# NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

08th May 2022 to 08th June 2022

Issued on 11th May 2022


**Department of Meteorology**

**Department of Agriculture**

**2022.05.11**

# NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

**Farmers and all other farm managements are advised to follow the guidelines of Government of Sri Lanka to avoid infection and social transmission of CORONA virus (COVID-19). Precautions and safety measures should be taken up to prevent the Corona virus spread. Simple measures include social distancing, maintaining personal hygiene by washing hands with soap, wearing of face mask, drink hot water, stay at home and cleaning of implements and machinery. Farmers should not work in a group; consult with a doctor in case of any symptom.**

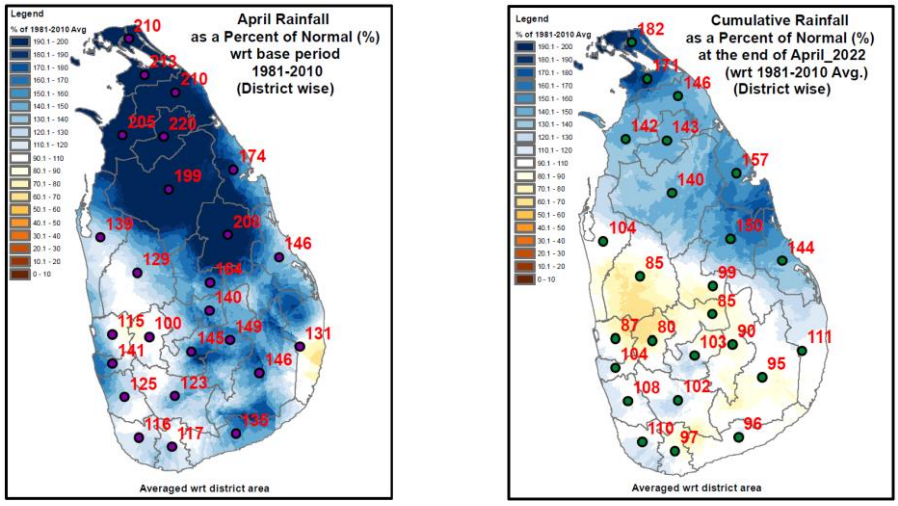
## Weather and Climate update

### Department of Meteorology

**Rainfall Analysis-April 2022**

According to the available rainfall data in the Department of Meteorology, above normal rainfalls were reported over most parts of the country during the month of April 2022. Northern and North Central provinces received more than twice of normal rainfall during the month (Figure 1a). Cumulative rainfalls from 1st January to 30th April 2022, were near or above normal over most parts except Gampaha, Kurunegala, Kegalle and Kandy districts (Figure 1 b) where they were below normal.

Observed rainfall as a percentage of normal during the month of April 2022 is shown in the figure 1(a) and observed cumulative rainfall as a percent of normal from 1st January 2022 to 30th April 2022 is shown in the figure 1 (b).




(a) (b)

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

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**Temperature analysis (April)**

Average maximum temperatures(day time) were a little below normal over Mulativu, Mannar, Vavuniya, Anuradhapura and Badulla districts and near normal over other parts of the country during the month of April 2022. Average minimum temperatures(night time) were near normal over the country during the month of April 2022.

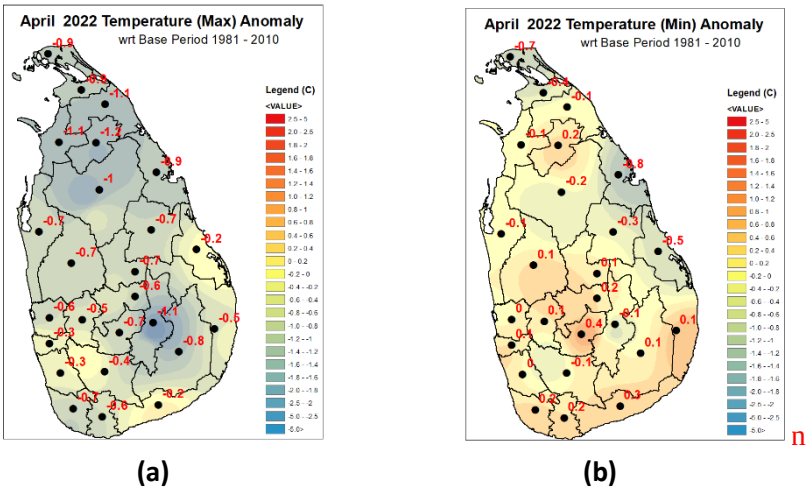


**Figure 02 :** Average Maximum (a) and Minimum (b) Temperature anomalies during the month of April 2022 compared with the long-term average (1981-2010)

## Weather Forecast: Forecast for the month of May 2022(Weekly)

(Updatd on 5th May 2022)

Slightly below normal rainfalls are likely over most parts of the country during the week of 06-12 May 2022. During the weeks 13-19 May, 20-26 May and 27 May- 02 June, near normal rainfalls are likely over the country (figure 03).

