NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

08th January 2022 to 08th February 2022

Issued on 08th January 2022

Department of Meteorology

Department of Agriculture

2023.01.08

NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

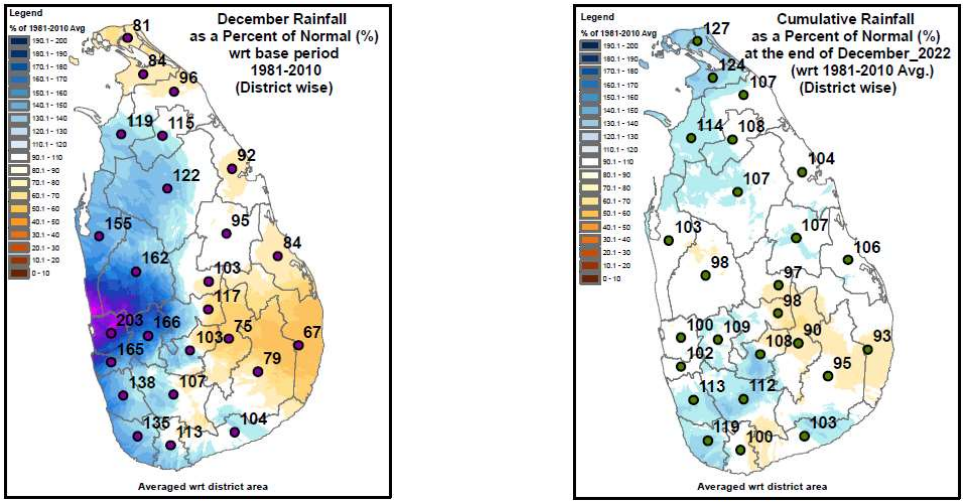
Weather and Climate update

Department of Meteorology

Rainfall Analysis-December 2022

According to the available rainfall data in the Department of Meteorology, above normal rainfalls were reported over Western, North-western, Central, Sabaragamuwa and Southern provinces and Mannar,Vauniya and Anuradhapura districts and below normal rainfalls were reported over Jaffna, Killinochchi, Batticaloa, Ampara, Badulla and Monaragala districts and near normal rainfalls were reported over remaining areas of the country during the month of December 2022.

Observed rainfall as a percentage of normal during the month of December 2022 is shown in the figure 1(a) and observed cumulative rainfall as a percentage of normal from 1st January 2022 to 31st December 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 during the year 2022. However, it shows a little below rainfalls aver Uva province and Ampara district during the year 2022.

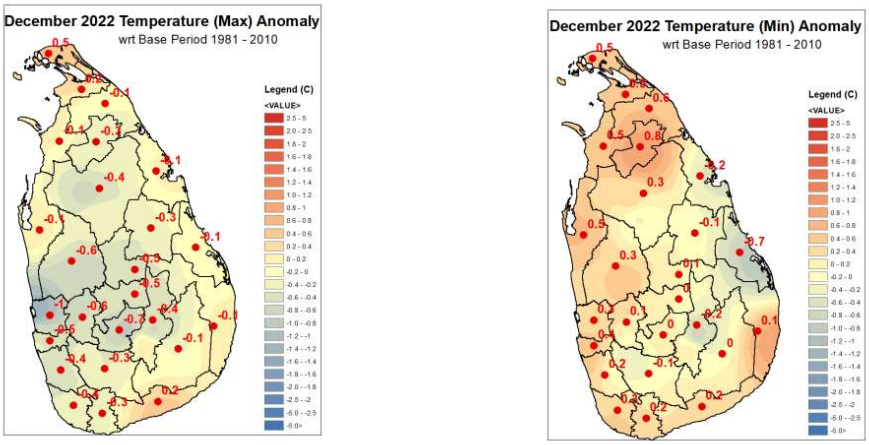


(a) (b)

Figure 01 : Observed Monthly rainfall as percentage of long-term average (1981-2010) during December 2022 (a) and cumulative rainfall from 01st January 2022 to 31st December 2022 as percentage of long term average (1981- 2010) (b)

Temperature analysis (December)

Average maximum temperatures (daytime) and average minimum temperatures (night-time) were predominantly near normal over the country during the month of December 2022.



(a) (b)

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

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

(Updated on 05th January 2023)

A slightly above normal rainfalls are likely over the country except Northern and Southwestern parts of Sri Lanka, where near normal rainfalls are likely during the week 06th – 12th January 2023. During the week 13th -19th of January near normal rainfalls are likely over the country. Below normal rainfalls are likely over most parts of the country during the week 20th – 26th January. There is a possibility for near normal rainfalls over the country during the week 27th- 02nd February 2023. (Figure 03).

