NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

08th August 2022 to 08th September 2022

Issued on 08th August 2022

Department of Meteorology

Department of Agriculture

2022.08.08

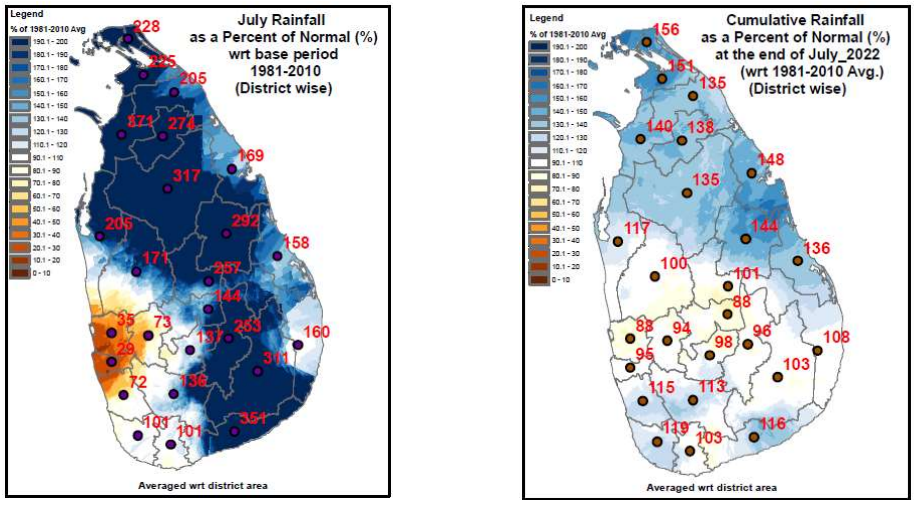
NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

Weather and Climate update

Department of Meteorology

Rainfall Analysis-July 2022

According to the available rainfall data in the Department of Meteorology, near or above normal rainfalls were reported over most parts except Colombo, Gampaha, Kalutara and Kegalle districts and southern parts of Puttalam and Kurunegala districts, where below normal rainfalls were reported during the month of July 2022. Observed rainfall as a percentage of normal during the month of July 2022 is shown in the figure 1(a). Observed cumulative rainfall from 1st January 2021 to 31st July 2022 as a percentage of normal shown in the figure 1 (b) and it illustrates near normal rainfalls over most parts of the country.

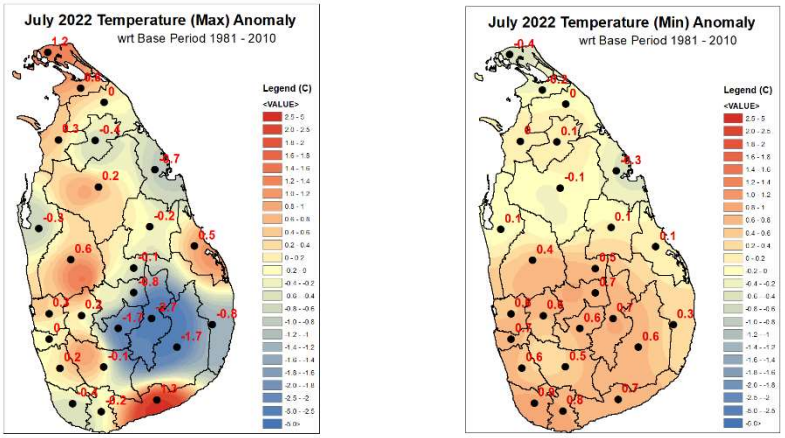


(a) (b)

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

Temperature analysis (July)

Average maximum temperatures(day time) were a little above normal over Jaffna and Hambantota districts, a little below normal over Kandy, Nuwara Eliya , Badulla and Monaragala districts and near normal over remaining areas of the country during the month of July 2022. Average minimum temperatures (night time) were a near normal over most parts of the country during the month of July 2022.



(a) (b)

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

Weather Forecast: Forecast for the month of August 2022(Weekly)

(Updated on 4th August 2022)

Slightly below normal rainfalls are likely over Western, Central, Sabaragamuwa and Southern provinces of the country and near normal over remaining areas of the country during the week of 05-11 August. During the weeks 12-18 August, 19-25 August and 26 August – 01 September near normal rainfalls are likely over the country. (figure 03).

