

NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN



08th August 2023 to 08th September 2023

Issued on 08th August 2023



Department of Meteorology

Department of Agriculture

2023.08.08

NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

Weather and Climate update

Department of Meteorology

Rainfall Analysis-July 2023

According to the available rainfall data in the Department of Meteorology Near normal rainfalls were reported from some parts of Rathnapura, Badulla and Nuwaraeliya districts. It has reported below normal rainfall over remaining areas of the country with only 7% of normal rainfalls were reported in Polonnaruwa, 8% of normal rainfalls were reported in Anuradapura and 11% of normal rainfall were reported in Trincomalee districts during the month of July.

Observed rainfall as a percentage of normal during the month of July 2023 is shown in the figure 1(a) and observed cumulative rainfall as a percentage of normal from 1st January 2023 to 31st July 2023 is shown in the figure 1 (b).

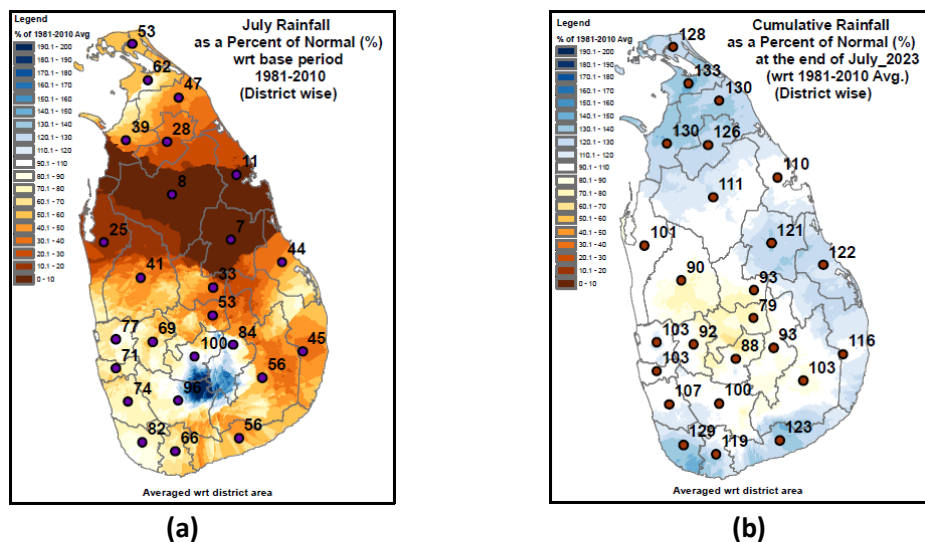


Figure 01 : Observed Monthly rainfall as percentage of long-term average (1981-2010) during July 2023 (a) and cumulative rainfall from 01st January 2023 to 31st July 2023 as percentage of long term average (1981-2010) (b)

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Temperature analysis-July 2023

Average maximum temperatures (daytime) were above normal over Batticaloa and Hambantota districts and near normal over other areas. Average minimum temperatures (night-time) were above normal over most parts of the country except Trincomalee and Batticaloa districts where near normal temperatures were reported during the month of July 2023.

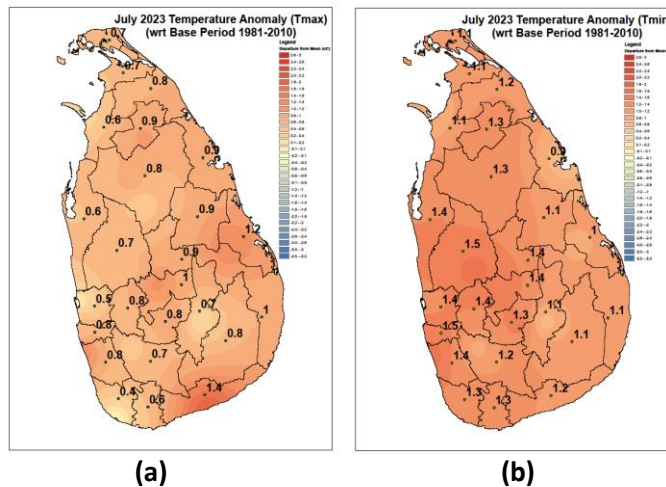


Figure 02 : Average Maximum (a) and Minimum (b) Temperature anomalies during the month of July 2023 compared with the long-term average (1981-2010)

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

(Updated on 3rd August 2023)

A slightly above normal rainfalls are likely over the Ampara district during the week 04th -10th August. During the week 11th -17th of August below normal rainfalls are likely over Western, Northwestern, Sabaragamuwa and Southern provinces. During the weeks 18th -24th August and 25th – 31st August 2023 there is a possibility of having below normal rainfalls in western coastal areas. There is no clear signal indicated over remaining areas of the country (Figure 03).