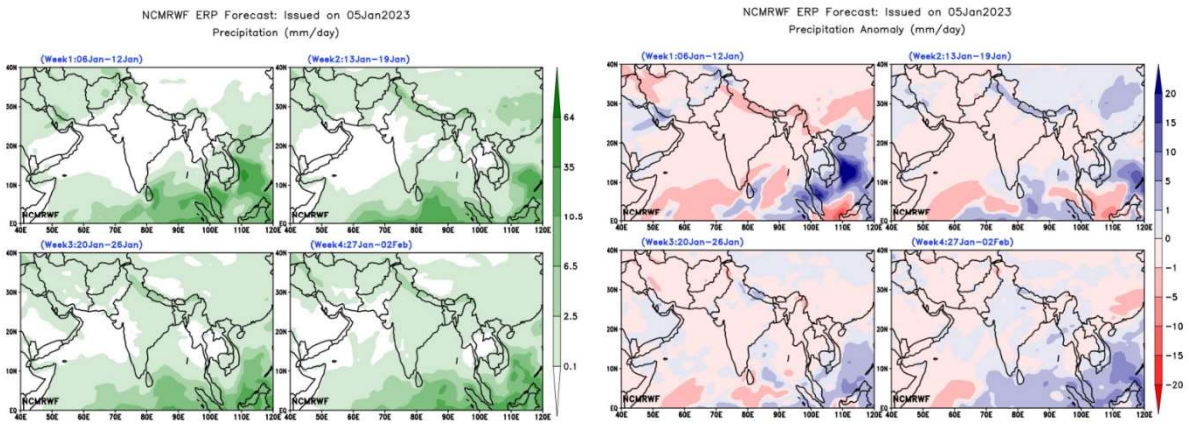


Figure 03 : Weekly rainfall Forecast and the Rainfall anomaly (mm/day)

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 January-February-March (JFM) 2023

Figure 04 : Seasonal Rainfall Forecast for January-March 2023 (JFM 2023)

Near normal rainfalls are likely over most parts of the country during JFM 2023 season as a whole (Fig. 04). Generally, wavy type disturbances are possible over and vicinity of Sri Lanka during January. If so rainfall can be enhanced.

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Monthly Rainfall Forecasts for January-February-March 2023

Month	Rainfall forecast
January 2023 	Near normal rainfalls are likely over most parts of the country during the month of January 2023.
February 2023 	There is a climatological probability as there is no clear signal for the prediction for the month of February 2023. Therefore, there is an equal possibility for below or near or above normal rainfall during the month.
March 2023 	There is a climatological probability as there is no clear signal for the prediction for the month of March 2023. Therefore, there is an equal possibility for below or near or above normal rainfall during the month.

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Agro-met Advisory : January 2023

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-month period as follows.

Rainfall forecast for **January**

Near normal rainfalls has been forecasted over most parts of the country during the month of January. However, DoM further predicted a **possibility of developing** wavy type disturbances over and vicinity of Sri Lanka that **may lead to enhance the rainfall.**

Rainfall forecast for **February** and **March** 2023

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

DoM further requested to pay attention on the medium and short-term weather predictions due to the absence of clear signals for the months of February and March and also due to the frequent increasing trend of sudden, short intense rains.

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 the Irrigation Department (ID) is about 61%. Recent update of daily water levels & storage of major reservoirs are attached in Table 4. ID further stated that, the carry over storage of major reservoirs is at a satisfactory level to continue the season with proper

water management practices. However, strict water scheduling is needed for medium tanks to prevent severe crop damages due to possible water shortage under the prevailing situation.

According to the *Mahaweli* Authority of Sri Lanka (MASL), present cultivation progress of paddy, under *Mahaweli* areas is about 100% and the total cultivation progress of other crops including Other Field Crops, vegetables and fruit crops is about 73%.

Recent updated statistics of Corporate Development Division of Department of Agrarian Development (DAD) shows that, the national cultivation progress of paddy is about 768,556 ha. District-wise national cultivation progress of 2022/23 *Maha* season, is given in the Table 5.

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.

- According to the general climatology of the country January to March are the months which brings the least quantum of rainfall to the entire island and no significant inflow to tanks and reservoirs will be expected during this period.
- Cultivations under major irrigation schemes, including Mahaweli schemes, can be secured for the rest of 2022/2023 *Maha* season with carry-over water storage for 2023 *Yala* season, by practicing well-planed, tight irrigation scheduling.
- However, according to the available information, drought resulted crop damages may be resulted over 30% land area under minor irrigation schemes and rainfed cultivations if a considerable rainfall is not received during forth coming months. Therefore, alternative solutions, such as constructing agro-wells or tube-wells in suitable areas, should have to be planned to avoid this kind of situations in future.
- Standing water should have to maintain up to the level of 0 (saturated level) to 5 cm for two weeks from first appearance of flowering, during the reproductive stage of paddy, to avoid the grain sterility.
- Due to the deviation of the normal weather pattern, late cultivation and staggered cultivation are rather common in this season. Furthermore, nutrient deficiencies among crops are also frequently observed. Therefore, there is a considerable threat of occurrence

of pest attacks such as Brown Plant Hopper (BPH). In order to minimize the risk, frequent observation on pest population dynamics is important in paddy fields.

