NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

08th March 2023 to 08th April 2023

Issued on 08th March 2023

Department of Meteorology

Department of Agriculture

2023.03.08

NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

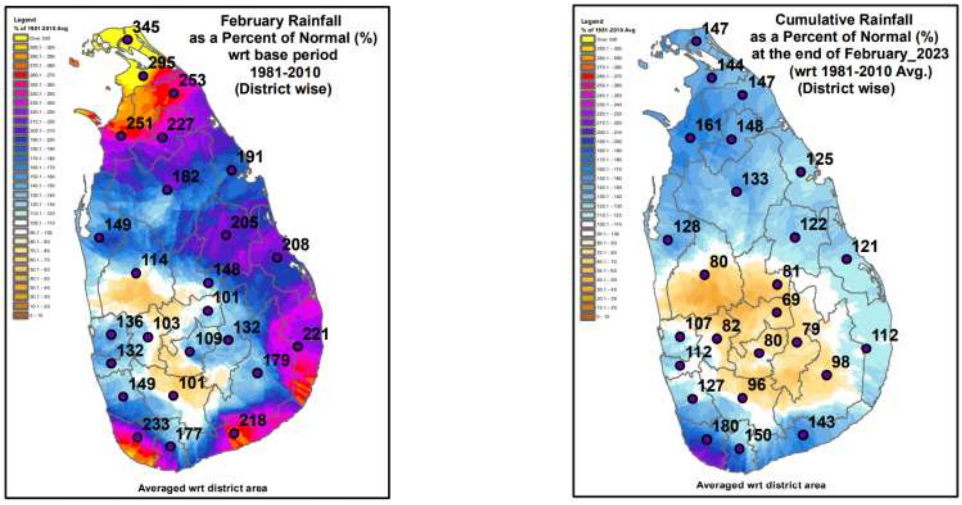
Weather and Climate update

Department of Meteorology

Rainfall Analysis-February 2023

According to the available rainfall data in the Department of Meteorology, above normal rainfalls were reported from most parts of the country except Kandy, Nuwara Eliya, Kegalle and Rathnapura districts where near or slightly below normal rainfalls were reported during the month of February 2023. It has been reported nearly 300% of normal rainfalls over Jaffna and Killinochchi districts during the month.

Observed rainfall as a percentage of normal during the month of February 2023 is shown in the figure 1(a) and observed cumulative rainfall as a percentage of normal from 1st January 2023 to 28th February 2023 is shown in the figure 1 (b).



(a) (b)

Figure 01 : Observed Monthly rainfall as percentage of long-term average (1981-2010) during February 2023 (a) and cumulative rainfall from 01st January 2023 to 28th February 2023 as percentage of long term average (1981- 2010) (b)

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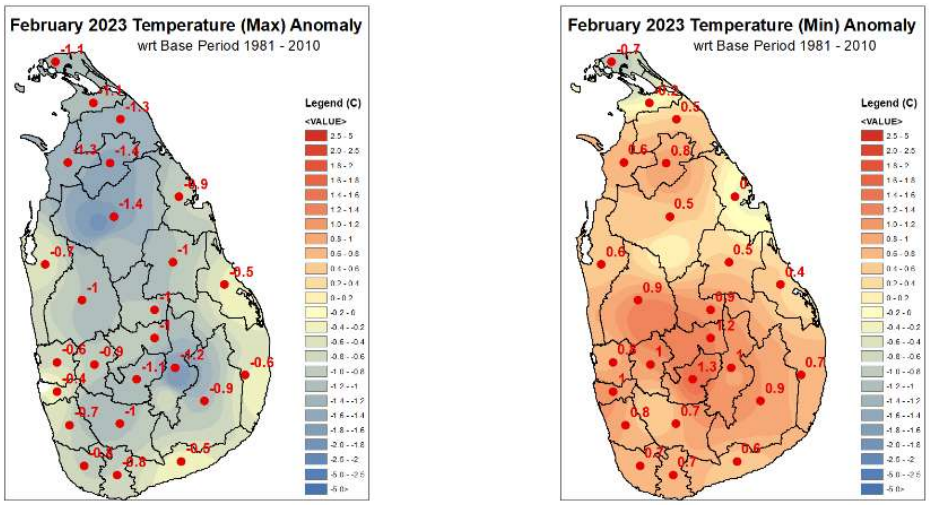
Temperature analysis-February 2023

Monthly average maximum temperatures (daytime) were below normal over northern province and in Anuradhapura, Nuwar Eliya and Badulla districts and near normal over remaining areas of the country during the month of February 2023. Monthly average minimum temperatures (night-time) were above normal over Kandy and Nuwar Eliya districts and near normal over remaining areas of the country during the month of February 2023.