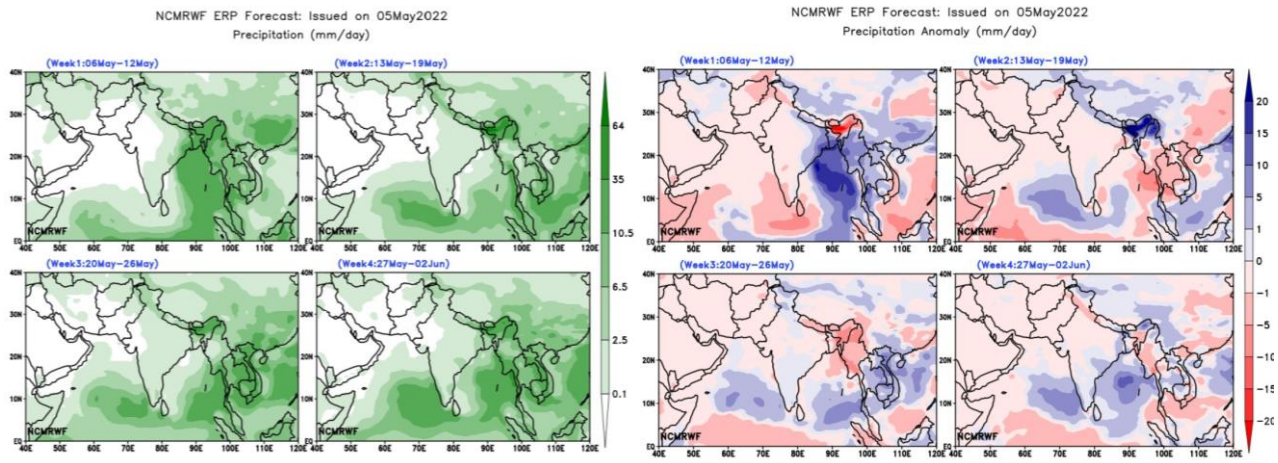


**Figure 03** : Weekly rainfall Forecast and the Rainfall anomaly (mm/day)

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://www.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 May-June-July (MJJ) 2022

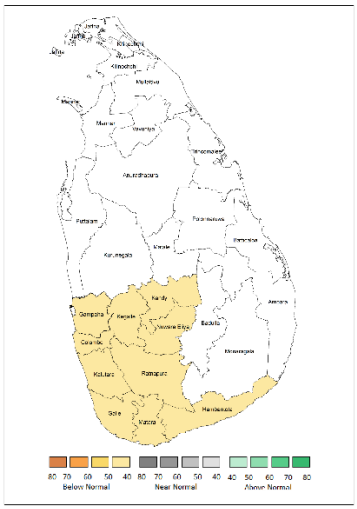


**Figure 04** : Seasonal Rainfall Forecast for May-July 2022 (MJJ 2022)

According to the Department of Meteorology, below normal rainfalls are expected in Southern and Southwestern parts and no clear signal for remaining areas of the country, where there is equal probability for having near or above or below normal rainfalls, for the season of MJJ 2022(Fig. 4).

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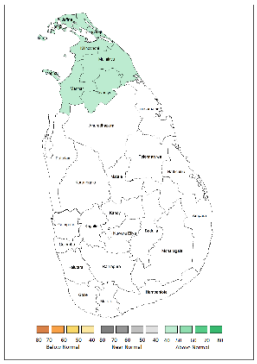
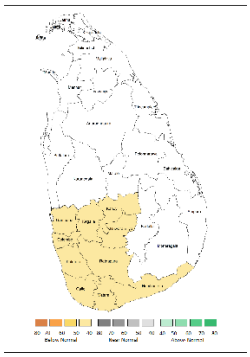
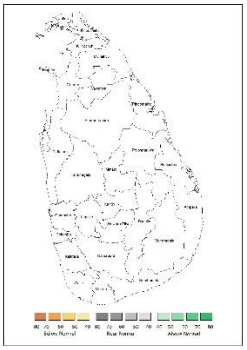
## Monthly Rainfall Forecasts for May-June-July 2022

