Government of India
Ministry of Earth Sciences

India Meteorological Department

PRESS RELEASE–3

Time of issue: 1500 hours IST **Dated: 17th October, 2024**

Sub: Brief Report on the Depressions over central Arabian Sea (13-15 October) and southwest Bay of Bengal (15-17 October)

Salient Features of depressions over Arabian Sea and Bay of Bengal:

1. **Two depressions** formed back-to-back over Central Arabian Sea (13th – 15th October) and Southwest Bay of Bengal (15th – 17th October) during the withdrawal phase of southwest monsoon.
2. Both the systems crossed coasts. Depression over **Central Arabian Sea** crossed Oman coast near latitude 19.35°N and longitude 57.7°E, close to Duqm (Oman) during the **mid-night of 15th October.** The Depression over **Southwest Bay of Bengal** crossed north Tamil Nadu - South Andhra Pradesh coasts between Puducherry and Nellore, close to north of Chennai, near latitude 13.5N and longitude 80.2E during the **early morning of today, the 17th October**.
3. Both the systems developed under the presence of **favourable features** like Madden Julian Oscillation and other equatorial waves.
4. Both the systems exhibited **west-northwestwards** movement.
5. Depression over Central Arabian Sea had a life period of **2 days & 6 hours** and the Depression over Southwest Bay of Bengal had a life period of **1 day 12 hours**.
6. The brief life history, forecast performance and statistics of bulletins issued by IMD is association with these systems are in Section 1 and Section 2:

Section1: Depression over Central Arabian Sea (13th – 15th October)

1.1 Life History:

- A cyclonic circulation lay over South Kerala & neighbourhood in the morning (0830 hours IST) of the 7th October, 2024.
- Under its influence, a **Low Pressure Area** formed over Lakshadweep and adjoining southeast & eastcentral Arabian Sea in the morning (0830 hours IST) of the 9th October, 2024.
- It lay as a **Well Marked Low Pressure Area** over eastcentral Arabian Sea off Karnataka-Goa coasts in the morning (0830 hours IST) of the 10th October 2024. I
- It intensified into a **Depression** in the evening (1730 hours IST) of the 13th October, 2024 over central Arabian Sea.
- It moved northwestwards and crossed Oman coast near latitude 19.35°N and longitude 57.7°E, close to Duqm (Oman) between 2230 hours IST and 2330 hours IST. It then weakened and lay as a **Well Marked Low Pressure Area** over coastal Oman in the same midnight (2330 hours IST), the 15th October, 2024. **Observed track of the depression is presented in Fig.1.**

1.2. Forecast performance:

- The daily tropical weather outlook issued at 1130 hours IST of 7th October, 2024 indicated formation of low pressure area over Lakshadweep and adjoining Southeast & Eastcentral Arabian Sea around 9th October. Actually low pressure area formed on 9th October.
- The formation of the system was first indicated in the extended range outlook issued on 10th October (3 days prior to formation of depression). With High probability (67-100%), it was indicated that the Well Marked Low Pressure over eastcentral Arabian Sea would intensity into a Depression over central Arabian Sea and would move nearly west-northwestawrds.
- The daily tropical weather outlook issued at 1130 hours IST of 10th October, 2024 indicated formation of depression over Central Arabian Sea during 12-13 October. Actually depression formed on central Arabian Sea on 13th October.
- In the Special Tropical Weather Outlook bulletin based on 1730 hours IST of 13th October, it was indicated that the depression would move west-northwestwards towards Oman coast till 15th October.
- Since beginning it was indicated that the system would reach peak intensification of depression only.
- Thus, the track, initial movement intensification/weakening of the system were well predicted by IMD/RSMC New Delhi.

