

NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN



08th January 2024 to 08th February 2024

Issued on 08th January 2024



Department of Meteorology

Department of Agriculture

2024.01.08

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Weather and Climate update Department of Meteorology

Rainfall Analysis-December 2023

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 December.

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

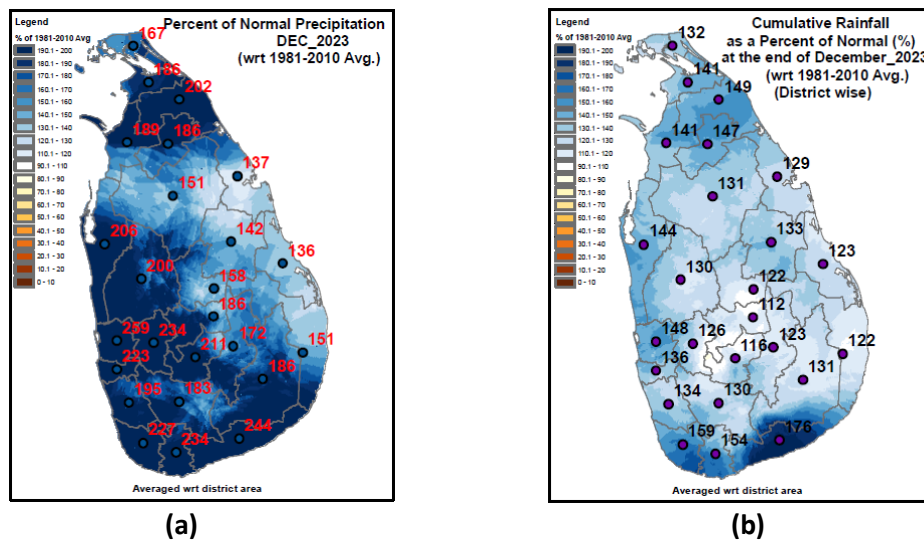


Figure 01 : Observed Monthly rainfall as percentage of long-term average (1981-2010) during December 2023 (a) and cumulative rainfall from 01st January 2023 to 31st December 2023 as percentage of long term average (1981- 2010) (b)

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Temperature analysis-December 2023

During the month of December average maximum temperatures (daytime) were a little above normal over Puttalam, Gampaha, Polonnaruwa, Trincomalee and Batticaloa districts and about normal over remaining areas of the country. Minimum temperatures (night-time) were well above normal over Northern, Northwestern and central provinces and in Anuradhpura district and a little above normal elsewhere during the month of December 2023.

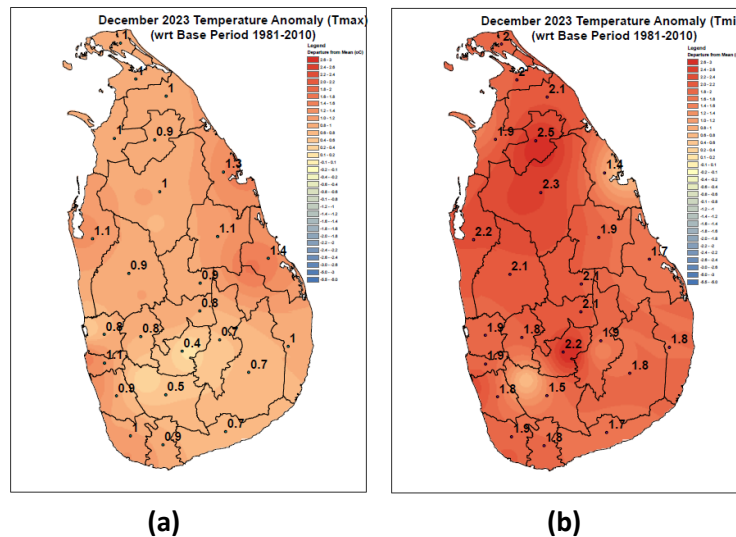


Figure 02 : Average Maximum (a) and Minimum (b) Temperature anomalies during the month of December 2023 compared with the long-term average (1981-2010)

Weather Forecast: Forecast for the month of January 2024(Weekly)

(Updated on 11th January 2024)

A slightly below normal rainfalls are likely over the country during 12th -18th January. During the week 19th - 25th of January near or slightly above normal rainfalls are possible over most parts of the country. During the week 26th January -01st February there is a possibility of having slightly below normal rainfalls over most parts of the country except South-western parts and Jaffna and Killinochchi districts. Where near normal rainfalls are possible. During the week 02nd-08th February there is a possibility of having near normal rainfalls over most parts of the country except northwestern and eastern parts, where slightly below normal rainfalls are likely (Figure 03).