| Month | Rainfall forecast |
|---|---|
|  May 2022 | There is a possibility for slightly above normal rainfalls over Northern province and no clear signal for other areas where there is equal probability of having above or near or below normal rainfalls during the month of May 2022 |
|  June 2022 | There is a probability for below normal rainfall over Southern and Southwestern parts and no clear signal for remaining areas of the country for the month of June 2022. |
|  July 2022 | There is no clear signal and there exist equal probabilities for below or near or above normal rainfalls over the country during the month of July 2022. |

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## Agro-met Advisory: May 2022

NRMC, Department of Agriculture (*)

(For the months of May, June and July)

Department of Meteorology (DoM) forecasts a slightly above normal rainfall over Northern Province for May and no weather prediction has been issued for the other areas during this month. However, DoM further stated that, there will be a probability to receive high rainfall due to low pressure systems and depressions, over the vicinity of Sri Lanka, which may result enhanced rainfall during May. Below normal rainfall was predicted for Southern and Southwestern parts for June and no weather prediction has been issued for the other areas. No weather forecasts have been given for July. DoM further forecasts that, below normal rainfalls over Southern and Southwestern parts of the country during May, June and July (MJJ) season. With the available weather information, it is advisable to consider general climatological rainfall values of each month for agriculture planning. Agro-ecological region-wise expected average rainfall values are attached in Table 1 - 3.

According to the Irrigation Department (ID), the average effective storage of major reservoirs is about 71%. Recently updated summary of daily water levels & storage of major reservoirs are attached in Table 4. ID further stated that, compared to a normal Yala season, the carry over storage of major reservoirs is at a very satisfactory level to continue a successful Yala season. However, only about 20 - 25% progress of land preparation activities could be observed in most paddy lands, under major reservoirs. Nevertheless, some special area like Ampara and Batticaloa have shown a satisfactory level of progress in land preparation activities. Under a normal condition, 1/3 of water in the reservoir is used for the land preparation activities. This helps to store considerable amount of water to continue the rest of the season. However, under the current situation, most of the major reservoirs in Polonnaruwa, Anuradhapura Trincomalee, Batticaloa, and Mannar, will reach up to the spill level, with expected rainwater. It may lead yield losses due to floods. Mahaweli Authority of Sri Lanka also agreed with ID and further stated that Mahaweli areas such as System B and C also show a minimum progress of land preparation activities. However, System H has shown favorable trend for cultivation of other field crops (OFCs).

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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, the Technical Advisory Team Members recommend the following agronomic interventions for the rest of 2022 *Yala* season through this agro-met advisory.

**Paddy cultivation:**

- From our previous agro-met advisory (April, 2022), paddy farmers were highly advised to establish the crop, before the 2nd week of May.
- However, with the present situation of the country and due to the shortage of the other inputs including fertilizer, most farmers are reluctant to start their cultivation activities. Therefore, through this advisory, attention of the paddy farmers is drawn on following weather related issues.
    - After mid-May short intense rains can be resulted due to low pressure systems created in the vicinity of Sri Lanka. Paddy farmers who are going to start the cultivation activities during this period, might have to do re-sowing, due to the damages that can be caused by heavy rains.
    - Due to the late cultivation, if the harvesting period extended to September, the yield can be damaged by the heavy rains that can be received during Second Inter-monsoon season.
    - If the paddy farmers in the Intermediate and Dry Zones, do not start their cultivation activities before the end of May, they should have to depend totally on the irrigated water. Because during the Southwest monsoon season (especially June and July) those areas are climatologically dry. (Ref. Table 2 and 3). However, paddy farmers, who are under minor and medium irrigation systems, will face to a critical situation due to the shortage of irrigation water.
    - A late *Yala* season will lead to unsuccessful inter-season (3rd season) and it will cause some difficulties to reach the national targets of OFC's such as Green gram.
    - A late *Yala* season again leads to a late *Maha* season (2022/23 *Maha*) and it will directly affect the food security of the country.

