



**India Meteorological Department  
Earth System Science Organisation  
(Ministry of Earth Sciences)**

**BULLETIN NO.: 59 (ARB/04/2019) & BULLETIN NO.: 12 (BOB/04/2019)**

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**Sub: (A) Severe Cyclonic Storm 'MAHA' (Pronounced as M'maha) over eastcentral & adjoining northeast Arabian Sea**  
**(B) Deep Depression over eastcentral & adjoining southeast Bay of Bengal.**

**BULLETIN NO. : 59 (ARB/04/2019)**

**(A) Severe Cyclonic Storm 'MAHA' (Pronounced as M'maha) over eastcentral & adjoining northeast Arabian Sea**

The **Severe Cyclonic storm MAHA (Pronounced as M'maha)** over eastcentral & adjoining northeast Arabian Sea moved nearly eastwards with a speed of 14 kmph during past 06 hours and lay centered at 1430 hrs IST of today, the 06<sup>th</sup> November, 2019 over eastcentral & adjoining northeast Arabian Sea near latitude 19.6°N and longitude 67.1°E, about 350 km west-southwest of Porbandar (Gujarat), 370 km west-southwest of Veraval (Gujarat) and 420 km west-southwest of Diu. It is very likely to move nearly eastwards, weaken into a Cyclonic Storm during next 12 hours. Thereafter it is likely to move east-northeastwards, weaken further into a Deep Depression by morning of tomorrow, the 7<sup>th</sup> November over northeast and adjoining eastcentral Arabian Sea. It is very likely to skirt Saurashtra coast and lie centered about 40 kilometers south of Diu around noon of 7<sup>th</sup> November as a deep depression. Continuing to move east-northeastwards, it would further weaken into a depression by tomorrow evening.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
06.11.19/1430	19.6/67.1	90-100 gusting to 110	Severe Cyclonic Storm
06.11.19/1730	19.7/68.0	85-95 gusting to 105	Cyclonic Storm
06.11.19/2330	19.9/69.3	70-80 gusting to 90	Cyclonic Storm
07.11.19/0530	20.2/70.4	60-70 gusting to 80	Cyclonic Storm
07.11.19/1130	20.4/71.2	55-65 gusting to 75	Deep Depression
07.11.19/2330	20.6/72.1	40-50 gusting to 60	Depression

**Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%**

**Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.**

## Warnings:

### (i) Rainfall:

- **Gujarat:** Light to moderate rainfall at many places with heavy to very heavy falls at isolated places very likely over Saurashtra and Gujarat region (**Diu, Junagarh, Gir Somnath, Amreli, Bhavnagar, Surat, Bharuch, Anand, Porbandar, and Rajkot**) on today, the 6<sup>th</sup> November & isolated heavy to very heavy falls over **Bhavnagar, Surat, Bharuch, Anand, and Vadodara** and heavy rainfall at isolated places over **Botad and Ahmedabad** on 7<sup>th</sup> November, 2019.
- **Maharashtra:** Light to moderate rainfall at a few places very likely over Madhya Maharashtra and north Konkan (Palghar & Thane districts) on today, the 6<sup>th</sup> November and at many places over northern most districts of Madhya Maharashtra on 7<sup>th</sup> November, 2019.

### (ii) Wind warning

- **Gujarat : Daman, Diu, Dadra & Nagar Haveli:** Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely to commence over northeast Arabian Sea along & off Gujarat coast from today, evening. It is very likely to increase gradually becoming 55-65 Kmph gusting to 75 Kmph along & off **Junagarh, Gir Somnath, Diu, Amreli Bhavnagar, Bharuch, Anand, Ahmedabad, and Botad** districts, 40-50 kmph gusting to 60 kmph over districts **Porbandar, Rajkot, Navsari, Valsad, Daman and Dadra & Nagar Haveli** from 7<sup>th</sup> November morning for the subsequent 12 hours.
- **Maharashtra:** Squally wind speed reaching 40-50 kmph gusting to 60 kmph likely along & off Maharashtra coast from today, the 6<sup>th</sup> evening. It is very likely to increase becoming 50-60 Kmph gusting to 70 Kmph from 7<sup>th</sup> November morning for the next 12 hours along & off Palghar & Thane districts.
- **Arabian Sea:** Gale wind speed reaching 90-100 kmph gusting to 115 kmph is prevailing over eastcentral and adjoining northeast Arabian Sea around the system centre. It is very likely to decrease gradually and become 60-70 kmph gusting 80 kmph on 7<sup>th</sup> November morning over northeast and adjoining eastcentral Arabian Sea and further decrease thereafter.