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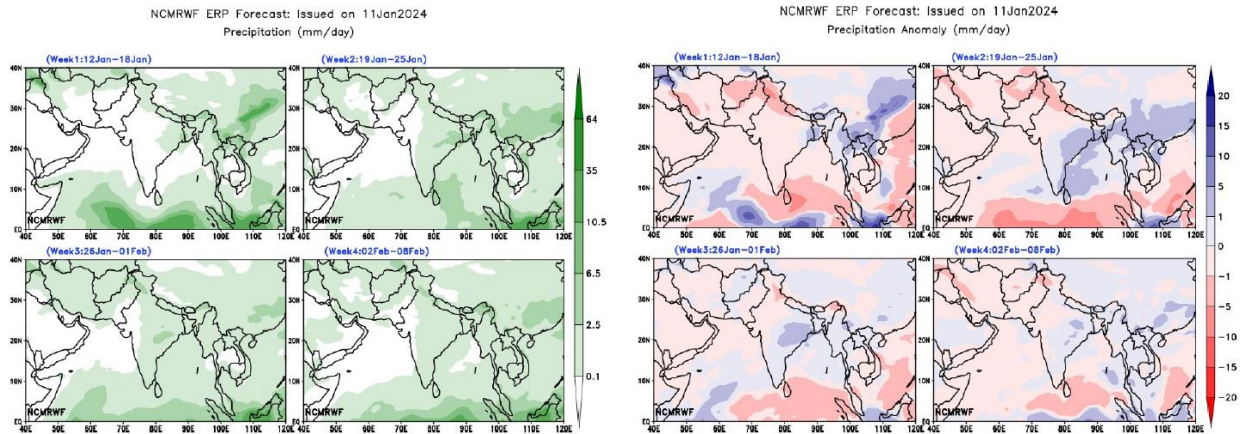


Figure 03 : Weekly rainfall Forecast and the Rainfall anomaly (mm/day)

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 January-February-March (JFM) 2024

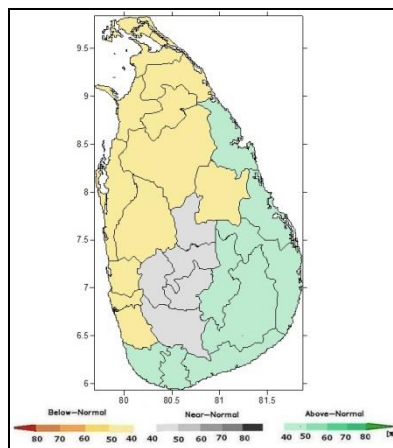
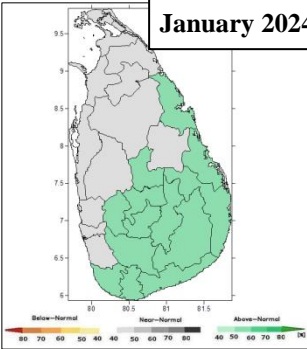
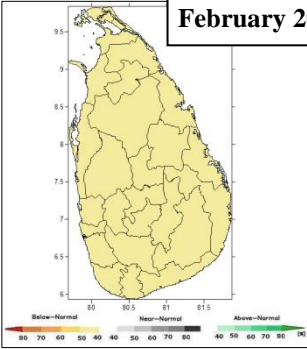
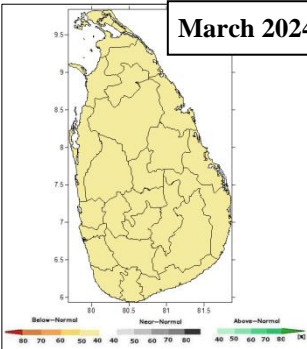


Figure 04 : Seasonal Rainfall Forecast for January-March 2024 (JFM 2024)

There is a possibility of having near or slightly above normal rainfall over Eastern, Southern, Sabaragamuwa, Central and Uva provinces and below normal rainfalls are likely over remaining areas during JFM 2024 season as a whole. (Fig. 04).