Statistics of Bulletins issued by IMD, New Delhi during Depression over Central Arabian Sea during 13th to 15th October

S. No.	Bulletin type	No. Of Bulletins	Issued to
1	National Bulletin	12	1. IMD's website, RSMC New Delhi website 2. FAX and e-mail to Control Room Ministry of Home Affairs & National Disaster Management Authority, Cabinet Secretariat, Ministry of Science & Technology, Secretary MOES, Headquarter Integrated Defence Staff, Director General Doordarshan, All India Radio, PIB MOES, UNI, DG National Disaster Response Force, Director, Punctuality, Indian Railways, Chief Secretary: Government of Lakshadweep, Karnataka, Kerala, Goa, Dadra & Nagar Haveli, Daman & Diu, Gujarat & Maharashtra.
2	RSMC Bulletin	12	1. IMD's website 2. WMO/ESCAP member countries through GTS and E-mail.
3	GMDSS Bulletins	9	1. IMD website, RSMC New Delhi website 2. Transmitted through WMO Information System (WIS) to Joint WMO/IOC Technical Commission for Ocean and Marine Meteorology (JCOMM)
4	Warnings through SMS	4653	**4,653** to General Public and disaster manages along the east coast of India by IMD Headquarters
5	Warnings through Social Media	12	Cyclone Warnings were uploaded on Social networking sites (Facebook and Tweeter) since inception to weakening of system (every time when there was change in track, intensity and landfall characteristics).
6	Press Release	1	Disaster Managers, Media persons by email and uploaded on website
7	Press Briefings	Daily	Regular & frequent briefing daily during 14th -17th October

Section 2: Depression over southwest Bay of Bengal (15th – 17th October)

2.1.: Life History:

- A cyclonic circulation lay over southeast Bay of Bengal and adjoining North Equatorial Indian Ocean in the morning (0830 hours IST) of the 12th October, 2024. It moved west-northwestwards.
- Under its influence, a **Low Pressure Area** formed over southeast Bay of Bengal in the early morning (0530 hours IST) of the 14th October 2024.
- It lay as a **Well Marked Low Pressure Area** over the central parts of south Bay of Bengal in the early morning (0530 hours IST) of 15th October 2024.
- It intensified into a **Depression** over southwest Bay of Bengal in the same evening (1730 hours IST).
- It moved west-northwestwards and crossed north Tamil Nadu - South Andhra Pradesh coasts between Puducherry and Nellore, close to north of Chennai, near latitude 13.5^0N and longitude 80.2^0E around 0430 hrs IST of today, the 17th October.
- Subsequently, it weakened into a **Well Marked Low Pressure Area** and lay over South coastal Andhra Pradesh and adjoining North coastal Tamil Nadu in the early morning (0530 hrs IST) of today, the 17th October, 2024.
- **Observed track of the depression is presented in Fig.2.**

2.2. Forecast performance:

- The extended range outlook issued on 10th October (5 days prior to formation of the depression indicated likely formation of an upper-air cyclonic circulation over central parts of south Bay of Bengal around 12th October. It was also indicated that under its influence a low pressure area would form over southwest Bay of Bengal off Tamil Nadu coast and intensify further into a depression during later part of week 1.
- The daily tropical weather outlook issued at 1130 hours IST of 12th October, 2024 indicated formation of low pressure area over Southwest Bay of Bengal around 14th October. Actually low pressure area formed over southeast Bay of Bengal on 14th October.
- In the Special Tropical Weather Outlook bulletin based on 2330 hours IST of 14th October, it was indicated that the low pressure area would intensify into a Depression and move west-northwestwards towards North Tamil Nadu, Puducherry and adjoining South Andhra Pradesh coasts during subsequent 2 days. Actually, depression formed over southwest bay of Bengal on 15th October.
- First track ad intensity forecast was issued at 1250 hours IST of 15th October on formation of Well Marked Low Pressure Area over central parts of south Bay of Bengal indicating crossing near Chennai with wind speed of 40-50 kmph gusting to 60 kmph.
- In the bulletin issued at 1210 hours IST of 16th October, it was indicated that the depression would cross near Chennai with wind speed of 35-45 kmph gusting to 55 kmph.
- In the Special Tropical Weather Outlook bulletin based on 1730 hours IST of 15th October, it was indicated that the system would move west-northwestwards and cross North Tamil Nadu-South-Andhra Pradesh coasts between Puducherry and Nellore, close to Chennai in the early morning hours (around 0000 UTC) of 17th October as a depression. Actually, it crossed north Tamil Nadu - South Andhra Pradesh coasts between Puducherry and Nellore, close to north of Chennai, near latitude 13.5N and longitude 80.2E around 0430 hrs IST of today, the 17th October.
- Thus, the track, initial movement intensification/weakening of the system were well predicted by IMD/RSMC New Delhi.

