

NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN



08th October 2022 to 08th November 2022

Issued on 08th October 2022



Department of Meteorology

Department of Agriculture

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Weather and Climate update Department of Meteorology

Rainfall Analysis-September 2022

According to the available rainfall data in the Department of Meteorology, below normal rainfalls were reported over most parts of the country except Mathale district, where near normal rainfall was received during the month of September 2022. Moreover, according to the Figure 01 (a), the district percent normal rainfalls over the country where almost half or less than half of the normal (climatological) rainfall during the month.

Observed rainfall as a percentage of normal during the month of September 2022 is shown in the figure 1(a) and observed cumulative rainfall as a percentage of normal from 1st January 2022 to 30th September 2022 is shown in the figure 1 (b). Cumulative rainfall in the figure 1(b) shows near or above normal rainfalls over most parts of the country except Gampaha, Colombo, Mathara, Badulla and Monaragala districts, where a little below normal rainfall has reported.

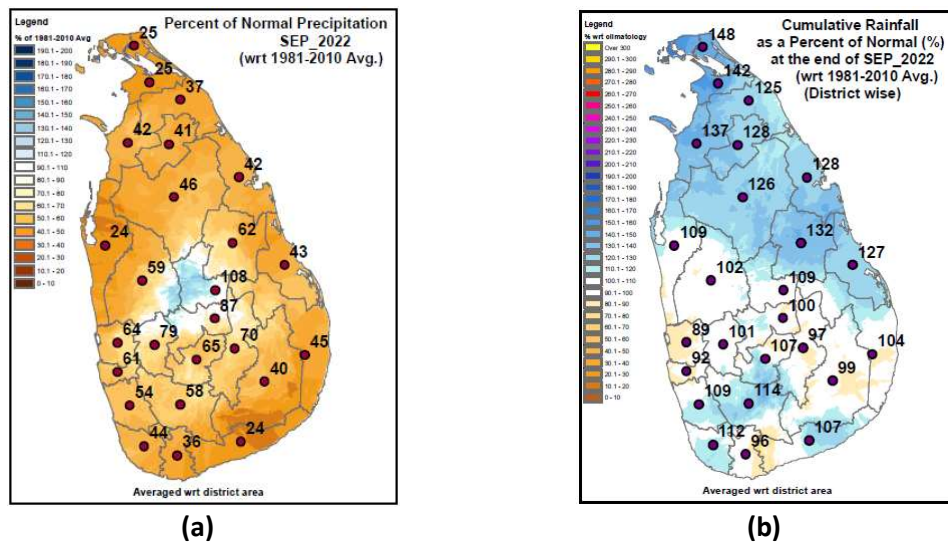


Figure 01 : Observed Monthly rainfall as percentage of long-term average (1981-2010) during September 2022 (a) and cumulative rainfall from 01st January 2022 to 30th September 2022 as percentage of long term average (1981- 2010) (b)

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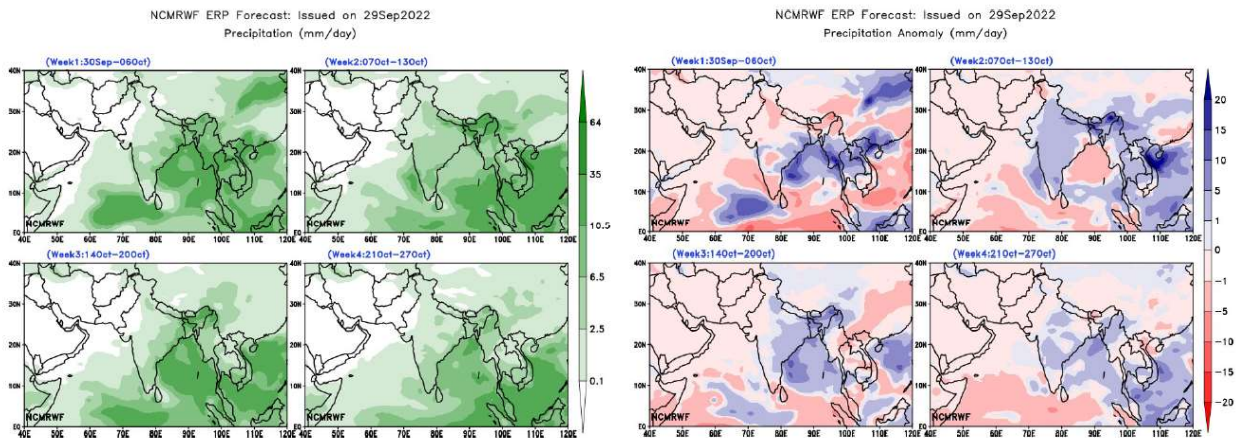


