

Thursday, 03<sup>rd</sup> JULY 2025

## **EXTENDED RANGE FORECAST FOR KERALA & MAHE AND LAKSHADWEEP**

**(Current weather status & outlook for the next two weeks (03<sup>rd</sup> JULY-16<sup>th</sup> JULY 2025))**

### **Realized rainfall scenario:**

#### **(i) Weekly Rainfall Scenario (26<sup>th</sup> JUNE 2025 to 02<sup>nd</sup> JULY 2025)**

Actual rainfall along with departure from normal rainfall for Kerala & Mahe and Lakshadweep during the recent past week is shown in the table below.

Subdivision	Actual Rainfall (in mm)	Normal Rainfall (in mm)	Departure (%)
Kerala & Mahe	150.7	162.6	-7
Lakshadweep (UT)	38.5	61.5	-37

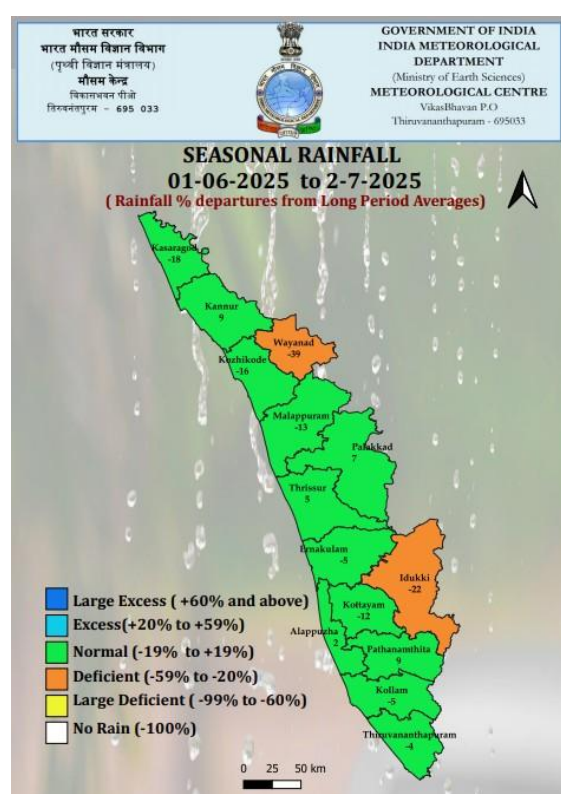
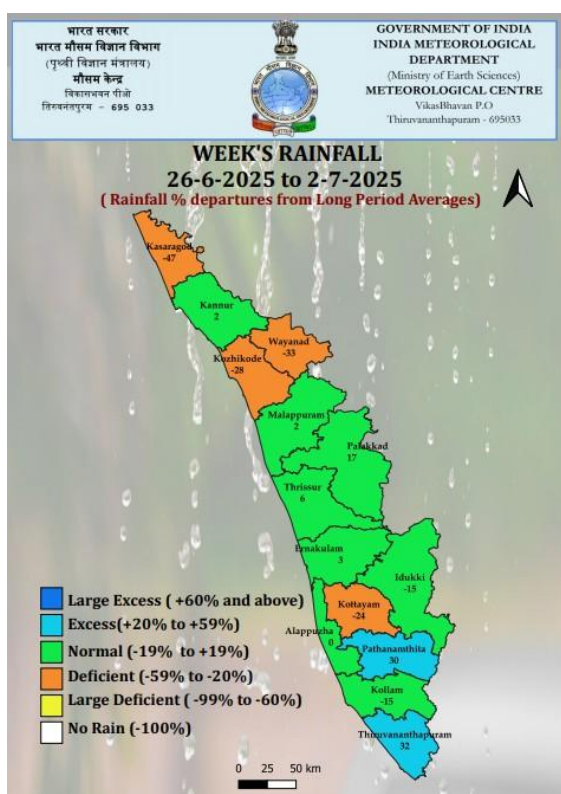
Out of the 14 districts in Kerala, **2** districts received **Excess Rainfall**, **8** districts received **Normal Rainfall** and **4** districts received **Deficient Rainfall**. **Lakshadweep** received **Deficient Rainfall** and **Mahe** received **Normal Rainfall**.