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Monthly Rainfall Forecasts for January-February-March 2024

Month	Rainfall forecast
 <p style="text-align: center;">January 2024</p>	<p>There is a higher chance of having above normal rainfall over Eastern, Uva, Southern, Sabaragamuwa and central provinces and near normal rainfall over remaining areas of the country during the month of January 2024.</p> <p>There is a possibility for developing wave type disturbances over and vicinity of Sri Lanka during the month. Ground frost are possible in Nuwara Eliya district during the month.</p>
 <p style="text-align: center;">February 2024</p>	<p>There is a chance of having below normal rainfall over most parts of the country.</p> <p>Ground frost are possible in Nuwara Eliya district during the month of February 2024.</p>
 <p style="text-align: center;">March 2024</p>	<p>There is a possibility of having below normal rainfall over most parts of the country during the month of March 2024.</p>

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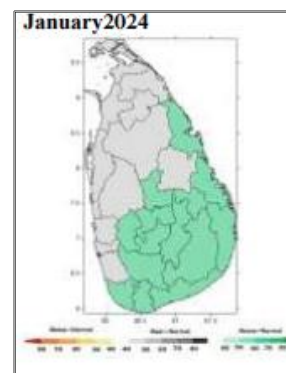
Natural Resource Management Centre, Department of Agriculture
(For the months of January, February and March)

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

- Rainfall forecast for **January**

There is a higher chance of having above normal rainfall over Eastern, Uva, Southern, Sabaragamuwa and central provinces and near normal rainfall over remaining areas of the country during the month of January 2024.

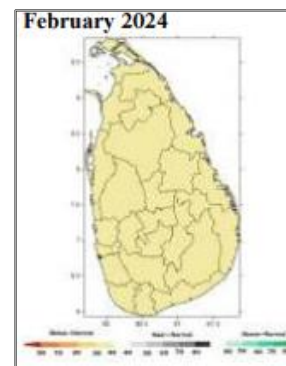
There is a possibility for developing wave type disturbances over and vicinity of Sri Lanka during the month. Ground frost are possible in Nuwara Eliya district during January.



- Rainfall forecast for **February**

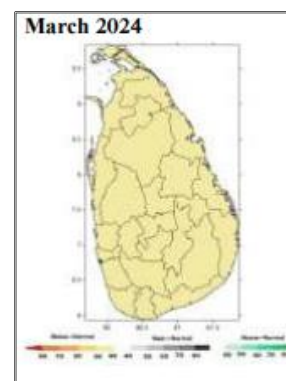
There is a chance of having below normal rainfall over most parts of the country during February.

Ground frost are possible in Nuwara Eliya district during the month.



Rainfall forecast for **March**

There is a possibility of having below normal rainfall over most parts of the country during the month of March 2024.



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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The **Irrigation Department (ID)** reports that the average effective storage in major reservoirs currently stands at an impressive 94.0%. The information in Table 4 provides updated details on water levels and availability in major reservoirs. ID emphasizes that the present average effective storage for January surpasses the long-term average of 68% - 70%, signifying a substantial increase of carry over storage. Furthermore, despite the limited water issuing for agriculture due to the current stage of crops in the field, the carry-over storage for the upcoming 2024 *Yala* season is notably higher. Besides, cultivation progress of major and medium irrigation reservoir schemes under ID is reported to be nearly 100%.