Statistics of Bulletins issued by IMD, New Delhi during Depression over Southwest Bay of Bengal during 15th to 17th October

S. No.	Bulletin type	No. of Bulletins	Issued to
1	National Bulletin	15	1. IMD's website, RSMC New Delhi website 2. FAX and e-mail to Control Room Ministry of Home Affairs & National Disaster Management Authority, Cabinet Secretariat, Ministry of Science & Technology, Secretary MOES, Headquarter Integrated Defence Staff, Director General Doordarshan, All India Radio, PIB MOES, UNI, DG National Disaster Response Force, Director, Punctuality, Indian Railways, Chief Secretary: Government of Tamil Nadu, Andhra Pradesh, Puducherry, Lakshadweep, Karnataka, Kerala, Goa, Dadra & Nagar Haveli, Daman & Diu, Gujarat & Maharashtra.
2	RSMC Bulletin	15	1. IMD's website 2. WMO/ESCAP member countries through GTS and E-mail.
3	GMDSS Bulletins	10	1. IMD website, RSMC New Delhi website 2. Transmitted through WMO Information System (WIS) to Joint WMO/IOC Technical Commission for Ocean and Marine Meteorology (JCOMM)
4	Warnings through SMS	1,68,732	**1.68 lakh** (1,68,732) to General Public and disaster
5	Warnings through Social Media	10	Cyclone Warnings were uploaded on Social networking sites (Facebook and Tweeter) since inception to weakening of system (every time when there was change in track, intensity and landfall characteristics).
6	Press Release	3	Disaster Managers, Media persons by email and uploaded on website
7	Press Briefings	Daily	Regular & frequent briefing daily during 14th -17th October

All associated graphics have been kept in Annexure-I.

Significant Rainfall recorded during 16.10.24 and 17.10.2024 (in cm) has been kept in Annexure - II

This is last press release in association with this system. However, regular weather bulletins will continue from National Weather Forecasting Centre and respective Regional Meteorological Centres and Meteorological Centres in association with the Well Marked Low Pressure Area over south coastal Andhra Pradesh and adjoining north coastal Tamil Nadu

Contact: Cyclone Warning Division, Office of the Director General of Meteorology, India Meteorological Department, Ministry of Earth Sciences, E-mail:cyclonewarningdivision@gmail.com, Website: rsmcnewdelhi.imd.gov.in, **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.**