Figure 03 : Weekly rainfall Forecast and the Rainfall anomaly (mm/day)

Note: Department of Meteorology issues **Weekly Agromet Bulletin** to update climatological situation. It can be downloaded from the web page link- Agromet Bulletin (meteo.gov.lk)

http://meteo.gov.lk/index.php?option=com_content&view=article&id=28&Itemid=301&lang=en#weekly-updates-2022

Weather forecast for the season of October-November-December (OND) 2022

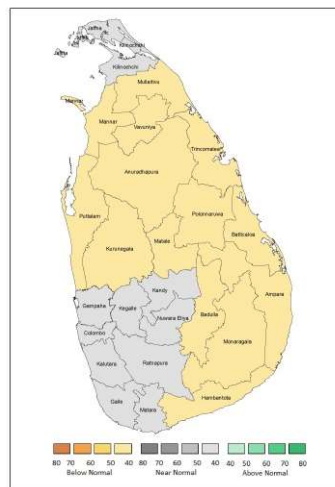





Figure 04 : Seasonal Rainfall Forecast for October-December 2022 (OND 2022)

Below normal rainfalls are likely over most parts of the country except SW part and in Killinochchi and Jaffna districts where near normal rainfalls are likely during OND 2022 (Fig.4).

Generally low-level atmospheric disturbances are possible over and vicinity of Sri Lanka during October to December season. If so, rainfall can be enhanced.

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Monthly Rainfall Forecasts for October-November-December 2022

| Month | Rainfall forecast |
|--|---|
| <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="border: 1px solid black; padding: 5px; text-align: center;">October</div> </div> | <p>There is a higher probability for below normal rainfalls over most parts of the country during the month of October 2022.</p> <p>However, low level atmospheric disturbances are possible over and vicinity of Sri Lanka during the month of October in general. If so, rainfall can be enhanced</p> |
| <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="border: 1px solid black; padding: 5px; text-align: center;">November</div> </div> | <p>There is a possibility for near normal rainfalls over South western parts and in Jaffna and Killinochchi districts and below normal rainfalls elsewhere during the month of November 2022.</p> <p>However, generally low level atmospheric disturbances are possible over and vicinity of Sri Lanka during the month of November. If so, rainfall can be enhanced.</p> |
| <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="border: 1px solid black; padding: 5px; text-align: center;">December</div> </div> | <p>Near normal rainfalls are likely over South western parts and in Jaffna and Killinochchi districts and below normal rainfalls elsewhere during the month of December 2022.</p> <p>However, low level atmospheric disturbances are possible over and vicinity of Sri Lanka during the month December. If so, rainfall can be enhanced.</p> |

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Agro-met Advisory : October 2022

Natural Resource Management Centre, Department of Agriculture
(For the months of October, November and December 2022)

Department of Meteorology (DoM) has issued the seasonal weather forecast for the coming three month period as follows,

- Rainfall forecast for **October 2022**

Below normal rainfall has been forecasted over most parts of the country. **However, DoM further predicted a possibility for developing low level atmospheric disturbances that may lead to higher rainfall.**



- Rainfall forecast for **November and December 2022**

Near normal rainfall has been predicted over South-western parts and in Jaffna and Killinochchi districts and below normal rainfall has been forecasted for the other regions of the country.