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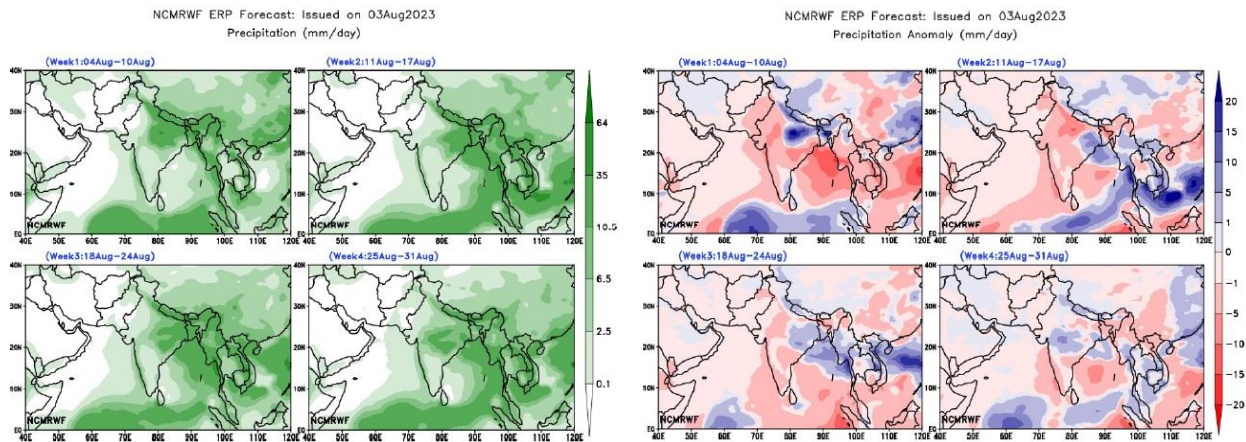


Figure 03 : Weekly rainfall Forecast and the Rainfall anomaly (mm/day)

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 August-September-October (ASO) 2023

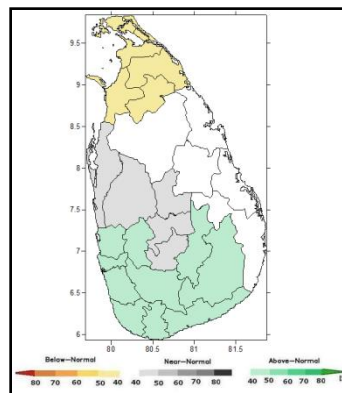
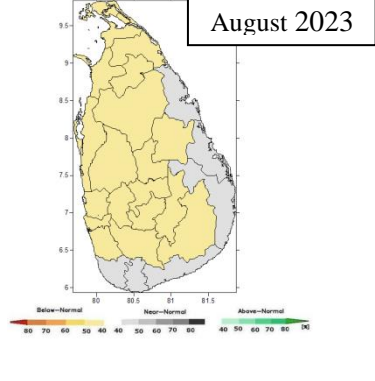
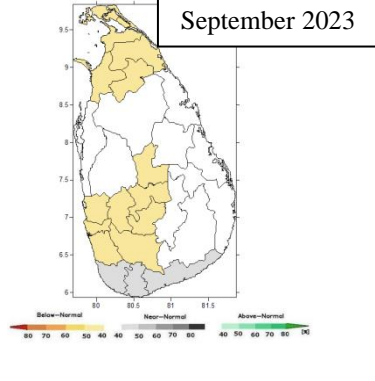
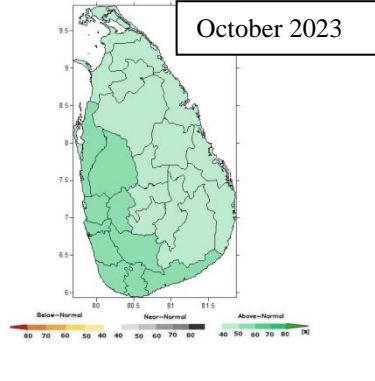


Figure 04 : Seasonal Rainfall Forecast for August-October 2023 (ASO 2023)

There is a chance of having above normal rainfall over western, Southern, Uva and Sabaragamuwa provinces, near or slightly below over Northwestern and Central provinces with a chance of below normal rainfall over Northern province with no signal for other areas during ASO 2023 season as a whole (Fig. 04).