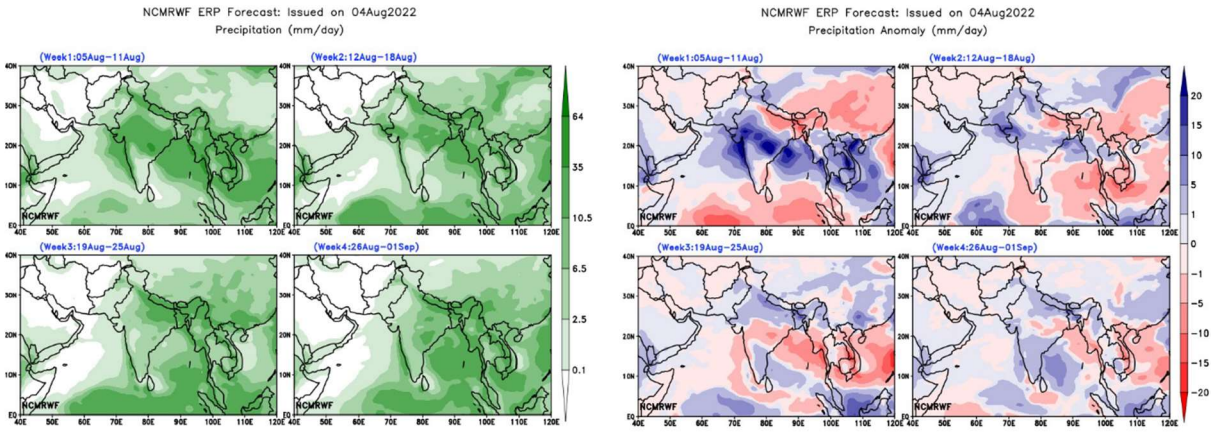


Figure 03 : Weekly rainfall Forecast and the Rainfall anomaly (mm/day)

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://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) 2022

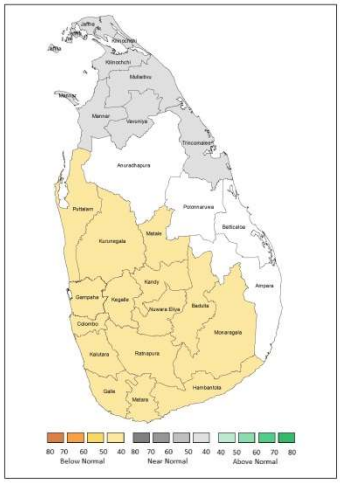


Figure 04 : Seasonal Rainfall Forecast for August-October 2022 (ASO 2022)

Below normal rainfalls are expected in Western, Sabaragamuwa, Northwestern, Uva, Southern and Central provinces and near normal rainfalls in Northern province and in Trincomalee district. There is no clear signal for remaining areas of the country for the season of ASO 2022 (Fig. 4).

NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

Monthly Rainfall Forecasts for August-September-October 2022

Month	Rainfall forecast
 August	Below normal rainfalls are likely over Western, Southern, Central, Sabaragamuwa, Northwestern and Uva provinces and near or slightly above normal rainfalls in northern province and in Trincomalee district. There is no clear signal for other areas where there is equal probability of having above or near or below normal rainfalls during the month of August 2022.
 September	There is a probability for near normal rainfall over Northern province and below normal over southern and Uva provinces. There is no signal for remaining areas where there is equal probability of having above or near or below normal rainfalls for the month of September 2022. However, there is a possibility for developing atmospheric disturbances particularly during the latter part of the month of September. If so rainfall can be experienced.
 October	There is a possibility for below normal rainfalls over most parts of the country during the month of October 2022. But there is a possibility for development of atmospheric disturbances, low pressure areas or depressions over and vicinity of Sri Lanka generally during the month of October. If so rainfall can be experienced.

NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN

Agro-met Advisory: August 2022

(For the months of August, September and October)

Weather predictions and Seasonal Outlook of August to October 2022 has been issued by the Department of Meteorology (DoM) as follows.