### (iii) Sea condition

- **Gujarat Coast:** Sea condition will be rough to very rough along & off Gujarat coast from 6<sup>th</sup> November evening for subsequent 24 hours.
- **Maharashtra Coast:** Sea condition will be rough to very rough along & off north Maharashtra coast from 06<sup>th</sup> November evening for the subsequent 24 hours.
- **Arabian Sea:** Sea condition will be phenomenal over eastcentral and adjoining northeast Arabian Sea during next 12 hours and will be high thereafter for subsequent 12 hours. It will be very rough to very rough over westcentral and adjoining northwest Arabian Sea during next 6 hours.

### (iv) Storm Surge

- Storm surge of about 0.5 meter above Astronomical tide is likely to inundate low lying areas of **Bhavnagar, Junagarh, Gir Somnath, Amreli, Surat, Bharuch, Anand and Ahmedabad** Districts from morning to forenoon of 7<sup>th</sup> November.

### (v) Fishermen Warning

- The fishermen are advised not to venture into westcentral and adjoining northwest Arabian Sea during next 06 hours and over eastcentral & adjoining northeast Arabian Sea till 08<sup>th</sup> November.
- The fishermen are advised not to venture into Sea along & off Gujarat coast and adjoining north Maharashtra coast till 8<sup>th</sup> November.

### (vi) Damage Expected over coastal districts of Gujarat (Junagarh, Gir Somnath, Amreli, Bhavnagar, Surat, Bharuch, Anand, Ahmedabad, Botad, Porbandar) and Daman, Diu:

- Minor damage to loose / unsecured structures.
- Some breaches in Kutcha road due to flooding.

Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%

Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.

- Minor damage to Banana trees and near coastal agriculture due to salt spray. Damage to ripe paddy crops.
- Minor damage to Kutcha embankments.

**BULLETIN NO. : 12 (BOB/04/2019)**

**(B) Deep Depression over eastcentral & adjoining southeast Bay of Bengal.**

The Deep Depression over eastcentral & adjoining southeast Bay of Bengal remained practically stationary and lay centred at 1430 hrs IST of today, the 6<sup>th</sup> November 2019, over eastcentral & adjoining southeast Bay of Bengal, near Lat.13.4°N and Long. 89.3°E, about 390 km west-northwest of Maya Bandar (Andaman Islands), about 810 km south-southeast of Paradip (Odisha), 920 km south-southeast of Sagar Islands (West Bengal) and 960 km south-southwest of Khepupara (Bangladesh) . It is very likely to intensify into a Cyclonic Storm during next 12 hours and into a Severe Cyclonic Storm during the subsequent 24 hours. It is very likely to move northwestwards for some time and then north-northwestwards towards West Bengal and Bangladesh coasts.

Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ Long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
06.11.19/1430	13.4/89.3	50-60 gusting to 70	Deep Depression
06.11.19/1730	13.7/88.9	60-70 gusting to 80	Cyclonic Storm
06.11.19/2330	14.2/88.6	70-80 gusting to 90	Cyclonic Storm
07.11.19/0530	14.7/88.3	80-90 gusting to 100	Cyclonic Storm
07.11.19/1130	15.2/88.1	90-100 gusting to 110	Severe Cyclonic Storm
07.11.19/2330	16.7/88.0	120-130 gusting to 145	Very Severe Cyclonic Storm
08.11.19/1130	17.5/87.9	130-140 gusting to 155	Very Severe Cyclonic Storm
08.11.19/2330	18.6/87.9	130-140 gusting to 155	Very Severe Cyclonic Storm
09.11.19/1130	18.6/87.9	120-130 gusting to 145	Very Severe Cyclonic Storm
09.11.19/2330	20.4/88.0	120-130 gusting to 145	Very Severe Cyclonic Storm
10.11.19/1130	20.8/88.1	115-125 gusting to 140	Very Severe Cyclonic Storm
10.11.19/2330	21.1/88.3	105-115 gusting to 125	Severe Cyclonic Storm
11.11.19/1130	21.2/88.5	95-105 gusting to 115	Severe Cyclonic Storm

**Warnings:**

**(i) Rainfall:**

- **Andaman and Nicobar Islands:** Light to moderate rainfall at most places very likely over **Andaman and Nicobar Islands** during next 24 hours.
- **Odisha:** Light to moderate rainfall at most places very likely over **north coastal districts of Odisha** from 9<sup>th</sup> & 10<sup>th</sup> Nov. 2019.
- **West Bengal:** Light to moderate rainfall at most places with heavy falls at isolated places very likely over **coastal districts of West Bengal** on 10<sup>th</sup> & 11<sup>th</sup> Nov. 2019.