DoM further forecasted the possibility for development of low level atmospheric disturbances over and vicinity of Sri Lanka, that can be resulted higher rainfalls.



With the available weather information, it is advisable to consider general climatological rainfall values as **near normal** rainfall values for each month for agriculture planning. Agro-ecological region-wise expected average rainfall values are attached in Table 1 - 3.

The average effective storage of major reservoirs that belong to the Irrigation Department (ID) is about 34%. Recently updated summary of daily water levels & storage of major reservoirs are attached in Table 4. According to the ID, the water levels in the major reservoirs are not at the satisfactory level to continue a successful *Maha* season, except for *Mahaweli* areas. However, according to the tentative schedules of the ID, cultivation activities under major irrigation schemes will start during 15th of October to 15th of November.

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Considering the weather forecast of DoM, irrigation water availability information of ID and field level information of Sri Lanka *Mahaweli* Authority of Sri Lanka (MASL) and Department of Agrarian Development (DAD), **following information are highlighted** from this agro-met advisory.

- The seasonal weather forecast of DoM predicted a below average rainfall for the coming three months; from October to December, especially for the major paddy growing areas.
- The onset of second Inter-monsoon rains may delay till end of October as the south-westerly wind flow is still in active mode, hindering the chance to develop the convectional rains customary to the first two weeks of October.
- It is very important to make aware of agricultural community on the short and medium term weather predictions during the coming three months. Because, in addition to above information, DoM further mentioned the possibility of developing 2 – 4 cyclonic disturbance or cyclonic storms during the subjected period, in the 27th Monsoon Forum, held on 04.10.2022.

Considering the above information, following agronomic interventions are recommended to ensure optimum productivity under existing situation.

Paddy cultivation:

- Paddy farmers under major and minor irrigation schemes are highly advisable to plan their cultivation activities getting maximum benefits of rain-water to minimize the impact of predicted below normal rainfall during the season.
- If they complete the first land preparation activity using incipient rains with the commencement of the season, considerable amount of water in the reservoirs can be saved to continue the season.
- Adaption of strict water issuing schedules is mandatory in all irrigation schemes while the season is being progressed.
- Considering the predicted late and below normal rainfall, **3½ months age classes of paddy varieties**, are recommended to the irrigated paddy systems. However, under critical conditions, farmer can select **3 months age classes**.

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- However, farmers are able to go for 4-month age classes of paddy varieties, if the irrigation tank in a given paddy tract is almost at the Full Supply Level (FSL).
- **Rainfed paddy farmer** are advised to select **3 months age classes** of **paddy varieties** and are able to start land preparation before the seasonal rains.
- However, they are informed to do the field establishment of crops with the onset of the second inter-monsoonal rains, strongly considering the medium term weather predictions.
- **It is strictly advice to complete land preparation activities within three weeks.** Follow the agronomic practices recommended from the previous advisory during land preparation activities.
- Manual transplanting or machine transplanting is advisable, so that mechanical weeding can be done manually or with a power-weeder.
- Encourage seedling broadcasting (Parachute method) if parachute trays are available.

Other Field Crops (OFCs)

- Farmers who are planning to cultivate other field crops including Maize, are advised to start cultivation actives with the onset of seasonal rains.
- It is recommended to do the field establishment of Maize before 15th of October to minimize the pest and diseases damages. However, due to the late onset of seasonal rains, if farmers have to delay the season, special attention should have to pay on Fall Army Worm (FAW) attack. Identify attack at the initial stage and follow the recommended integrated management approach for FAW control.
- Late planting of OFCs may likely to increase caterpillar attacks in common, therefore, special attention is needed on identifying the damages at the initial stage.
- ❖ Please consider that this advisory was prepared based the on the national level information and therefore, it is advisable to consider localized detailed information, as a supplementary to this advisory.