#### **(ii) Seasonal Rainfall Scenario (01<sup>st</sup> JUNE 2025 to 02<sup>nd</sup> JULY 2025): South West Monsoon**

Cumulative rainfall for Kerala & Mahe and Lakshadweep during this season from 01<sup>st</sup> June 2025 to 02<sup>nd</sup> July 2025 are shown in the table below.

Subdivision	Actual Rainfall (in mm)	Normal Rainfall (in mm)	Departure (%)
Kerala & Mahe	639.1	695.1	-8
Lakshadweep (UT)	223.7	353.9	-37

Out of the 14 districts in Kerala, **12 districts received Normal Rainfall** and **2 districts received Deficient Rainfall**. **Lakshadweep received Deficient Rainfall** and **Mahe received Normal Rainfall**.



### Salient Observed Features for week ending 02<sup>nd</sup> JULY 2025

- Extremely Heavy rainfall was recorded at isolated places over Kerala & Mahe on 26<sup>th</sup> June 2025.
- Very Heavy rainfall was recorded at isolated places over Kerala & Mahe on 26<sup>th</sup> & 27<sup>th</sup> June 2025.
- Heavy rainfall was recorded at isolated places over Kerala & Mahe on 26<sup>th</sup>, 27<sup>th</sup>, 28<sup>th</sup> & 29<sup>th</sup> June 2025 and 02<sup>nd</sup> July 2025.

## Large scale features

- ❖ Currently, Neutral El Nino–Southern Oscillation (ENSO) conditions prevail over the Equatorial Pacific Ocean. Forecasts from the latest Monsoon Mission Climate Forecast System (MMCFS) and other climate models suggest that these neutral conditions likely to persist till the end of the monsoon season.
- ❖ Currently, neutral Indian Ocean Dipole (IOD) conditions are being observed over the Indian Ocean. The model forecast indicates a possible transition to negative IOD conditions during the coming months.
- ❖ At present, neutral Indian Ocean Dipole (IOD) conditions are observed over the Indian Ocean. The latest MMCFS forecast indicates that weak negative IOD conditions are likely to develop during the monsoon season.
- ❖ Madden-Julian Oscillation (MJO) is currently in phase 2 with an amplitude less than 1. The model forecasts indicate that MJO is likely to make a loop in phase 2 during first half of the week with the same amplitude. Thereafter, it is indicated to move eastwards across phases 3,4 and 5 during the remaining days of the forecast period.

## Weather systems & associated precipitation during Week 1(03<sup>rd</sup> July to 09<sup>th</sup> July, 2025) and Week 2 (10<sup>th</sup> July to 16<sup>th</sup> July, 2025)

### Week 1(03<sup>rd</sup> July to 09<sup>th</sup> July, 2025)

#### WEATHER SYSTEMS

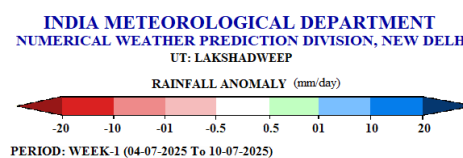
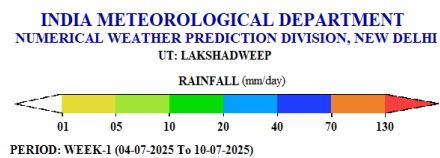
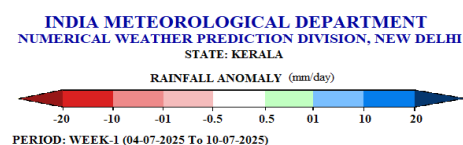
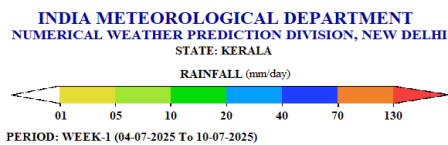
- An upper air cyclonic circulation lies over North Odisha adjoining Gangetic west Bengal between 1.5 & 5.8 km above mean sea level tilting southwestwards with height.
- An off-shore trough is present at sea level along Maharashtra-Karnataka coasts.