Annexure - I

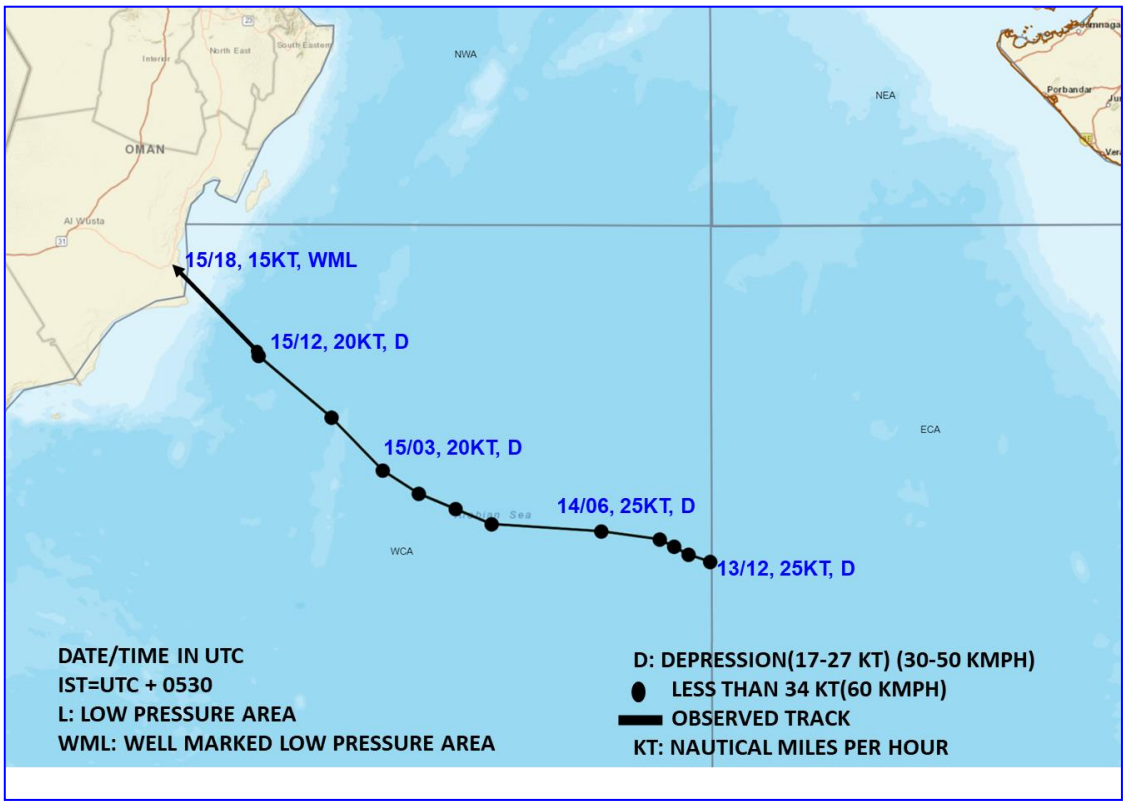

Fig. 1: Observed Track of Depression over Central Arabian Sea during 13th to 15th October, 2024

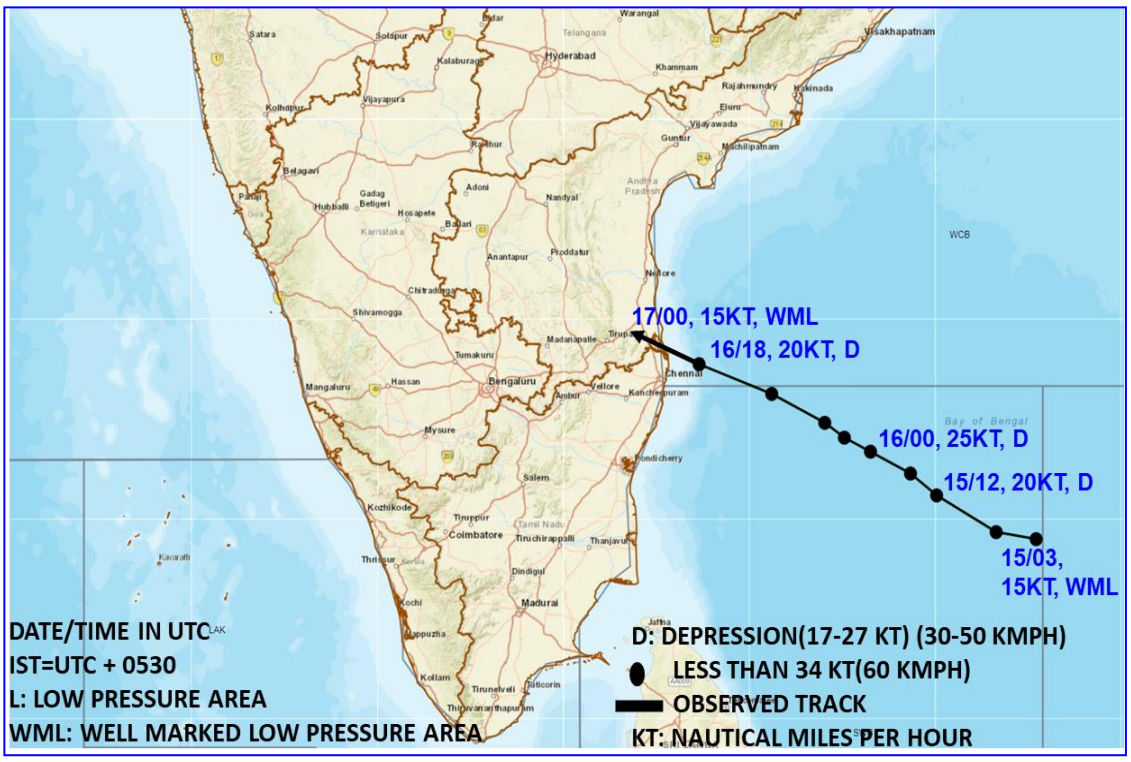

Fig. 2: Observed Track of Depression over Southwest Bay of Bengal during 15th to 17th October, 2024