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Monthly Rainfall Forecasts for August-September-October 2023

Month	Rainfall forecast
 <p style="text-align: right;">August 2023</p>	<p>There is a chance of having near normal rainfalls over southern and Eastern provinces and below normal rainfall over other areas during the month of August 2023.</p> <p>However, there is a possibility for development of Typhoons in the Pacific Ocean which could activate the Southwest monsoon flow over Sri Lanka. If so rainfall over Sri Lanka particularly over Southwestern part of the country can be enhanced.</p>
 <p style="text-align: right;">September 2023</p>	<p>Below normal rainfalls are expected over Central, Sabaragamuwa, western and Northern provinces and near over Southern coastal areas and no signal for other areas for the month of September 2023.</p> <p>However, there is a possibility for development of disturbances or low-pressure systems over and vicinity of Sri Lanka during the latter part of the month.</p>
 <p style="text-align: right;">October 2023</p>	<p>Above normal rainfall over most parts, particularly over Western, Southern, Sabaragamuwa and Northwestern provinces, during the month of October 2023.</p>

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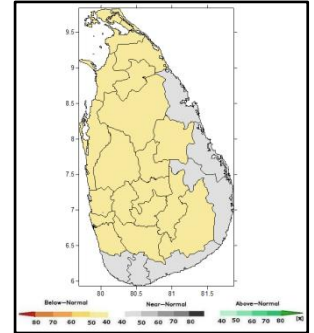
Agro-met Advisory: August 2023

Natural Resource Management Centre, Department of Agriculture
(For the months of August, September and October)

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

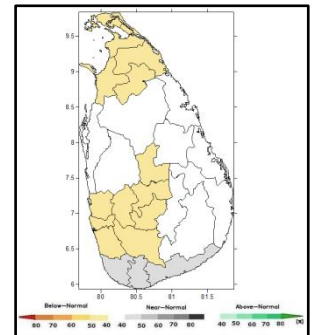
- Rainfall forecast for **August**

There is a chance of having near normal rainfalls over Southern and Eastern provinces and below normal rainfall over other areas during the month of August 2023



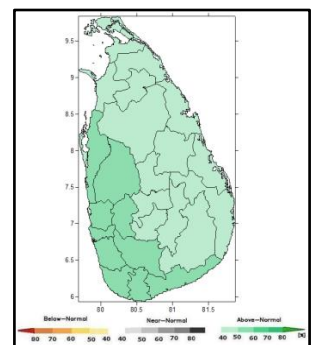
Rainfall forecast for **September**

Below normal rainfalls are expected over Central, Sabaragamuwa, Western and Northern provinces and near normal rainfall over the Southern coastal areas and there is no clear signal for the other remaining areas for the month of September 2023.



- Rainfall forecast for **October**

Above normal rainfall is expected over most parts of the country, particularly over Western, Southern, Sabaragamuwa and North-western provinces, during the month of October 2023.



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

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In addition to the above weather information, following weather—related information are highlighted considering the importance of Agricultural planning.

- As per the global climate predictions centers, an *El Nino* situation is persisting at the initial stage and there is a probability of developing it to a strong *El Niño* ($ONI \geq 1.5^{\circ}\text{C}$) through December 2023 to February 2024.
- During the Second Inter-monsoon (SIM) season, under an *El Nino* situation, a higher rainfall than the long-term average, is expected.
- Under a predicted *El Nino* situation, North-east Monsoon (NEM) rainfall is expected to be somewhat below the long-term average.
- However, it is important to consider that **ENSO is not the only climatic factor** that influence the weather pattern of the country.
- During the October to December period, there is a probability of sudden unexpected low-pressure systems, including cyclones. If so, it is anticipated a substantial increase in rainfall with short intense rains.
- Therefore, it is important to pay attention on the short-term and medium-term weather predictions issued by DoM, while planning and continuing the cultivation seasons.

The average effective storage in major reservoirs under Irrigation Department (ID) is about 30.8%. Recent updated information on the water levels and water availability of major reservoirs are attached in Table 4. In comparison to the long-term average, the available water storage in most major irrigation ranges, including Ampara, Hambantota, Kandy, Kurunegala, Moneragala, Puttalam, and Mannar, is currently below the expectation.

Harvesting of paddy for the 2023 *Yala* season under major irrigation schemes, has started at Batticaloa, Moneragala and has been starting in other ranges. It becomes highly important to take into account all available information, including recommendations like the Agro-met advisory, and other significant decisions made during cultivation planning meetings (Kanna meetings) while planning agronomic practices.