#### **FORECAST AND WARNING**

- **Widespread Moderate rainfall with Isolated heavy to very heavy rainfall** is very likely over Kerala on **03/07/2025**, **Widespread Moderate rainfall with Isolated heavy rainfall** is very likely over Kerala on **04/07/2025** and **05/07/2025**, **Fairly Widespread Moderate rainfall with Isolated heavy rainfall** is very likely over Kerala on **06/07/2025**. **Fairly Widespread Light to moderate rainfall** is very likely over Kerala during the period from **07/07/2025** to **09/07/2025**.
- **Widespread Moderate rainfall** is very likely over **Lakshadweep** on **03/07/2025** and **04/07/2025**, **Fairly Widespread light to Moderate rainfall** is very likely over

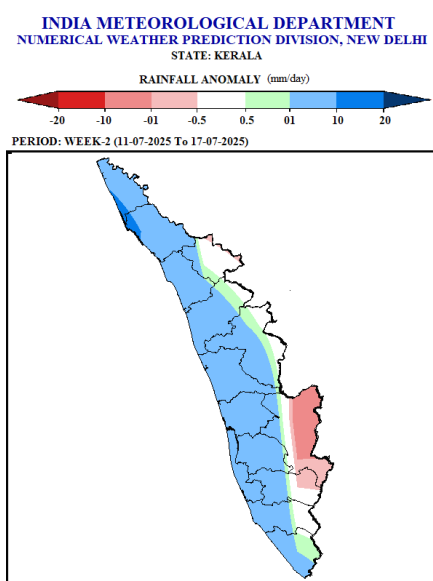
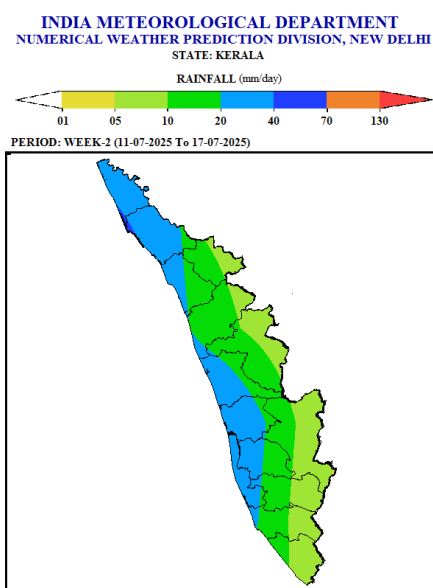
**Lakshadweep during the period from 05/07/2025 to 07/07/2025. Scattered Light rainfall is very likely over Lakshadweep on 08/07/2025 and 09/07/2025.**

- **Strong surface winds (speed 40-50 Kmph) very likely over Kerala, Mahe and Lakshadweep during the period from 03/07/2025 to 07/07/2025.**
- **Cumulatively Above Normal Rainfall is likely over Northernmost Districts and coastal sides of Southern Districts of Kerala and Normal to Below Normal Rainfall is likely over rest of the parts of Kerala and Mahe during week 1.**
- **Cumulatively Below Normal rainfall is likely over most parts of Lakshadweep during week 1.**

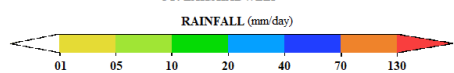


### Week 2(10th July to 16th July, 2025)

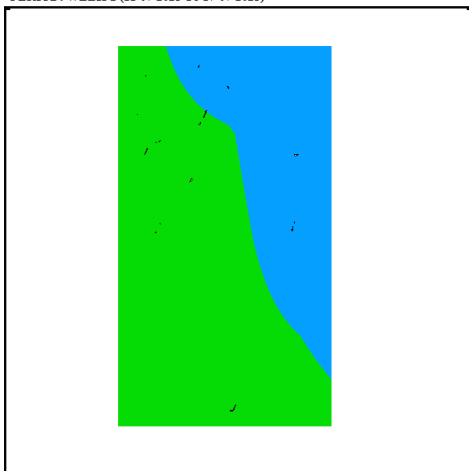
- ❖ Cumulatively **Above Normal rainfall** is likely over most parts of **Kerala** and **Mahe** except regions parallel to **Western Ghats** which may experience **Below Normal to Normal Rainfall** during **week 2**.
- Cumulatively **Above Normal rainfall** is likely over **Lakshadweep** during **week 2**.