The **Mahaweli Authority of Sri Lanka (MASL)** has reported that the paddy cultivation targets for the 2023/24 *Maha* season in Mahaweli areas are nearly accomplished. Concurrently, the cultivation programs for other field crops (OFCs) in the Mahaweli regions have commenced as well. There have been reported crop damages, particularly in Mahaweli system B and system C attributed to unusually high rainfall. Of the 20,000 hectares in system B, 600 hectares have been adversely affected by heavy rainfall. MASL has assured that the water levels in the reservoirs remain at satisfactory levels. However, due to the prevalent rainy conditions, irrigation water issuance to the fields is being limited and MASL has undertaken water management practices to conserve water for the upcoming 2024 *Yala* season.

The Department of Agrarian Development (DAD) has reported that 10,000 acres of cultivation area under minor irrigation tanks have been damaged due to the prevailing weather conditions and an additional 12,000 acres are under threat. Consequently, it is crucial to pay close attention to the current situation to address and mitigate further potential damages.

The following agronomic recommendations have been proposed by this agro-met advisory to ensure a successful cultivation progress.

Paddy cultivation

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- According to the medium-range forecast from the Department of Meteorology (DoM), the ongoing rainy conditions are expected to gradually diminish from the third week of January (unless developing wave type disturbances that brings higher rains). This forecast provides valuable information for farmers, especially those with paddy fields reaching the harvesting stage in the eastern province, enabling them to plan their harvesting activities accordingly.
- Field observations have revealed that the excessive rainfall has led to interruptions in fertilizer and pesticide applications. As a result, farmers are strongly advised to take into account the 10-day forecast provided by the DoM before planning these agronomic activities.
- Paddy farmers are requested to pay more attention on spreading of pests and diseases, such as Brown Plant Hopper (BPH), White-backed Plant Hopper (WBPH), and Leaf folder attacks, as indicated by field observations. The sudden and unusual rainy conditions experienced in recent days have contributed to this rise. Furthermore, sheath blight disease also could be arising with the flash floods.
- With the weather forecast predicting a continuation of these conditions throughout the month, farmers are advised to pay special attention to early identification of damage and adhere to the recommendations provided by the DoA for effective pest and disease management.
- For paddy cultivations at the first flowering stage, it is essential to maintain the water level in the fields at least saturation level for a duration of approximately two weeks. Given the current situation with available water in both irrigated and rainfed systems, farmers are well-positioned to adhere to this critical condition for optimal crop production.
- While irrigation tanks are currently in a satisfactory state, a reduction in rainfall can be anticipated after this month. Consequently, for irrigation farming systems, it is advisable to initiate land preparation activities for the upcoming 2024 *Yala* season during the last week of March or the first week of April (with aiming to establish the crop before the Sinhala and Hindu New Year). This leads to maximize the benefits of the available water in the reservoirs as expected dry weather condition after January, leads to evaporation losses.

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Other Field Crops (OFCs)

- The prevailing weather conditions and the anticipated rainy situation in January are likely to contribute to the increased spread of pests and diseases. Thus, it is imperative to pay special attention to identifying these issues at their initial stages and follow the recommended controlling measures provided by the DoA.
- Big onion bulbs are established in the field for seed production, during January. Since an above normal rainfall has predicted for January, Big onion growing farmers are advised to establish the crop, under strong rain shelters, preparing raise beds and improving drainage systems. Bulbs should have treated with recommended fungicides to minimize the damages due to fungal diseases. There is a high chance to spread Anthracnose under the prevailing weather condition. The crop should be frequently observed to identify such diseases at the initial stage for an effective control with recommended fungicides.
- For OFCs like soybeans, currently in the field establishment phase, it is crucial to take into account the anticipated dry weather conditions after this month and ensure a reliable water supply.
- Crops currently at the harvesting stage should be timely harvested as unnecessary delay may lead to pest and disease infections and quality deterioration caused by sudden and unexpected rains.

Plantation Crops

Tea

Based on the available weather predictions of DoM, expected rainfall for February 2024 is below the average. Hence soil moisture conservations and minimizing plant water loss are important. Further to that, following agronomic practices are recommended;

- Light plucking should be practiced.
- If fertilizer applications are to be carried out, it should ensure that adequate soil moisture is available.
- Based on weather predictions and soil moisture conditions, start applying anti-transpirant based on TRI Advisory Circular PA-02
- Keep the grounds free from weeds, allowing soft weeds only

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- Green manure crops should be trimmed and loppings should be thatched between tea rows
- If it is planned to apply irrigation for vulnerable tea fields, assessment of water sources and preparation of required equipment, should be done prior to the onset of drought.