The Mahaweli Authority of Sri Lanka (MASL) has stated that, paddy cultivation under Mahaweli areas covers approximately 85,000 hectares. The less water availability situation in

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Uda Walawe and System H, was repeatedly mentioned in Agro-met advisories, released in June and July. MASL has drawn further attention to the curtail situation prevailing in the Uda Walawe area. Paddy cultivations under Uda Walawe reservoir is about 15,400 ha. Other crops including Banana, vegetables etc. covers about 10,000 ha. During the months of April to July, the Uda Walawe area typically receives a total amount of rainwater according to the long-term average, which is 361 mm. However, in the current season, only 193 mm of rainfall has been received. It is essential to issue water to the paddy fields, that are currently at the 75-80 days stage and are expected to be harvested at the end of August.

MASL also emphasis the importance of carrying on the cultivation activities in accordance with the decisions made during cultivation meetings, specially to commence the season on time. This is essential because during this 2023 *Yala* season, even though water was released before the Sinhala and Hindu New Year, farmers commence their cultivation activities only after late April.

According to the recently updated statistics of Corporate Development Division of Department of Agrarian Development (DAD), national cultivation progress of paddy is about 503,313 ha. District-wise National cultivation targets and progress of 2023 *Yala* season, is given in Table 5. Based on the current reported data, approximately 50% of minor irrigation tanks under the DAD are not at the satisfactory level. The water shortages are mainly impact to the farmer who did not start the cultivation activities on-time.

Considering the weather forecast of DoM, irrigation water availability information of ID and DAD, field level information of DoA, MASL, ID and DAD, following agronomic recommendations are highlighted from this agro-met advisory.

- Paddy farmers, who are at the harvesting stage, can proceed with their harvesting and post-harvesting activities under the prevailing dry weather conditions. However, it is essential to take into consideration the short-term weather forecasts, especially regarding the possibility of short unexpected rains.
- The Agro-met advisory committee does not promote to commence seasonal cultivations for 2023 *Yala* (both paddy or other crops), considering available weather and irrigation information.

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- Through this advisory, commence of third-season cultivation is also not being promoted, taking into account the weather forecast indicating below normal rainfall for this month (August), the current water availability in the reservoirs, and the crucial importance of commencing the **2023/24 Maha season on time** or even in advance.
- To maximize the advantages of the anticipated higher rainfall during the SIM season and withstand under expected water scarcity in the later part of the season, the advisory committee members highly recommended to **plan the 2023/24 Maha season on time**.
- Water management practices and water conservation methods should have to maximize to conserve and utilize available water in the reservoirs and utilize the anticipated rains at the beginning of the season.
- Land preparation activities should have to do, using expected rains during October.
- Every possible step should be followed to collect anticipated rainwater in the reservoirs, during the SIM season to ensure a successful 2023/24 Maha season.

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

Dry Zone (mm)		Intermediate Zone (mm)		Wet Zone (mm)	
AER	Aug	AER	Aug	AER	Aug
DL1a	7.5	IL1a	29.7	WL1a	169.6
DL1b	4.4	IL1b	30.7	WL1b	117.3
DL1c	17.0	IL1c	29.0	WL2a	121.4
DL1d	23.6	IL2	29.5	WL2b	97.1
DL1e	16.2	IL3	8.3	WL3	54.4
DL1f	2.8	IM1a	37.3	WM1a	226.1
DL2a	25.6	IM1b	21.6	WM1b	149.0
DL2b	14.1	IM1c	6.2	WM2a	173.7
DL3	4.3	IM2a	59.4	WM 2b	108.6
DL4	1.6	IM2b	35.9	WM3a	68.7
DL5	4.9	IM3a	68.5	WM3b	55.3
		IM3b	19.2	WU1	263.5
		IM3c	37.2	WU2a	213.0
		IU1	69.1	WU2b	158.6
		IU2	56.5	WU3	117.3
		IU3a	32.3		
		IU3b	29.6		
		IU3c	41.2		
		IU3d	31.6		
		IU3e	32.5		

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

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

Dry Zone (mm)		Intermediate Zone (mm)		Wet Zone (mm)	
AER	Sep	AER	Sep	AER	Sep
DL1a	27.4	IL1a	73.8	WL1a	267.4
DL1b	25.9	IL1b	60.1	WL1b	244.3
DL1c	43.6	IL1c	59.6	WL2a	176.2
DL1d	45.1	IL2	50.1	WL2b	148.5
DL1e	51.9	IL3	38.1	WL3	125.2
DL1f	17.8	IM1a	75.8	WM1a	264.2
DL2a	38.7	IM1b	38.8	WM1b	187.4
DL2b	22.0	IM1c	18.3	WM2a	176.2
DL3	13.3	IM2a	83.4	WM 2b	141.9
DL4	6.2	IM2b	79.0	WM3a	100.7
DL5	14.0	IM3a	98.9	WM3b	82.7
		IM3b	46.6	WU1	222.5
		IM3c	64.3	WU2a	169.1
		IU1	93.8	WU2b	148.4
		IU2	92.6	WU3	116.4
		IU3a	79.8		
		IU3b	66.5		
		IU3c	79.9		
		IU3d	60.2		
		IU3e	68.2		