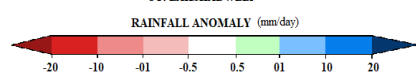
INDIA METEOROLOGICAL DEPARTMENT  
NUMERICAL WEATHER PREDICTION DIVISION, NEW DELHI  
UT: LAKSHADWEEP



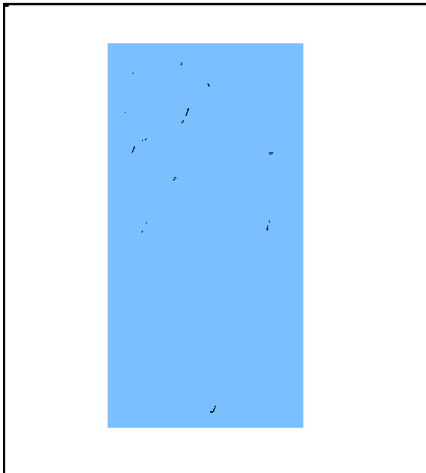
PERIOD: WEEK-2 (11-07-2025 To 17-07-2025)



INDIA METEOROLOGICAL DEPARTMENT  
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UT: LAKSHADWEEP



PERIOD: WEEK-2 (11-07-2025 To 17-07-2025)



## **IMPACT EXPECTED AND ACTION SUGGESTED**

### **Week 1(03rd July to 09th July, 2025)**

#### **Impact due to Isolated very heavy rainfall over Kerala during the week 1.**

##### **Impact Expected**

- ✓ Visibility may become poor due to intense spell of rainfall leading to traffic congestion.
- ✓ Temporary Disruption of traffic due to water logging in roads/ uprooting of trees/ breaking of tree branches leading to increased travel time.
- ✓ Uprooting of trees may cause damages to power sector
- ✓ Possibility of damages to vulnerable structures due to heavy to very heavy/ Extremely heavy rainfall
- ✓ Partial Damages to Kutcha Houses and Huts due to uprooting of trees.
- ✓ Possibilities of Flash floods due to intense spell of rainfall.
- ✓ Water logging / flooding in many parts of low-lying areas.
- ✓ Landslides/mud slide/land slip very likely.
- ✓ Heavy rainfall may damage the standing crops and vegetables in the maturity stage.
- ✓ Lightning may injure people and cattle at open place.
- ✓ Dispersion of soil from the field and hence seed displacement and poor germination of seeds.

##### **Action Suggested**

- ✓ Follow traffic advisories issued, if any.
- ✓ Avoid staying in vulnerable structure.
- ✓ Avoid going to the areas that face landslides/landslips/water logging problems/ river fronts.
- ✓ People in the vulnerable area are advised to move to safer places.
- ✓ Propping of the vegetable pandals recommended.
- ✓ Take shelter during thunderstorm/lightning activities.
- ✓ Provide mulch at the base of the crop to prevent soil and root damage.
- ✓ Avoid working in the fields during thunderstorm/lightning period and ensure proper mechanism to avoid runoff in case of rain.
- ✓ Postpone sowing of seeds; if already sown, avoid water stagnation in the field and

cover the seeded area with natural mulching materials like straw, farm residues etc.

✓ Be Updated.

### **Agromet advisories for Very Heavy Rainfall likely over Kerala-**

- Heavy rainfall may damage the standing crops and vegetables in the maturity stage.
- Propping of the vegetable pandals recommended.

### **Week 2(10th July to 16th July, 2025)**

**Impact due to Isolated heavy rainfall over Kerala during most days of the week.**

#### **Impact Expected**

- ✓ Moderate flash flood risk likely over some areas
- ✓ Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas.
- ✓ Occasional reduction in visibility due to heavy rainfall.
- ✓ Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- ✓ Minor damage to kutcha roads.
- ✓ Possibilities of damage to vulnerable structure.
- ✓ Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
- ✓ Damage to horticulture and standing crops in some areas due to inundation.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of Central Water Commission)

#### **Action Suggested**

- ✓ Check for traffic congestion on your route before leaving for your



destination.

- ✓ Follow any traffic advisories that are issued in this regard.
- ✓ Avoid going to areas that face the water logging problems often.
- ✓ Avoid staying in vulnerable structure.