Contact: Cyclone Warning Division, Office of the Director General of Meteorology, India Meteorological Department, Ministry of Earth Sciences, E-mail:cyclonewarningdivision@gmail.com, Website: rsmcnewdelhi.imd.gov.in, **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.**

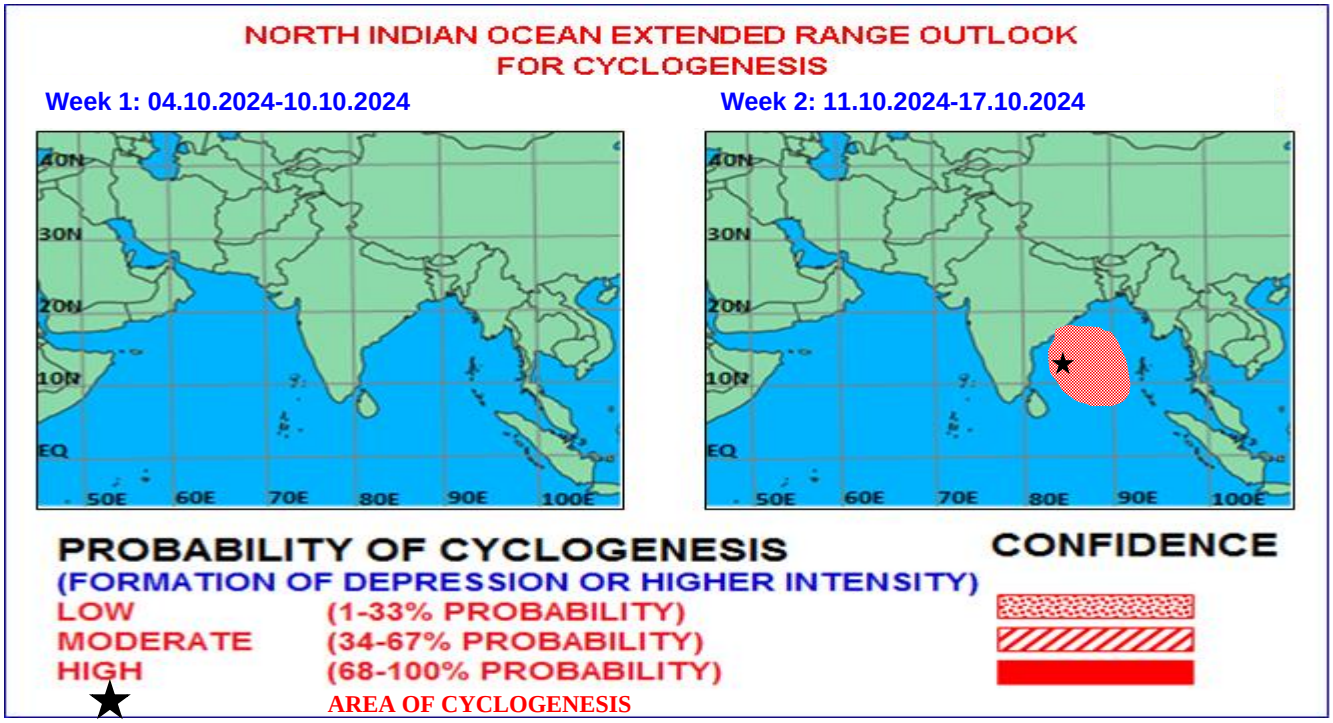

Fig. 3: Extended Range Outlook issued on 3rd October indicating probability of Cyclogenesis over Bay of Bengal