(a) **(b)**

Figure 02 : Average Maximum (a) and Minimum (b) Temperature anomalies during the month of February 2023 compared with the long-term average (1981-2010)

Weather Forecast: Forecast for the month of March 2023(Weekly)

(Updated on 2nd March 2023)

A slightly above normal rainfalls are likely over most parts of the country during the weeks 03rd - 09th March and 10th -16th of March. Near normal or slightly above normal rainfall is likely over the country during the week 17th -23rd March. During the week 24th – 30th March Below normal rainfalls are likely over southern parts of the country and near normal rainfalls are likely elsewhere of the country. (Figure 03).

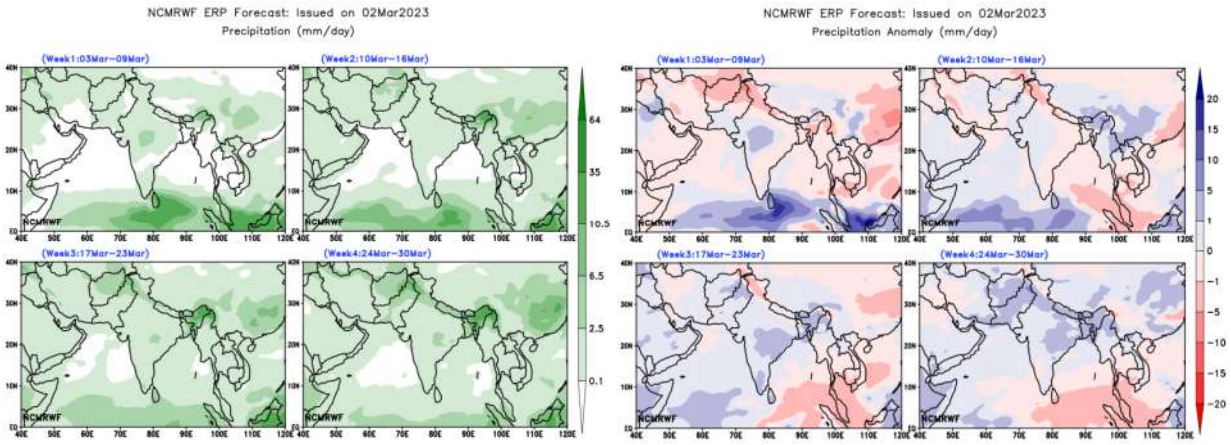


Figure 03 : Weekly rainfall Forecast and the Rainfall anomaly (mm/day)

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://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 March-April-May (MAM) 2023

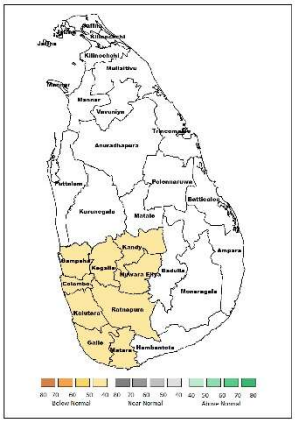


Figure 04 : Seasonal Rainfall Forecast for March-May 2023 (MAM 2023)

Slightly below normal rainfalls are likely over Southwestern part and there is no clear signal for remaining areas where there is a climatological probability which means there is equal probability for below or near or above normal rainfalls during MAM 2023 season as a whole.

However, there is a possibility for developing low pressure area, depression or cyclone in the Bay of Bengal which could enhance the rainfall over the country, particularly over Southwestern part of the country during latter part of the month of May. (Fig. 04).

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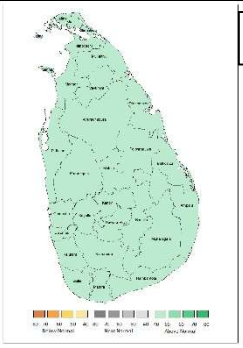
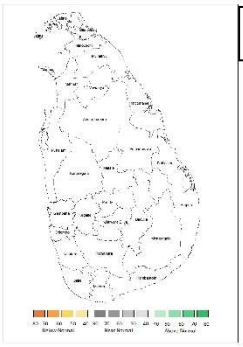
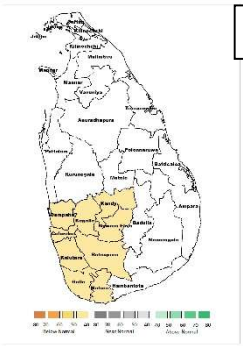
Monthly Rainfall Forecasts for March-April-May 2023

Month	Rainfall forecast
 March 2023	Near or slightly above normal rainfalls are likely over most parts of the country during month of March 2023. There is a higher possibility for getting above normal rainfall during the first half of March 2023.
 April 2023	There is no clear signal for the month of April 2023, as such there is climatological probability, that means equal probability for having below or near or above normal rainfalls over the country during April 2023.
 May 2023	Slightly below normal rainfalls are likely over Southwestern part and there is no clear signal for remaining areas. As such there is equal probability for below or near or above normal rainfalls over remaining areas of the country during the month of May 2023. However, there is a possibility for developing low pressure area, depression or cyclone in the Bay of Bengal which could enhance the rainfall over the country, particularly over Southwestern part of the country during latter part of the month of May.