Coconuts

- **Coconut growers are advised to avoid;**

field planting of coconut seedlings, application of inorganic fertilizer, harrowing, ploughing, cutting husk pits and any other practices that expose soils from January to March 2024. In addition, it is recommended to minimize weed control, growing intercrops and grazing.

- **Coconut growers are advised to practice;**

For seedling: During dry period (to minimize the anticipated impacts of drought during Feb and March 2024)

- Irrigation, if possible, for seedlings planted in October to December, 2023
- To tie the coconut leaves of the seedlings together specially for seedlings planted in October to December, 2023
- Provide shade

Cinnamon

- According to the DoM forecast, dry weather condition is expected during February. Therefore, it is recommended to finish fertilizing in the first half of January.
- During January, fungal diseases can spread with the predicted rains. While this does not cause economic damage in mature cultivations, attention is required for immature cinnamon cultivations.

Minor Export Agricultural Crops (Pepper, Coffee, Nutmeg, Clove, etc.)

Even in the light of the recent rainfall, possibility of a dry spell prevails, it is emphasized the critical importance of conserving soil moisture for the successful cultivation of minor export spice crops. While the recent rains may provide a temporary respite, worst case scenario of impending

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a dry spell poses a significant risk to the optimal growth of these crops. It is imperative that farmers proactively implement soil moisture conservation practices such as mulching, reduced tillage, and efficient irrigation methods to sustain the moisture levels necessary for crop development. This precautionary measure will not only mitigate the potential adverse effects of the upcoming dry period but also contribute to the overall resilience and productivity of crops.

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

Dry Zone (mm)		Intermediate Zone (mm)		Wet Zone (mm)	
AER	Jan	AER	Jan	AER	Jan
DL1a	36.5	IL1a	10.7	WL1a	64.5
DL1b	30.3	IL1b	21.8	WL1b	44.0
DL1c	114.2	IL1c	85.0	WL2a	54.6
DL1d	44.2	IL2	183.1	WL2b	12.0
DL1e	33.7	IL3	12.9	WL3	12.3
DL1f	9.4	IM1a	186.0	WM1a	56.8
DL2a	138.4	IM1b	208.8	WM1b	73.6
DL2b	127.5	IM1c	115.8	WM2a	30.1
DL3	11.9	IM2a	53.8	WM 2b	15.8
DL4	9.8	IM2b	78.6	WM3a	21.2
DL5	35.1	IM3a	58.1	WM3b	73.6
		IM3b	79.2	WU1	43.4
		IM3c	112.6	WU2a	52.6
		IU1	213.8	WU2b	60.3
		IU2	182.2	WU3	74.9
		IU3a	52.0		
		IU3b	83.3		
		IU3c	80.8		
		IU3d	55.2		
		IU3e	62.5		

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

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

Dry Zone (mm)		Intermediate Zone (mm)		Wet Zone (mm)	
AER	Feb	AER	Feb	AER	DEC
DL1a	26.9	IL1a	6.1	WL1a	57.5

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DL1b	12.6		IL1b	20.5		WL1b	34.5
DL1c	47.0		IL1c	54.1		WL2a	53.8
DL1d	11.1		IL2	71.1		WL2b	10.4
DL1e	10.9		IL3	5.3		WL3	9.4
DL1f	2.0		IM1a	66.2		WM1a	66.9
DL2a	58.1		IM1b	81.0		WM1b	70.4
DL2b	46.8		IM1c	58.9		WM2a	23.5
DL3	1.1		IM2a	64.3		WM 2b	12.9
DL4	0.5		IM2b	50.6		WM3a	13.7
DL5	11.4		IM3a	24.4		WM3b	35.5
			IM3b	31.4		WU1	47.7
			IM3c	41.0		WU2a	25.9
			IU1	76.4		WU2b	37.5
			IU2	61.8		WU3	29.2
			IU3a	47.3			
			IU3b	48.1			
			IU3c	46.6			
			IU3d	33.6			
			IU3e	25.9			