- Considering above factors, Paddy farmers, who are planning for late cultivation, are advised to select short aged rice varieties, preferably 3 or 2½ months rice varieties.
- To avoid the impacts of late cultivation, try to finish land preparation activities within two weeks deploying 10 days between 1st and 2nd ploughing and then 4-5 days for tertiary tillage that involves puddling and levelling.
- Farmers can opt to seedling broadcasting and further to that raw seeding or transplanting will help to carryout manual or mechanical weed controlling while the crop is in the field.
- Since the late cultivation also leads to staggered cultivation, a special attention is needed on pest and disease control.

**Other Field Crops (OFCs)**

- OFC farmers are promoted to start their cultivation activities in the paddy tracks that are not cultivating due to different reasons for this season. This will be important to ensure national food security.
- However, as mentioned in the previous agro-met advisory, farmers who are planning to start the cultivation actives in May, should have to give a special attention to improve drainage systems to avoid the water logging situations due to unexpected intense rains.
- OFC's such as Black gram, Soy bean, Green gram and Cowpea, can be cultivated as a solution for the shortage of agricultural inputs.
- However, these farmers should have to give a special attention on possible crop damages caused due to pest and diseases.
- Nurseries for the Big onion cultivations are not still established by the farmers in the most Big onion growing areas. However, it is important to finish the field establishment of Big onion before the end of May to prevent the yield damages that can be caused by heavy rains during the harvesting period.

- Vegetable cultivation also promoted to increase the food crop production of the country. However, excessive care, should have to take to prevent damages caused by intense rains during this month and prevent damages due to infectious disease such as bacterial and fungal diseases and also to the post-harvest losses.

- 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.

An updated Agro-met Advisory will be issued in early June for the rest of 2022 *Yala* season in consultation with the Department of Meteorology and other relevant resource persons and stakeholders.

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

| Dry Zone (mm) | | | Intermediate Zone (mm) | | | Wet Zone (mm) | |
|---|---|---|---|---|---|---|---|
| **AER** | **May** | | **AER** | **May** | | **AER** | **May** |
| DL1a | 44.5 | | IL1a | 104.0 | | WL1a | 358.3 |
| DL1b | 31.8 | | IL1b | 88.5 | | WL1b | 345.7 |
| DL1c | 27.1 | | IL1c | 62.9 | | WL2a | 205.3 |
| DL1d | 17.5 | | IL2 | 40.0 | | WL2b | 142.4 |
| DL1e | 24.3 | | IL3 | 60.7 | | WL3 | 198.8 |
| DL1f | 27.5 | | IM1a | 67.3 | | WM1a | 293.3 |
| DL2a | 29.5 | | IM1b | 42.0 | | WM1b | 252.8 |
| DL2b | 14.5 | | IM1c | 34.5 | | WM2a | 158.7 |
| DL3 | 18.5 | | IM2a | 121.4 | | WM 2b | 143.4 |
| DL4 | 13.7 | | IM2b | 78.4 | | WM3a | 107.3 |
| DL5 | 21.0 | | IM3a | 82.9 | | WM3b | 85.6 |
| | | | IM3b | 46.7 | | WU1 | 244.5 |
| | | | IM3c | 55.0 | | WU2a | 170.5 |
| | | | IU1 | 81.4 | | WU2b | 156.4 |
| | | | IU2 | 84.1 | | WU3 | 123.0 |
| | | | IU3a | 94.2 | | | |
| | | | IU3b | 84.6 | | | |
| | | | IU3c | 78.0 | | | |
| | | | IU3d | 95.8 | | | |
| | | | IU3e | 70.6 | | | |

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

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

| Dry Zone (mm) | | | Intermediate Zone (mm) | | | Wet Zone (mm) | |
|---|---|---|---|---|---|---|---|
| **AER** | **Jun** | | **AER** | **Jun** | | **AER** | **Jun** |
| DL1a | 4.9 | | IL1a | 65.8 | | WL1a | 280.5 |
| DL1b | 3.1 | | IL1b | 52.4 | | WL1b | 227.2 |
| DL1c | 1.1 | | IL1c | 12.9 | | WL2a | 181.7 |
| DL1d | 0.1 | | IL2 | 5.7 | | WL2b | 164.3 |
| DL1e | 0.0 | | IL3 | 18.5 | | WL3 | 121.2 |
| DL1f | 0.4 | | IM1a | 19.4 | | WM1a | 312.5 |
| DL2a | 3.5 | | IM1b | 27.7 | | WM1b | 227.4 |
| DL2b | 30.2 | | IM1c | 5.6 | | WM2a | 226.4 |
| DL3 | 0.7 | | IM2a | 77.8 | | WM 2b | 160.0 |
| DL4 | 0.0 | | IM2b | 16.2 | | WM3a | 121.3 |
| DL5 | 28.6 | | IM3a | 92.9 | | WM3b | 79.4 |
| | | | IM3b | 39.0 | | WU1 | 344.8 |
| | | | IM3c | 50.1 | | WU2a | 274.3 |
| | | | IU1 | 83.1 | | WU2b | 217.6 |
| | | | IU2 | 51.1 | | WU3 | 137.9 |
| | | | IU3a | 16.5 | | | |
| | | | IU3b | 22.8 | | | |
| | | | IU3c | 11.7 | | | |
| | | | IU3d | 12.6 | | | |
| | | | IU3e | 17.3 | | | |