**(ii) Wind warning**

- **Andaman and Nicobar Islands:** Strong wind speed reaching 35-45 kmph gusting to 55 kmph is likely to prevail over Andaman Islands, north Andaman Sea during next 24 hours.
- **Bay of Bengal:** Squally wind speed reaching 50-60 kmph gusting to 70 kmph is prevailing over east central and adjoining southeast Bay of Bengal around the system centre. It will become gale wind speed reaching 80-90 kmph gusting to 100 kmph by 7<sup>th</sup> November morning. It will gradually increase further becoming 130-140 kmph gusting to 145 kmph over northwest and adjoining central Bay of Bengal by 8<sup>th</sup> November forenoon.

**Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%**

**Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.**

- **Odisha & West Bengal coasts:** Squally wind speed reaching 40 – 50 kmph gusting to 60 kmph likely to commence over northwest Bay of Bengal off Odisha – West Bengal coasts from 8<sup>th</sup> November evening and gradually increase thereafter.

**(iii) Sea condition**

- Sea condition will be very rough to High over eastcentral Bay of Bengal till 7<sup>th</sup> November evening and become very high to phenomenal thereafter over central and adjoining northwest Bay of Bengal.
- Sea condition will be rough over north Andaman Sea during next 24 hours.

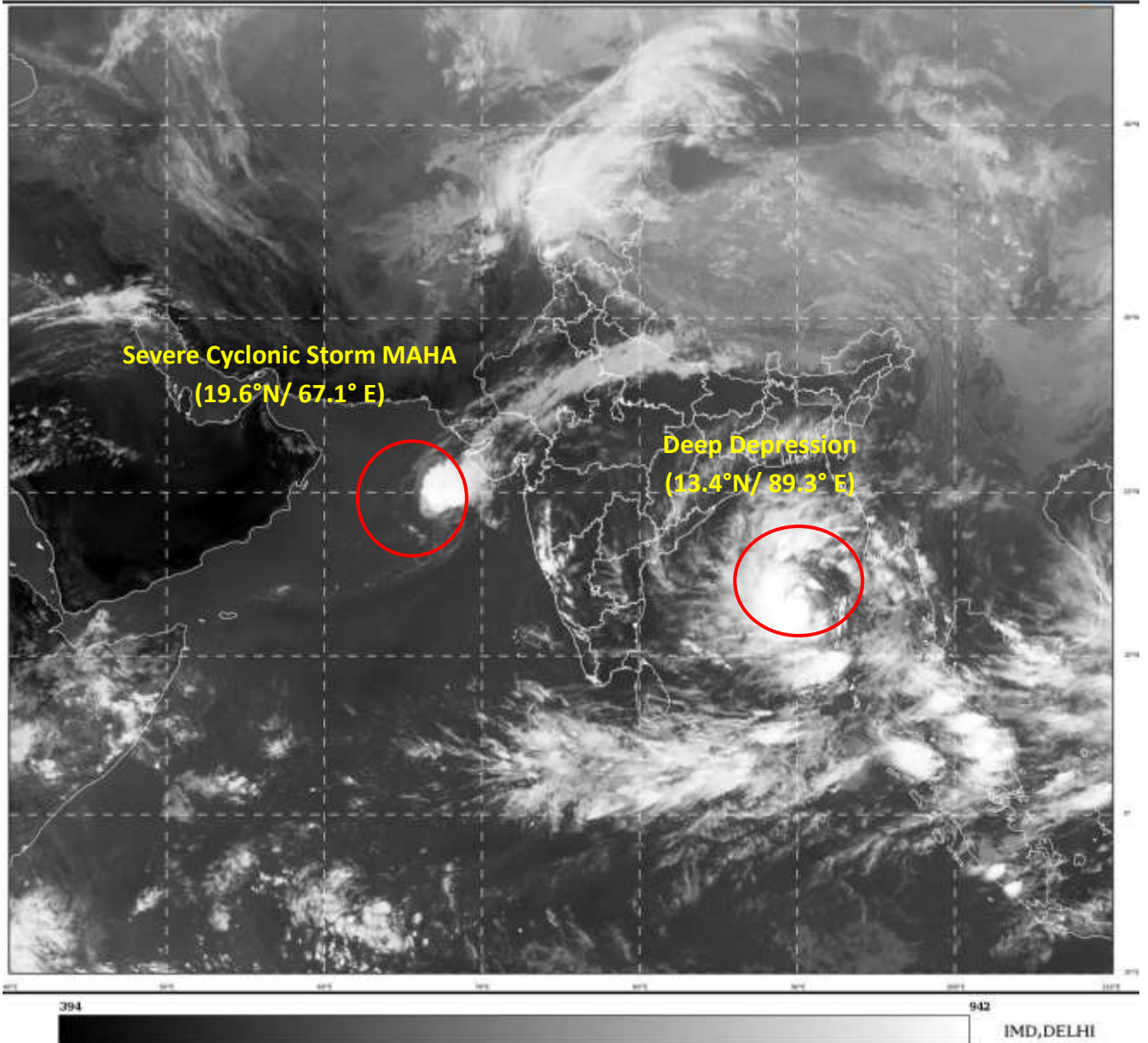
**(iv) Fishermen Warning**

- Fishermen are advised not to venture into north Andaman Sea and adjoining southeast Bay of Bengal during next 24 hours.
- Fishermen are advised not to venture into eastcentral Bay of Bengal during next 2 days and into westcentral and adjoining northwest Bay of Bengal during 8<sup>th</sup> – 10<sup>th</sup> November.
- Fishermen are advised not to venture into north Bay of Bengal along & off Odisha – west Bengal coasts from 8<sup>th</sup> November onwards.
- The fishermen out at Sea are advised to return to the coast from these areas.

***The next bulletin will be issued at 2030 hrs IST of 06<sup>th</sup> November, 2019.***

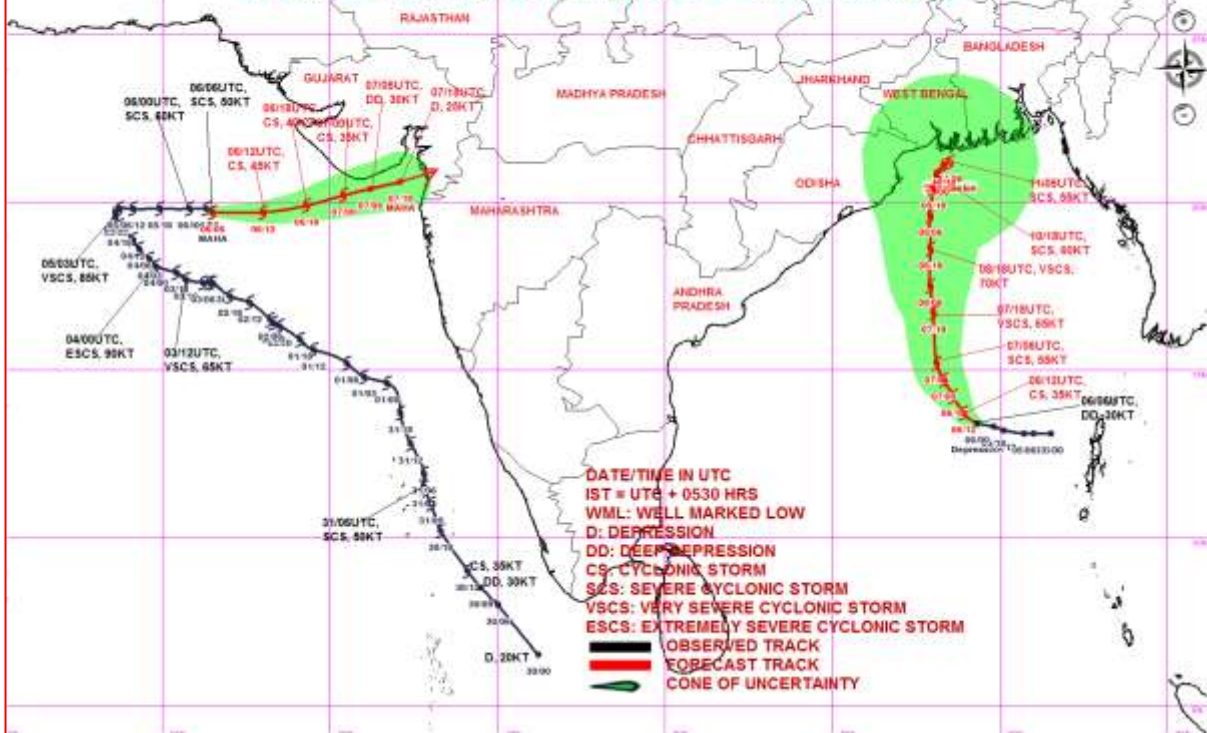
**(Sunitha Devi. S)  
Scientist-E, RSMC, New Delhi**