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

Table 3: 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

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			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)

Table 4: Summary of daily water levels & storage of major reservoirs (08.08.2023)

NO	RANGE	NO OF TANKS	STORAGE (Acft)				
			GROSS	DEAD	PRESENT	EFFECTIVE	
						Acft.	%
1	AMPARA	9	1,052,221	16,259	248,345	232,086	22.4%
2	ANURADAPURA	10	556,390	27,583	200,161	172,578	32.6%
3	BADULLA	7	78,388	4,138	33,253	29,115	39.2%
4	BATTICALOA	4	140,172	1,085	51,531	50,446	36.3%
5	HAMBANTOTA	10	377,738	34,172	154,335	120,163	35.0%
6	GALLE	2	3,081	-	3,018	3,018	98.0%
7	KANDY	3	28,503	386	10,845	10,459	37.2%
8	KURUNEGALA	10	142,413	5,670	54,536	48,866	35.7%
9	MONARAGALA	3	44,873	2,640	17,345	14,705	34.8%
10	POLONNARUWA	4	352,010	24,300	172,267	147,967	45.2%
11	PUTTALAM	2	74,261	8,400	19,438	11,038	16.8%
12	TRINCOMALEE	5	191,328	2,555	66,598	64,043	33.9%
13	MANNAR	4	67,370	675	14,553	13,878	20.8%
	TOTAL	73	3,108,747	127,863	1,046,223	918,360	30.8%

(Source: Water Management Division, Department of Irrigation)

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Table 5. National Cultivation progress of Paddy, 2023 *Yala* season (04.07.2023)
(Source: Corporate Development Division, Department of Agrarian Development)

Serial Number	District	Cultivation target given by the head office (ha)	Cultivation Progress of <i>Yala</i> season 2023		
			A (Hectares)	B (Hectares)	A + B Total (Hectares)
			Extent of land sown or planted	Extent of land under basic land preparation only	
1	Colombo	3,058.80	2,551.24	0.00	2,551.24
2	Gampaha	11,175.10	8,182.55	3.98	8,186.53
3	Kalutara	12,423.06	8,769.88	6.00	8,775.88
4	Kandy	11,297.30	9,016.37	654.39	9,670.76
5	Matale	18,099.60	11,695.18	1,483.78	13,178.96
6	Nuwaraeliya	3,115.09	63.95	45.36	109.31
7	Galle	12,514.97	5,809.42	84.05	5,893.47
8	Matara	15,000.00	11,825.69	887.26	12,712.95
9	Hambantota	36,393.20	33,179.85	1,067.94	34,247.79
10	Kurunegala	71,322.87	63,397.72	0.00	63,397.72
11	Puttalama	19,379.93	18,030.05	0.00	18,030.05
12	Anuradhapura	105,132.94	53,931.80	7,409.70	61,341.50
13	Polonnaruwa	69,682.87	57,755.10	6,608.90	64,364.00
14	Badulla	21,634.29	11,852.21	1,642.64	13,494.85
15	Monaragala	23,400.69	17,805.97	506.10	18,312.07
16	Rathnapura	13,323.77	10,556.48	362.17	10,918.65
17	Kegalle	7,141.00	4,870.64	1,549.50	6,420.14
18	Ampara	67,357.71	63,341.64	0.00	63,341.64
19	Trincomalee	31,389.25	27,731.37	2,140.90	29,872.27
20	Batticaloa	33,682.66	34,752.03	0.00	34,752.03
21	Vavniya	9,287.00	5,387.82	557.70	5,945.52
22	Jaffna	0.00	0.00	0.00	0.00
23	Mannar	4,052.64	2,675.51	0.00	2,675.51
24	Mullathivu	10,154.30	6,444.25	1,115.40	7,559.65
25	Kilinochchi	12,050.00	7,561.40	0.00	7,561.40
Total		622,069.04	477,188.12	26,125.77	503,313.89

(Source: Corporate Development Division, Department of Agrarian Development)

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

An updated Agro-met Advisory will be issued in early September 2023 in consultation with the members of the technical advisory committee, other relevant resource persons and stakeholders.

Technical Advisory Team Members

- Ms. Anusha Warnasooriya (Director – Climate Change and Research) Department of Meteorology
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