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Agro-met Advisory: March 2023

by

Natural Resource Management Centre, Department of Agriculture

(For the months of March, April and May 2023)

Department of Meteorology (DoM) has issued the seasonal weather forecast for the coming three-months' period, as follows.

Rainfall forecast for **March**

Near or slightly above normal rainfall has been forecasted over most parts of the country during March.

Rainfall forecast for **April**

No specific weather prediction has been issued for April by DoM and mentioned that there is an equal possibility of having below, near or above normal rainfall during the month.

Rainfall forecast for **May**

For May, slightly below normal rainfall has been predicted over Southwestern part of the country and no specific weather prediction has been issued for the remaining areas.

With the available weather predictions, 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 in major reservoirs under Irrigation Department (ID) is about 67.6%. Recent updated information on daily water levels and storage of major reservoirs are attached in Table 4. According to the irrigation-range wise tentative water issuing schedule of ID, Ampara and Batticaloa ranges will receive water for the coming 2023 *Yala* season on 15th of March and will be extended for the other ranges including Mahaweli areas. ID further stated that, with the available water in major and medium reservoirs, a successful *Yala* season can be started and continued with well-planed water management practices.

Department of Agrarian Development (DAD) informed that sixty percent of minor irrigation tanks under the DAD also reached up to the satisfactory level. Paddy cultivations under minor irrigation schemes are also planned to be started during mid- March.

Mahaweli Authority of Sri Lanka (MASL), denoted that the harvesting activities in the Mahaweli areas are still going on and hope to start the next season in advance with the available water resources.

Considering the weather forecast of DoM, irrigation water availability information of ID and field level information of MASL and DAD, the following agronomic interventions are recommended to ensure optimum production under existing situation.

Paddy cultivation:

- According to the medium-term weather prediction of DoM, short interval rains can be expected until 3rd week of March and dry weather condition will be prevailed during the 4th week. Therefore, paddy famers are advised to plan their harvesting activities considering the short-term weather predictions to minimize the damage possibilities during harvesting and processing of the yield.

- Farmers who have started 4th season cultivation, should have to plan their cultivation activities in time, to allow timely commencement of the subsequent 2023 *Yala* season.
- Paddy farmers are advised to plan their land preparation activities for the coming *Yala* season immediately after harvesting, to get the maximum benefits of available water in the reservoirs. The prevailing high evaporation rate will result considerable amount of evaporation losses.
- As a custom, first inter-monsoon (FIM) rains will be expected during early stage of April. Therefore, farmers are advisable to plan their land preparation activities as soon as possible, to get the maximum benefits of rain-water and to save the available water in the reservoirs to continue the season.
- An early *Yala* season will leads to a successful inter-season (3rd season) cultivation and it will contribute to reach the national targets of OFC's such as Green gram.
- Since the long-term forecast of DoM predicts a slightly below normal rainfall over South-western part of the country during May, delaying of the season will result water scarcity situations, especially for the rainfed paddy farmers in the aforesaid region.
- Paddy farmers, who can start the land preparation activities before mid-April, are advisable to cultivate 4 months-aged paddy varieties, in consultation with the relevant officials. Otherwise, 3½ months-aged paddy varieties are recommended for the irrigation farming systems. 3 months-aged paddy varieties are recommended for rainfed rice systems.
- Recommend to avoid staggered cultivation to minimize the irrigation water losses and to minimize the pest and disease impacts.
- The Seed and Plant Material Development Centre (SPMDC) of the Department of Agriculture ensure the availability of basic paddy seeds for seed multiplication program.

Other Field Crops (OFCs)

- Farmers who are planning to cultivate other field crops (OFCs), especially maize, better to start the cultivation activities during early April. This will be beneficial to maximize the usage of available water in the reservoirs under prevailing evapotranspiration

conditions and minimize the damages due to pest and diseases. As frequent rainfall events are expected in March, rainfed sesame cultivation can be started as usual.

- If use paddy tracts for cultivation of OFCs, better to choose lands with well drained soils and try to improve drainage systems to avoid the water logging situations, due to unexpected intense rains.
- The following table shows the seed availability of important subsidiary field crops at the SPMDC to continue the season.