***Copy to: ACWC Chennai/ ACWC Mumbai/ ACWC Kolkata/ MC Goa/ MC Bengaluru/ CWC Ahmedabad/ Thiruvananthapuram/ CWC Visakhapatnam/ CWC Bhubaneswar/ M.O. Port Blair.***

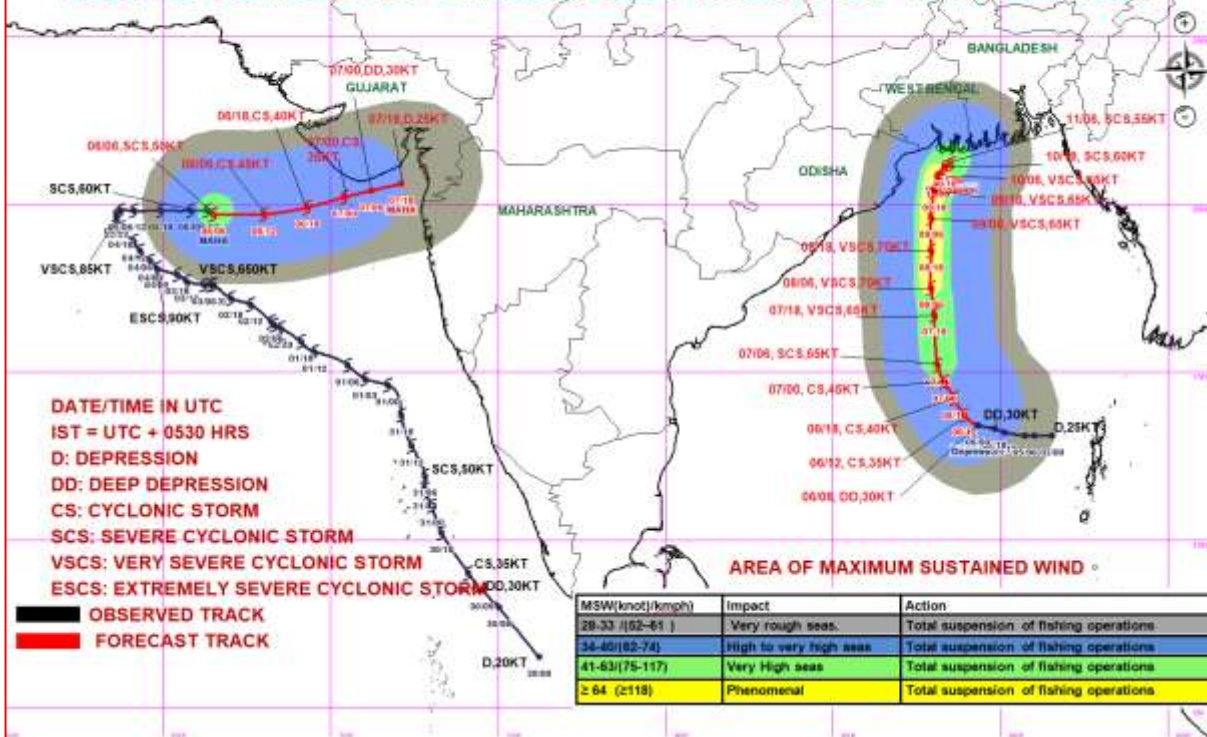


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**Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.**

**OBSERVED & FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY IN ASSOCIATION WITH (A) SEVERE CYCLONIC STORM "MAHA" OVER EASTCENTRAL & ADJOINING NORTHEAST ARABIAN SEA AND (B) DEEP DEPRESSION OVER EASTCENTRAL & ADJOINING SOUTHEAST BAY OF BENGAL BASED ON 0600 UTC OF 06<sup>th</sup> NOVEMBER 2019**



**OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH (A) SEVERE CYCLONIC STORM "MAHA" OVER EASTCENTRAL & ADJOINING NORTHEAST ARABIAN SEA AND (B) DEEP DEPRESSION OVER EASTCENTRAL & ADJOINING SOUTHEAST BAY OF BENGAL BASED ON 0600 UTC OF 6<sup>th</sup> NOVEMBER 2019**



**Spatial rainfall distribution: Isolated: <25%, A few: 26-50%, Many: 51-75%, Most: 76-100%**

**Rainfall amount (mm): Heavy rain: 64.5 – 115.5, Very heavy rain: 115.6 – 204.4, Extremely heavy rain: 204.5 or more.**