#### **Agromet advisories for Heavy Rainfall likely over Kerala-**

- Heavy rainfall may damage the standing crops and vegetables in the maturity stage.
- Propping of the vegetable pandals recommended.

## Cyclogenesis

Issued on 03.07.2025

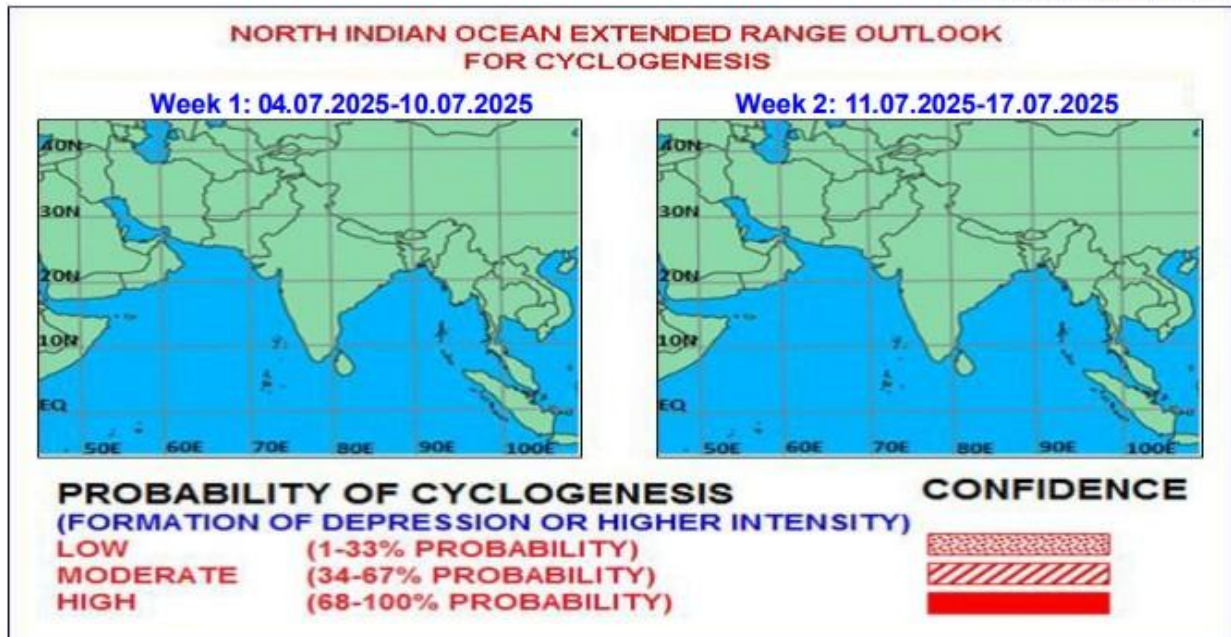


Fig. 1: Graphical Cyclogenesis over the north Indian Ocean during next two weeks

### **I.Environmental features:**

The guidance from various models (ECMF, ECMM, NCEP, JMA) indicates that Madden-Julian Oscillation (MJO) is currently in phase 2 with an amplitude less than 1. The model forecasts indicate that the MJO is likely to make a loop in phase 2 during the first half of week 1, with the amplitude remaining less than 1. Thereafter, it is indicated to move eastwards across phases 3, 4, and 5 during the remaining days of the forecast period. The NCICS CFS model also indicates similar features. Hence, MJO is likely to contribute positively towards the enhancement of convective activity over the Bay of Bengal (BoB). The guidance from the NCICS CFS model indicates the prevalence of westerly wind anomaly (5- 7mps) over central & north Arabian Sea (AS), central India and north BoB along with easterly wind anomaly (5-7 mps) over northern parts of India and north Bay of Bengal during first half of week 1. During later half of week 1, there is a gradual decreasing trend in both easterly and westerly wind anomalies, and MJO is also indicated to progress eastwards. Thus, the conditions are favorable for the development of cyclonic circulation/ low pressure area over north BoB during the first half of week 1. During week 2, there is a significant decreasing trend in westerly wind anomaly over the region, indicating weakening of the lower-level monsoonal flow over the region.