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

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

| Dry Zone (mm) | | | Intermediate Zone (mm) | | | Wet Zone (mm) | |
|---|---|---|---|---|---|---|---|
| **AER** | **Jul** | | **AER** | **Jul** | | **AER** | **Jul** |
| DL1a | 6.4 | | IL1a | 36.1 | | WL1a | 187.7 |
| DL1b | 3.4 | | IL1b | 32.3 | | WL1b | 124.3 |
| DL1c | 5.8 | | IL1c | 18.7 | | WL2a | 120.3 |
| DL1d | 5.0 | | IL2 | 16.7 | | WL2b | 121.9 |
| DL1e | 6.7 | | IL3 | 10.3 | | WL3 | 71.6 |
| DL1f | 0.3 | | IM1a | 27.3 | | WM1a | 233.3 |
| DL2a | 15.4 | | IM1b | 19.4 | | WM1b | 160.5 |
| DL2b | 9.2 | | IM1c | 5.7 | | WM2a | 201.0 |
| DL3 | 1.9 | | IM2a | 55.3 | | WM 2b | 134.9 |
| DL4 | 0.4 | | IM2b | 23.0 | | WM3a | 84.8 |
| DL5 | 3.5 | | IM3a | 87.8 | | WM3b | 64.5 |
| | | | IM3b | 27.1 | | WU1 | 287.1 |
| | | | IM3c | 42.7 | | WU2a | 247.6 |
| | | | IU1 | 73.3 | | WU2b | 178.8 |
| | | | IU2 | 54.1 | | WU3 | 127.9 |
| | | | IU3a | 26.0 | | | |
| | | | IU3b | 20.0 | | | |
| | | | IU3c | 30.0 | | | |
| | | | IU3d | 31.6 | | | |
| | | | IU3e | 22.0 | | | |

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

Table 4: Summary of daily water levels & storage of major reservoirs (05.05.2022)

| NO | RANGE | NO OF TANKS | STORAGE (Acft) | | | | |
|---|---|---|---|---|---|---|---|
| | | | GROSS | DEAD | PRESENT | EFFECTIVE | |
| | | | | | | Acft. | % |
| 1 | Ampara | 9 | 1,052,327 | 16,259 | 503,701 | 487,442 | 47 |
| 2 | Anuradapura | 10 | 555,566 | 27,583 | 510,067 | 482,484 | 91 |
| 3 | Badulla | 7 | 78,266 | 4,138 | 51,359 | 47,221 | 64 |
| 4 | Batticaloa | 4 | 140,120 | 1,085 | 124,727 | 123,642 | 89 |
| 5 | Hambantota | 10 | 378,065 | 34,172 | 262,218 | 228,046 | 66 |
| 6 | Galle | 2 | 3,160 | - | 2,605 | 2,605 | 82 |
| 7 | Kandy | 3 | 28,450 | 386 | 26,738 | 26,352 | 94 |
| 8 | Kurunegala | 10 | 142,381 | 5,670 | 171,348 | 111,678 | 82 |
| 9 | Monaragala | 3 | 44,900 | 2,640 | 29,557 | 26,917 | 64 |
| 10 | Polonnaruwa | 4 | 351,700 | 24,300 | 332,788 | 308,488 | 94 |
| 11 | Puttalam | 2 | 74,233 | 8,400 | 58,121 | 49,721 | 76 |
| 12 | Trincomalee | 5 | 190,895 | 2,555 | 170,632 | 168,077 | 89 |
| 13 | Mannar | 4 | 67,924 | 675 | 59,134 | 58,459 | 87 |
| | TOTAL | 73 | 3,107,987 | 127,863 | 2,248,995 | 2,121,132 | 71 |

(Source: Water Management Division, Department of Irrigation)

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