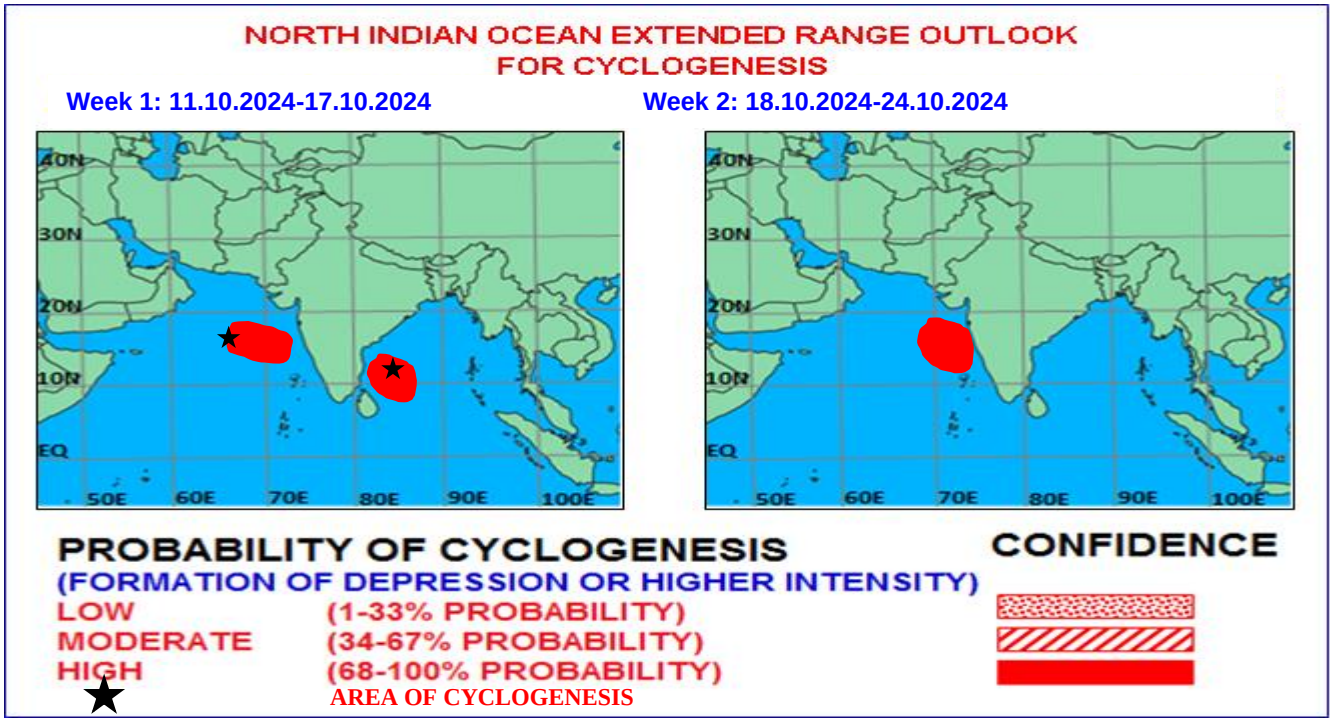

Fig. 4: : Extended Range Outlook issued on 10th October indicating probability of Cyclogenesis over Bay of Bengal and Arabian Sea

Contact: Cyclone Warning Division, Office of the Director General of Meteorology, India Meteorological Department, Ministry of Earth Sciences, E-mail:cyclonewarningdivision@gmail.com, Website: rsmcnewdelhi.imd.gov.in, **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.**

Annexure-II

Significant Rainfall recorded during past 24 hours till 0830 hours IST of 16.10.2024 (in cm):

- **Tamil Nadu, Puducherry & Karaikal:**

  Extremely heavy rainfall (> 20 cm): Cholavaram (Tiruvallur) 30, Red Hills (Tiruvallur) 28, Avadi (Tiruvallur) 25, Kathivakkam (Chennai) 23, Manali (Chennai) 21,

  Very heavy rainfall (20 cm ≤ and ≥ 12cm): T.V.K Nagar (Chennai) 19, Kolathur (Chennai), Adyar (Chennai), Puzhal (Tiruvallur), Ambattur (Chennai) 18 each, Thiruvottiyur (Chennai), Perungudi (Chennai), Manali (Chennai), Hindustan_University (Kancheepuram), Ennore (Chennai) 17 each, Perambur (Chennai), Malar Colony (Chennai), Good Will School Villivakkam (Tiruvallur), Puzhal (Chennai), Ayanavaram Taluk Office (Chennai), Anna University (Chennai), Ponneri (Tiruvallur), Thamaraipakkam (Tiruvallur) 16 each, Ambathur (Chennai), Anna University (Chennai), MGR Nagar (Chennai), Sholinganallur (Chennai), Thiru-Vi-Ka Nagar (Chennai), Tondiarpet (Chennai), Royapuram (Chennai), Adayar (Chennai) 15 each, Madhavaram (Chennai), Tondiarpet (Chennai), Chennai(N) (Chennai), CD Hospital Tondaiarpet (Chennai), YMCA Nandnam (Chennai), Kodambakkam (Chennai) 14 each, Anna Nagar (Chennai), Vanagaram (Chennai), Chennai Collector Office (Chennai), Kodambakkam (Chennai), DGP Office (Chennai), Royapuram (Chennai) 13 each, Ice House (Chennai), NIOT_Pallikaranai (Chennai), Teynampet (Chennai), Alandur (Chennai), Chennai (AP) (Chennai), Meenambakkam (Chennai), Maduravoyal (Chennai) 12 each,