Table 5. Available seed stocks in SPMDC for the present season (09.03.2023)

Crop	Available seed stocks (kg)
Green gram	3,647
Black gram	45,425
Cowpea	11,327
Maize Local	20,490
Maize hybrid	4,371
Soya Bean	86,600
Finger millet	14,650
Chilli (Opv)	8,894
Chilli (Hybrid)	145
Sesame (Black)	6,396

(Source: SPMDC, DoA)

- Vegetables can be grown in well-drained soils, under excessive care, as intense rains always lead to infectious disease such as bacterial and fungal diseases and also leads to post-harvest losses.

- Please consider that this advisory was prepared based the on the national level information and therefore, if available, it is advisable to consider localized detailed information, as a supplementary to this advisory.

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

Dry Zone (mm)			Intermediate Zone (mm)			Wet Zone (mm)	
AER	**Mar**		**AER**	**Mar**		**AER**	**Mar**
DL1a	77.7		IL1a	29.4		WL1a	110.8
DL1b	26.0		IL1b	34.2		WL1b	65.6
DL1c	21.3		IL1c	77.0		WL2a	86.2
DL1d	3.4		IL2	47.9		WL2b	58.0
DL1e	4.6		IL3	19.3		WL3	47.3
DL1f	12.3		IM1a	58.9		WM1a	119.2
DL2a	26.6		IM1b	55.4		WM1b	141.9
DL2b	30.2		IM1c	46.6		WM2a	46.3
DL3	10.3		IM2a	95.0		WM 2b	57.2
DL4	8.5		IM2b	83.0		WM3a	53.4
DL5	28.6		IM3a	36.9		WM3b	33.3
			IM3b	30.0		WU1	88.7
			IM3c	43.8		WU2a	54.6
			IU1	64.9		WU2b	76.2
			IU2	56.6		WU3	54.5
			IU3a	123.0			
			IU3b	100.3			
			IU3c	66.1			
			IU3d	44.6			
			IU3e	55.0			

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

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

Dry Zone (mm)			Intermediate Zone (mm)			Wet Zone (mm)	
AER	**Apr**		**AER**	**Apr**		**AER**	**Apr**
DL1a	150.9		IL1a	123.4		WL1a	250.2
DL1b	87.7		IL1b	98.1		WL1b	184.5
DL1c	57.0		IL1c	113.2		WL2a	161.3
DL1d	15.6		IL2	84.0		WL2b	195.4
DL1e	38.0		IL3	113.5		WL3	146.9
DL1f	72.3		IM1a	119.8		WM1a	236.4
DL2a	45.6		IM1b	108.1		WM1b	229.7
DL2b	26.1		IM1c	91.1		WM2a	179.7
DL3	43.3		IM2a	175.4		WM 2b	167.3
DL4	41.8		IM2b	158.7		WM3a	162.6
DL5	51.7		IM3a	98.4		WM3b	118.8
			IM3b	106.5		WU1	189.8
			IM3c	92.9		WU2a	161.3
			IU1	125.6		WU2b	184.5
			IU2	123.4		WU3	123.0
			IU3a	250.4			
			IU3b	197.5			
			IU3c	144.4			
			IU3d	100.3			
			IU3e	99.9			

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

Table 3: 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 4: Summary of daily water levels & storage of major reservoirs (09.03.2023)

NO	RANGE	NO OF TANKS	STORAGE (Acft)				
			GROSS	DEAD	PRESENT	EFFECTIVE	
						Acft.	%
1	Ampara	9	1,052,221	16,259	522,173	505,914	48.8
2	Anuradapura	10	556,390	27,583	457,178	429,595	81.2
3	Badulla	7	78,315	4,138	68,126	63,988	86.3
4	Batticaloa	4	140,172	1,085	139,440	138,355	99.5
5	Hambantota	10	377,738	34,172	240,758	206,586	60.1
6	Galle	2	3,081	-	3,006	3,006	97.6
7	Kandy	3	28,503	386	27,373	26,987	96.0
8	Kurunegala	10	142,413	5,670	118,299	112,629	82.4
9	Monaragala	3	44,873	2,640	28,614	25,974	61.5
10	Polonnaruwa	4	352,010	24,300	294,177	269,877	82.4
11	Puttalam	2	74,261	8,400	45,411	37,011	56.2
12	Trincomalee	5	191,328	2,555	156,744	154,189	81.7
13	Mannar	4	67,370	675	40,948	40,273	60.4
	TOTAL	73	3,108,674	127,863	2,142,248	2,014,385	67.6

(Source: Water Management Division, Department of Irrigation)

NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

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