## II. Model Guidance:

The guidance from various Numerical models, including IMD GFS, NCEP-GFS, NCUM, ECMWF, and EC-AIFS indicates an existing upper-air cyclonic circulation over north Odisha adjoining Gangetic West Bengal (GWB). Although there are variations amongst model forecasts, as per consensus, the cyclonic circulation is likely to move slowly west-northwestwards across Jharkhand till 4th July, 2025, before it gets merged with the vertical extension of the seasonal monsoon trough. There is a likely development of another upper-air cyclonic circulation over the northwest BoB and adjoining West Bengal and Bangladesh around 6 July. According to a few model forecasts, under its influence, there is a likelihood for the formation of a low pressure area over the same region around 7th July. However, it is likely to move west-northwestwards across GWB & adjoining north Odisha, Jharkhand and east Madhya Pradesh during the subsequent 3-4 days. If we consider the 10-day forecasts of the global model, there is no probability of cyclogenesis during the period over North Indian Ocean (NIO) region. The 850 hPa mean wind field of IMD ERF Model indicates southwesterly winds over AS, central & south peninsular India and the entire BoB during both weeks. The model also indicates a seasonal monsoon trough in its normal position during week 1; however, the monsoon trough, especially its western end, is likely to shift towards the north during week 2. The 850 hPa wind anomaly field indicates anomalous cyclonic circulation over northwest AS with a north-south trough along the western part of AS during week 1. A weak cyclonic circulation over northwest BoB off Odisha coast is also indicated the wind anomaly field. There is a feeble east-west troughing developed across central AS during week 2. In the second week, the 850 hPa wind anomaly also indicates a cyclonic circulation over coastal Myanmar and the adjoining north Andaman Sea. The model is also indicating low to moderate (30-40 %) probability of cyclogenesis over the Gangetic plain in eastern parts of India during week 1. This is further reiterated by above normal rainfall activity over north BoB, central India, and northeast & adjoining central AS. However, there is no zone with a significant probability of cyclogenesis during week 2. The global ensemble model, as well as sub-seasonal forecasts of the ECMWF, do not suggest any significant probability of cyclogenesis during entire forecast period. Thus, guidance from various numerical models indicates likely formation of cyclonic circulation/ low pressure area over northwest BoB and adjoining areas of eastern parts of India, with good monsoon rainfall activity over India during week 1, and there is likely subdued monsoon activity over the Indian region.

**III. Inference:** Considering various large-scale environmental features and model guidance, it is inferred that,

1. The existing upper-air cyclonic circulation over north Odisha adjoining Gangetic West Bengal is likely to persist for 24 hours with a slow west-northwestward movement.
2. There is a likelihood of the formation of another upper-air cyclonic circulation over North Bay of Bengal and adjoining coastal West Bengal & Bangladesh around 6th July. It is likely to move westnorthwestwards across Gangetic West Bengal and adjoining north Odisha, Jharkhand, and east Madhya Pradesh during the subsequent 3-4 days. However, there is no likelihood of its further intensification.
3. There is no probability of cyclogenesis during week 2. However, there is a likely development of an upper-air cyclonic circulation over the north Bay of Bengal and adjoining coastal West Bengal-Odisha and Bangladesh during the week.

**Legends:** : MJO: Madden Julian Oscillation, ERW: Equatorial Rossby Waves, KW: Kelvin Waves, NCICS: North Carolina Institute for Climate Studies (for Equatorial waves Forecast), IMD GFS: India Meteorological Department Global Forecast System, NCUM: National Centre for MediumRange Weather Forecasting Centre (NCMRWF) Unified Model, ECMWF: European Centre for Medium-Range Weather Forecasting, EC-AIFS: ECMWF Artificial Intelligence Forecasting System, ECMM: ECMWF-Ensemble System Bias Corrected, GPP: Genesis Potential Parameter, NCEP GFS/GEFS/CFS: National Centre for Environment Prediction GFS/GEFSv12/CFSv2, CPC: Climate Prediction Center (for MJO update), IMD-GEFS: GFS ensemble forecast system of IMD, NEPS: NCUM ensemble prediction system, CNCUM: Coupled NCUM, CPC: Climate Prediction Centre, NWS: National Weather Service, INCOIS: Indian National Centre for Ocean Information Services.

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(Next bulletin will be issued on 10<sup>th</sup> July 2025)

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