  Heavy rainfall (11 cm ≤ and ≥ 7cm): Meenambakkam (Chennai), Kolapakkam (Kancheepuram), Valasaravakkam (Chennai), Uthandi (Chennai), GCC (Chennai), Tiruvottiyur (Chennai), Zone Adyar Eco Park (Chennai) 11 each, Mugalivakkam (Chennai), Jaya Engg College (Tiruvallur), Perungudi (Chennai), Sholinganallur (Chennai), Tiruppur (Tiruppur) 10 each, Gummidipoondi (Tiruvallur), Perungudi (Chennai), Uthukottai (Tiruvallur), Manimutharu Dam (Kallakurichi), Tiruvallur (Tiruvallur), Kachirayaopalayam (Kallakurichi), Mahabalipuram (Chengalpattu), Satyabama (Kancheepuram), Poonamallee (Tiruvallur), Chembarabakkam (Kancheepuram) 9 each, ACS Medical College (Kancheepuram), Bhuvanagiri (Cuddalore), VIT Chennai (Chengalpattu), Valavanur (Villupuram), Mahabalipuram (Chengalpattu), Koratur (Tiruvallur), Koliyanur (Villupuram) 8 each, Uthangarai (Krishnagiri), Tiruttani (Tiruvallur), Pallipattu (Tiruvallur), Kundrathur (Kancheepuram), Tambaram (Chengalpattu), Tiruppur South (Tiruppur) 7 each;

- **Rayalaseema:**

  Sullurpeta (Tirupati) 22, Tada (Tirupati) 12, Tirupati Aero (Tirupati) 11, Satyavedu (Tirupati) 10, Porumamilla (YSR) 9, Srikalahasti (Tirupati), Thottambedu (Tirupati), Venkatagiri (Tirupati), Penagaluru (Annamayya), Kodur (YSR) & Nagari (Chittoor) 8 each, Gudur (Tirupati) & Pullampeta (Annamayya District) 7 each;

- **Coastal Andhra Pradesh & Yanam:**

  Kavali (Nellore) 18, Nellore (Nellore) 13, Kandukur (Nellore) 10, Seetharamapuram (Nellore) 10, Vinjamur (Nellore) & Udayagiri (Nellore) 9 each;

- **South Interior Karnataka:**

  Bengaluru Hal Ap (Bengaluru Urban) 9, Hesaraghatta (Bengaluru Urban) 7, Bellur (Mandya) & Bengaluru City (Bengaluru Urban) 7 each;

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Significant Rainfall recorded during past 24 hours till 0830 hours IST of 17.10.2024 (in cm):

- **Rayalaseema:**
  Kodur (YSR) 14, Pullampeta (Annamayya) 10, Penu Konda (Sri Sathyasai) 9, Ramagiri (Sri Sathyasai) & Nandikotkur (Nandyal) 8 each, Chenne Kothapalle (Sri Sathyasai), Jupadu Bungalow (Nandyal), Rajampet (Annamayya), Venkatagiri (Tirupati), Srikalahasti (Tirupati), Nallamada (Sri Sathyasai), Gorantla (Sri Sathyasai), Penagaluru (Annamayya) & Tirupati (Tirupati) 7 each;
- **Coastal Andhra Pradesh & Yanam:**
  Nellore (Nellore) 7;
- **Kerala:**
  Kozhikode (Kozhikode) 7;
- **South Interior Karnataka:**
  Davanagere (Davangere) & Davanagere (Davangere) 9 each, Y N Hoskote (Tumakuru) & Chitradurga (Chitradurga) 7 each;

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