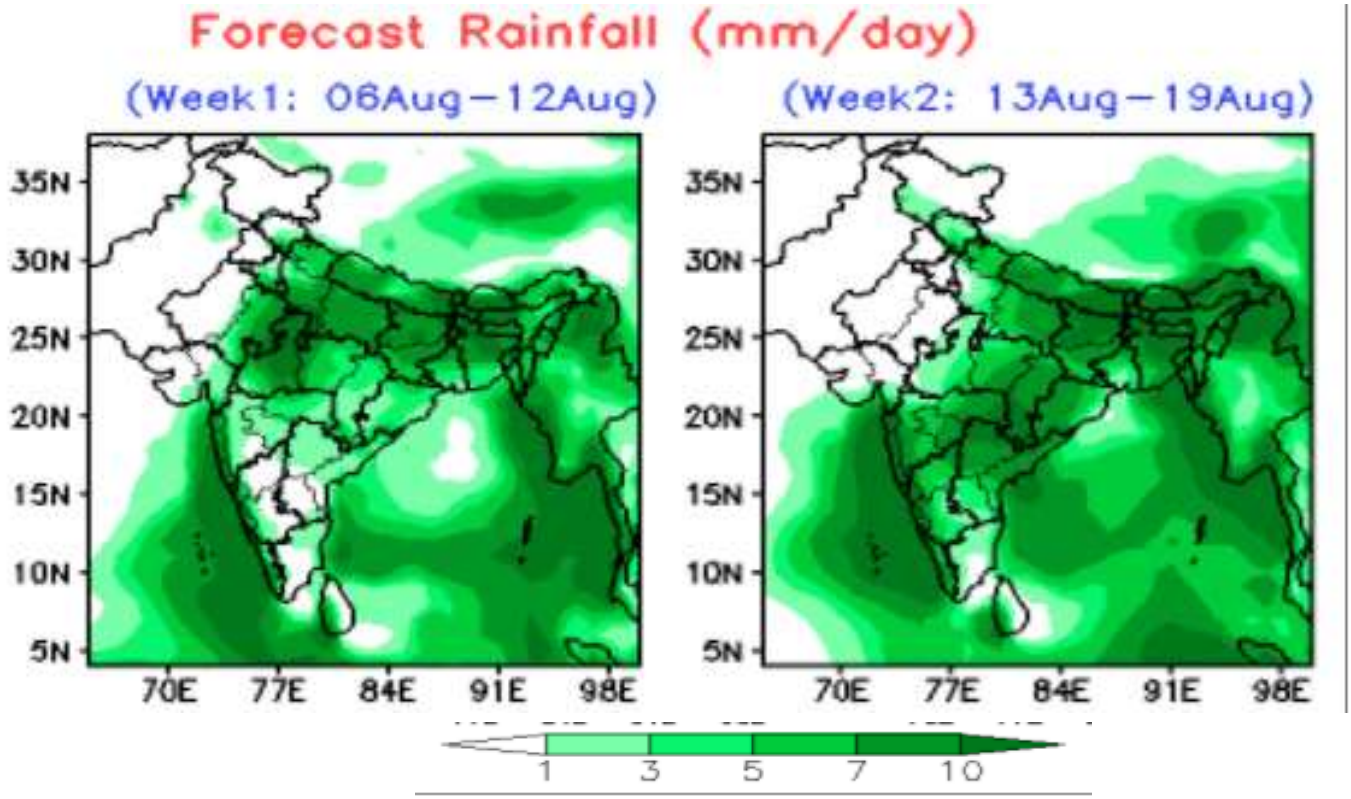
Annex I

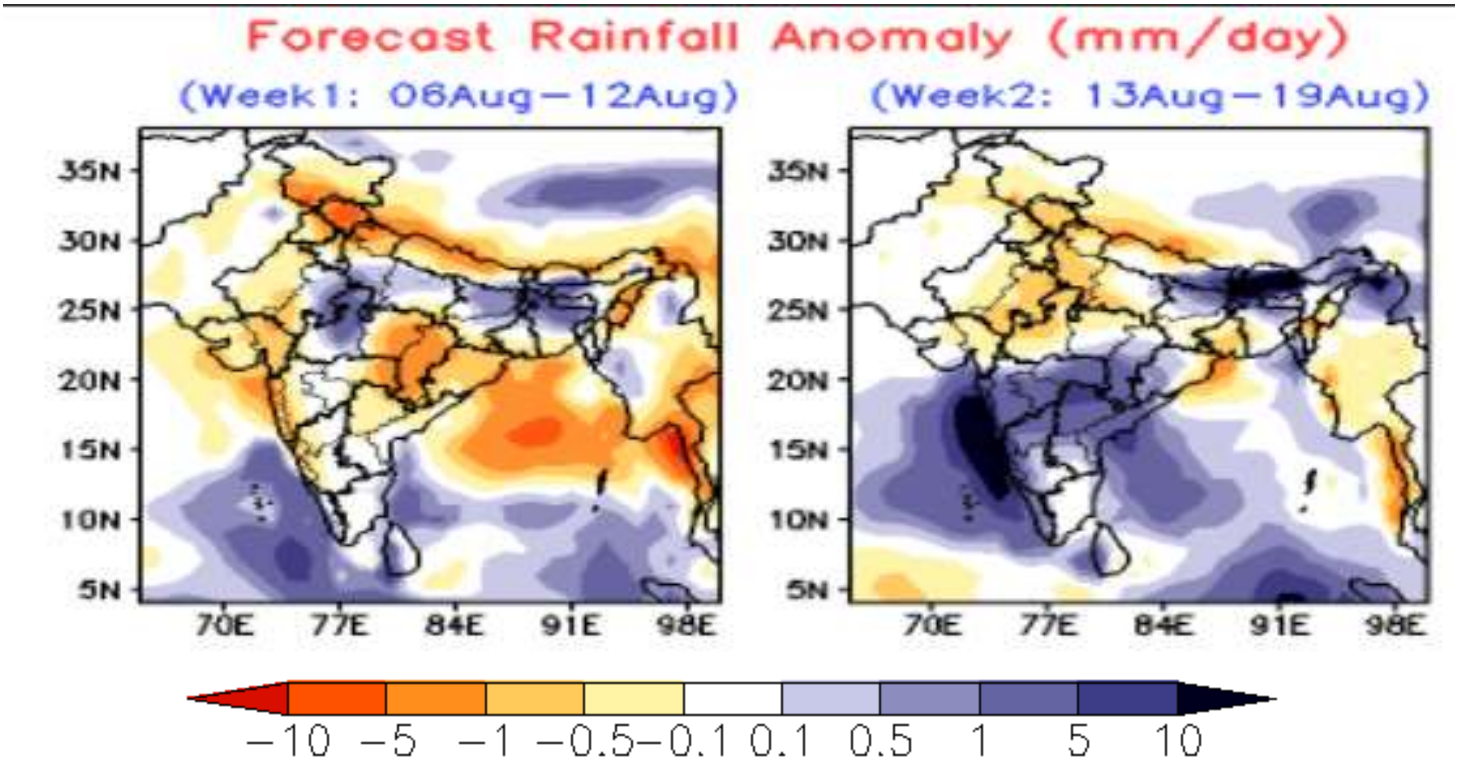

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT
जल मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI
SUBDIVISION RAINFALL MAP
Week : 29-07-2021 To 04-08-2021
N
ALL INDIA
Actual Normal % Dep.
63.0 65.2 -3
CATEGORYWISE NO. OF SUBDIVISIONS
LARGE EXCESS 6
EXCESS 3
NORMAL 6
DEFICIENT 11
LARGE DEFICIENT 10
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 II



Annexure III


Forecast Rainfall (mm/day)
(Week1: 06Aug−12Aug)
(Week2: 13Aug−19Aug)
35N
30N
25N
20N
15N
10N
5N
70E
77E
84E
91E
98E
1
3
5
7
10


Forecast Rainfall Anomaly (mm/day)
(Week1: 06Aug−12Aug)
(Week2: 13Aug−19Aug)
35N
30N
25N
20N
15N
10N
5N
70E
77E
84E
91E
98E
−10
−5
−1
−0.5
−0.1
0.1
0.5
1
5
10