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

Table 3: 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		

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			IU3c	66.1			
			IU3d	44.6			
			IU3e	55.0			

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

Table 4: Summary of daily water levels & storage of major reservoirs (09.01.2024)

NO	RANGE	NO OF TANKS	STORAGE (Acft)				
			GROSS	DEAD	PRESENT	EFFECTIVE	
						Acft.	%
1	AMPARA	9	1,052,221	16,259	964,114	947,855	91.5%
2	ANURADAPURA	10	556,390	27,583	556,988	529,405	100.0%
3	BADULLA	7	78,388	4,138	77,862	73,724	99.3%
4	BATTICALOA	4	140,172	1,085	124,056	122,971	88.4%
5	HAMBANTOTA	10	377,738	34,172	346,996	312,824	91.1%
6	GALLE	2	3,081	-	3,157	3,157	100.0%
7	KANDY	3	28,503	386	28,905	28,519	100.0%
8	KURUNEGALA	10	142,145	5,670	140,363	134,693	98.7%
9	MONARAGALA	3	44,873	2,640	44,911	42,271	100.0%
10	POLONNARUWA	4	352,010	24,300	319,219	294,919	90.0%
11	PUTTALAM	2	74,261	8,400	70,137	61,737	93.7%
12	TRINCOMALEE	5	191,328	2,555	186,435	183,880	97.4%
13	MANNAR	4	67,370	675	65,574	64,899	97.3%
	TOTAL	73	3,108,479	127,863	2,928,717	2,800,854	94.0%

(Source: Water Management Division, Department of Irrigation)

Note: Please consider that this advisory was prepared based on national-level information. If available, it is advisable to consider localized detailed information as supplementary to this advisory.

An updated Agro-met Advisory will be issued in early February 2024 in consultation with members of the technical advisory committee, other relevant resource persons and stakeholders.

Technical Advisory Team Members

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- Ms. Anusha Warnasooriya (Director – Climate Change and Research) Department of Meteorology
- Eng. (Ms.) S. Vidanapathirana (Director – Water Management) Irrigation Department
- Ms. D.K.W.R. Senevirathna (Director – Agriculture) Mahaweli Authority of Sri Lanka
- Mr. D.D. Perera (Technical Officer - Water Management Division) Department of Agrarian Development
- Dr. W.M.U.K. Rathnayake (Director, Natural Resources Management Centre) (Principal Agriculture Scientist – Soil Science - Rice)
- Dr. M.A.P.W.K. Malaviarachchi (Additional Director) Field Crops Research and Development Institute
- Mr. K.M.D.W.P. Nishantha (Additional Director, Plant Protection Service) Horticultural Crops Research and Development Institute
- Mr. L.C. Silva (Assistant Director of Agriculture, Research - Physiology) Rice Research and Development Institute (RRDI)
 - Ms. T.M.P.G.S.P. Thennakoon (Additional Director- IC) National Agriculture Information and Communication Center
- Mr. M.S. Thilakasiri (Deputy Director of Agriculture– Seed Paddy) Seed and Plant Material Development Center
- Ms. Aruni B. Abeysekera (Assistant Director of Agriculture-Agro-climatology and Climate Change) - Natural Resources Management Centre

Special thanks:

- Mr. S.R, Sarathchandra (Assistant Director of Agriculture, Research - Entomology) Rice Research and Development Institute (RRDI)

For Plantation Crops:

- Dr. Shayamantha Bandara (Principal Research Officer) Tea Research Institute of Sri Lanka
- Mr. A.M.R.W.S. Dilhan Ratnayake (Research Officer) Rubber Research Institute of Sri Lanka
- Ms. K.V.N.N. Jayalath (Senior Research Officer) Coconut Research Institute
- Ms. P.K.D. Pabasara (Assistant Director (Research) National Cinnamon Research and Training Center
- B. D. P. Rangoda (Deputy Director) Department of Export Agriculture, Sri Lanka
- A. J. Warusavitharana (Director – Agriculture) Ministry of Agriculture and Plantation Industries