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An updated Agro-met Advisory will be issued in early November in consultation with the members of the technical advisory committee and other relevant resource persons and stakeholders.

Table 1: Agro-ecological region wise expected rainfall values for **October**

| Dry Zone (mm) | | | Intermediate Zone (mm) | | | Wet Zone (mm) | |
|---------------|-------|--|------------------------|-------|--|---------------|-------|
| AER | Oct | | AER | Oct | | AER | Oct |
| DL1a | 127.0 | | IL1a | 209.4 | | WL1a | 385.2 |
| DL1b | 132.0 | | IL1b | 145.3 | | WL1b | 324.1 |
| DL1c | 100.3 | | IL1c | 155.8 | | WL2a | 252.8 |
| DL1d | 103.0 | | IL2 | 136.7 | | WL2b | 292.8 |
| DL1e | 125.4 | | IL3 | 175.8 | | WL3 | 251.6 |
| DL1f | 129.5 | | IM1a | 172.7 | | WM1a | 366.2 |
| DL2a | 120.3 | | IM1b | 161.8 | | WM1b | 299.5 |
| DL2b | 96.8 | | IM1c | 119.6 | | WM2a | 296.1 |
| DL3 | 111.1 | | IM2a | 177.3 | | WM 2b | 279.4 |
| DL4 | 107.4 | | IM2b | 170.6 | | WM3a | 274.5 |
| DL5 | 85.5 | | IM3a | 203.8 | | WM3b | 233.9 |
| | | | IM3b | 180.5 | | WU1 | 343.4 |
| | | | IM3c | 165.4 | | WU2a | 268.4 |
| | | | IU1 | 228.0 | | WU2b | 264.7 |
| | | | IU2 | 187.4 | | WU3 | 196.7 |
| | | | IU3a | 197.9 | | | |
| | | | IU3b | 195.3 | | | |
| | | | IU3c | 189.4 | | | |
| | | | IU3d | 145.4 | | | |
| | | | IU3e | 144.7 | | | |

(Source: Punyawardena *et al.* 2003, Agro-ecological Region Map)

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Table 2: Agro-ecological region wise expected rainfall values for **November**

| Dry Zone (mm) | | Intermediate Zone (mm) | | Wet Zone (mm) | |
|---------------|-------|------------------------|-------|---------------|-------|
| AER | Nov | AER | Nov | AER | Nov |
| DL1a | 217.9 | IL1a | 189.4 | WL1a | 305.1 |
| DL1b | 168.3 | IL1b | 174.9 | WL1b | 273.7 |
| DL1c | 202.0 | IL1c | 226.6 | WL2a | 242.7 |
| DL1d | 166.4 | IL2 | 224.3 | WL2b | 233.0 |
| DL1e | 187.5 | IL3 | 163.9 | WL3 | 222.3 |
| DL1f | 157.2 | IM1a | 242.3 | WM1a | 289.5 |
| DL2a | 196.2 | IM1b | 252.3 | WM1b | 285.7 |
| DL2b | 191.3 | IM1c | 156.0 | WM2a | 232.8 |
| DL3 | 191.4 | IM2a | 248.5 | WM 2b | 248.0 |
| DL4 | 185.8 | IM2b | 264.8 | WM3a | 226.4 |
| DL5 | 137.4 | IM3a | 208.4 | WM3b | 220.6 |
| | | IM3b | 218.8 | WU1 | 258.0 |
| | | IM3c | 195.3 | WU2a | 209.2 |
| | | IU1 | 272.8 | WU2b | 229.8 |
| | | IU2 | 251.4 | WU3 | 189.6 |
| | | IU3a | 290.6 | | |
| | | IU3b | 272.5 | | |
| | | IU3c | 227.2 | | |
| | | IU3d | 140.1 | | |
| | | IU3e | 167.0 | | |