- Nematode attack is also observed specially in Wet Zone areas such as Galle, Matara and Rathnapura and few other parts of the country. Therefore, it is advisable to pay special attention on Nematode attack at the initial stage and advisable to consult suitable subject specialists at Rice Research Institute, Batalagoda directly or through field level officers.
- Farmers who are planning to grow OFCs also need to pay special attention on minimizing the water stress conditions.

❖ 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.

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

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
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			
			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 (09.01.2023)

NO	RANGE	NO OF TANKS	STORAGE (Acft)				
			GROSS	DEAD	PRESENT	EFFECTIVE	
						Acft.	%
1	Ampara	9	1,052,221	16,259	398,449	382,190	36.9
2	Anuradapura	10	556,390	27,583	412,097	384,514	72.7
3	Badulla	7	78,315	4,138	64,231	60,093	81.0
4	Batticaloa	4	140,172	1,085	115,401	114,316	82.2
5	Hambantota	10	377,738	34,172	281,793	247,621	72.1
6	Galle	2	3,081	-	2,975	2,975	96.6
7	Kandy	3	28,503	386	27,233	26,847	95.5
8	Kurunegala	10	142,413	5,670	127,439	121,769	89.0
9	Monaragala	3	44,873	2,640	30,274	27,634	65.4
10	Polonnaruwa	4	352,010	24,300	260,715	236,415	72.1
11	Puttalam	2	74,261	8,400	42,703	34,303	52.1
12	Trincomalee	5	191,328	2,555	129,504	126,949	67.2
13	Mannar	4	67,370	675	48,397	47,722	71.6
	TOTAL	73	3,108,674	127,863	1,941,211	1,813,348	60.8

(Source: Water Management Division, Department of Irrigation)

Table 5: National Cultivation progress of Paddy, *Maha* season, 2022/23 (05.01.2023)

No	District	Cultivation Progress of *Maha* season 2022/23		
		A (Hectares)	B (Hectares)	A + B Total (Hectares)
		Extent of land sown or planted	Extent of land under basic land preparation only	
1	Colombo	4,246.95	126.67	4,373.62
2	Gampaha	12,234.01	354.52	12,588.52
3	Kalutara	13,332.62	472.60	13,805.22
4	Kandy	7,794.83	4,041.91	11,874.74
5	Matale	18,426.36	1,306.60	19,732.96
6	Nuwara Eliya	819.7	521.08	1,340.78
7	Galle	12,529.42	385.36	12,914.77
8	Matara	11,177.83	2,664.75	13,842.58
9	Hambantota	27,147.59	8,361.40	35,508.99
10	Kurunegala	75,496.20	907.23	76,403.43
11	Puttalam	18,628.96	190.40	18,819.36
12	Anuradhapura	101,496.60	0.00	101,496.60
13	Polonnaruwa	68,048.55	662.80	68,711.35
14	Badulla	13,258.62	4,652.37	17,933.26
15	Moneragala	33,078.57	4,960.14	38,038.71
16	Rathnapura	11,397.54	2,577.27	13,974.81
17	Kegalle	6,925.48	131.17	7,056.65
18	Ampara	75,861.00	5,034.00	80,895.00
19	Trincomalee	40,225.64	2,869.19	43,094.83
20	Batticaloa	71,189.41	0	71,189.41
21	vavuniya	14,949.25	4,582.74	19,531.99
22	Jaffna	9,791.60	2,256.41	12,048.00
23	Mannar	20,647.23	2,043.67	22,690.90
24	Mulathiu	21,773.25	137.4	21,910.65
25	Kilinochchi	28,388.90	390	28,778.90
Total		**718,866.09**	**49,629.67**	**768,556.03**

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

Technical Advisory Team Members

- *Ms. Anusha Warnasooriya (Director – Climate Change and Research) Department of Meteorology*
- *Eng. N. Yogaraja (Director – Water Management) Department of Irrigation*
- *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. H.K. Kadupitiya, (Director, Natural Resources Management Centre)*
- *Dr. W.M.U.K. Rathnayake (Principal Agriculture Scientist – Soil Science - Rice) Rice Research and Development Institute*
- *Dr. M.A.P.W.K. Malaviarachchi (Principal Agriculture Scientist – Agronomy – Field Crops) 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*
- *Ms. T.M.P.G.S.P. Thennakoon (Deputy Director-ICT) 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: Eng. D. Abeysiriwardena (Former Director – Water Management) Department of Irrigation