(Source: Punyawardena *et al.* 2003, Agro-ecological Region Map)

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Table 3: Agro-ecological region wise expected rainfall values for **December**

| Dry Zone (mm) | | Intermediate Zone (mm) | | Wet Zone (mm) | |
|---------------|-------|------------------------|-------|---------------|-------|
| AER | Dec | AER | Dec | AER | Dec |
| DL1a | 89.0 | IL1a | 50.9 | WL1a | 130.6 |
| DL1b | 105.7 | IL1b | 69.5 | WL1b | 111.2 |
| DL1c | 191.9 | IL1c | 148.5 | WL2a | 117.5 |
| DL1d | 178.1 | IL2 | 246.1 | WL2b | 63.5 |
| DL1e | 167.2 | IL3 | 69.6 | WL3 | 53.0 |
| DL1f | 99.7 | IM1a | 281.0 | WM1a | 124.2 |
| DL2a | 236.0 | IM1b | 259.5 | WM1b | 145.2 |
| DL2b | 240.1 | IM1c | 260.9 | WM2a | 82.7 |
| DL3 | 99.9 | IM2a | 132.6 | WM 2b | 61.2 |
| DL4 | 96.3 | IM2b | 156.7 | WM3a | 70.0 |
| DL5 | 87.2 | IM3a | 131.9 | WM3b | 151.9 |
| | | IM3b | 172.1 | WU1 | 102.8 |
| | | IM3c | 167.5 | WU2a | 95.8 |
| | | IU1 | 276.5 | WU2b | 118.9 |
| | | IU2 | 267.8 | WU3 | 132.9 |
| | | IU3a | 159.9 | | |
| | | IU3b | 152.9 | | |
| | | IU3c | 174.3 | | |
| | | IU3d | 84.7 | | |
| | | IU3e | 130.5 | | |

(Source: Punyawardena *et al.* 2003, Agro-ecological Region Map)

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Table 4: Summary of daily water levels & storage of major reservoirs (06.10.2022)

| NO | RANGE | NO OF TANKS | STORAGE (Acft) | | | | |
|----|-------------|-------------|----------------|---------|-----------|-----------|----|
| | | | GROSS | DEAD | PRESENT | EFFECTIVE | |
| | | | | | | Acft. | % |
| 1 | Ampara | 9 | 1,052,327 | 16,259 | 203,625 | 187,366 | 18 |
| 2 | Anuradapura | 10 | 555,566 | 27,583 | 262,809 | 235,226 | 45 |
| 3 | Badulla | 7 | 78,266 | 4,138 | 35,104 | 30,966 | 42 |
| 4 | Batticaloa | 4 | 140,120 | 1,085 | 38,894 | 37,809 | 27 |
| 5 | Hambantota | 10 | 378,065 | 34,172 | 148,881 | 114,709 | 33 |
| 6 | Galle | 2 | 3,160 | - | 2,847 | 2,847 | 90 |
| 7 | Kandy | 3 | 28,450 | 386 | 21,438 | 21,052 | 75 |
| 8 | Kurunegala | 10 | 142,381 | 5,670 | 99,950 | 94,280 | 69 |
| 9 | Monaragala | 3 | 44,900 | 2,640 | 17,896 | 15,256 | 36 |
| 10 | Polonnaruwa | 4 | 351,700 | 24,300 | 205,915 | 181,615 | 55 |
| 11 | Puttalam | 2 | 74,233 | 8,400 | 30,586 | 22,186 | 34 |
| 12 | Trincomalee | 5 | 190,895 | 2,555 | 57,126 | 54,571 | 29 |
| 13 | Mannar | 4 | 67,924 | 675 | 21,878 | 21,203 | 32 |
| | TOTAL | 73 | 3,107,987 | 127,863 | 1,146,949 | 1,019,086 | 34 |

(Source: Water Management Division, Department of Irrigation)

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