- Rainfall forecast for **August** 2022

  Below normal rainfall has been forecasted over Western, Southern, Central, Sabaragamuwa, Northwestern and Uva provinces and near or slightly above normal rainfalls over Northern province and Trincomalee district. No weather prediction has been issued for the other areas.

- Rainfall forecast for **September** 2022

  Near normal rainfall has been forecasted over Northern province and below normal rains over Southern and Uva provinces. No weather prediction has been issued for the other areas.

  DoM further predicted a possibility for developing atmospheric disturbances that may lead to higher rainfall during the latter part of September.

- Rainfall forecast for **October** 2022

  During October below normal rainfalls has been forecasted over most parts of the country.

  However, DoM further forecasted the possibility for development of atmospheric disturbances, low pressure areas or depressions over and vicinity of Sri Lanka generally during the month of October, that can be resulted higher rainfalls.

With the available weather information, 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.

According to the Irrigation Department (ID), the average effective storage of major reservoirs is about 41%. Recently updated summary of daily water levels & storage of major reservoirs are attached in Table 4. ID further stated that, the **cultivation progress** under major irrigation systems is **about 95 %** over the target. The major irrigation range-wise cultivation progress of 2022 *Yala* season is illustrated in Table 5. Harvesting of paddy for the 2022 *Yala* season has been starting at Ampara, Batticaloa, Moneragala and Mannar districts. ID has a plan to start the 2022/23 *Maha* season on 15th of October in the areas under major irrigation. However, the minor changes of water issuing schedule will be there depending on the sudden weather changes and availability of irrigation water in the reservoirs.

According to the recent statistical update of Corporate Development Division of Department of Agrarian Development (DAD), **national cultivation progress of paddy is about 511,885 ha (85%)**. District-wise National cultivation targets and progress of *Yala* season, is given in Table 6. *Mahaweli* Authority of Sri Lanka (MASL), states that the water issuing for the 2022/23 *Maha* season will be start on the 1st of November for the System B and C and the rest of the *Mahaweli* areas will receive water on 15th of October.

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 productivity under existing situation

Third season cultivation - Mung bean

- Farmers, who complete harvesting before mid-August (before 15th of August), are able to go for the 3rd season cultivation only with Mung bean.
- However, they should pay more attention on the following points to overcome the risk anticipated due to virus diseases,
    - Uniform crop cultivation is recommended (10 kg of Mung bean seeds per acre) to minimize spreading of diseases.
    - Seed treatment is recommended to improve the vigor of plant to withstand against virus diseases during its initial stage.

- Proper attention for early detection of virus infections at the initial stage and destroy infested plants immediately is advisable for minimizing possible damages.
- Urea, organic or liquid fertilizers are suggested to apply depending on the availability. However, pay attention on the inherent soil fertility of the land and avoid excessive applications as it could promote the vegetative growth with less number of flowers/pods

- Farmers who follow direct seeding either under zero tillage conditions or proper land preparation, should have to pay more attention on improving drainage conditions, to avoid the water logging situations under the sudden intense rains. Water logging conditions may lead to increase susceptibility to infestations, growth retardations and yield reductions.
- When the harvesting dates of the crop coincide with short intense rainy period, farmers are advised to delay the dates of harvesting. Delaying the harvesting is rather safe as pods harvested under heavy rains can be caught by fungal infections.

Paddy cultivation

- Paddy farmers, who are at the harvesting stage, are advised to follow short-term weather predictions issued by DoM, to avoid short intense rains during the South-west monsoon season.
- It is important to process the harvest, keeping more attention on drying. Especially for the 'seed paddy' production it is advisable to use dryers under proper standards.
- Since different types of pest damages are reported at minor levels, processing of farm saved seed paddy should be done, giving special attention on the purity of seeds.
- The Intermediate and Dry Zone farmers can get benefits from incidental rains by adjusting water issuing schedules in collaboration with water issuing officials. This will save the water in the reservoirs for the coming *Maha* season.
- Farmers, who are going to complete harvesting at the end of August, are able start 2022/23 *Maha* season, by land preparation activates with anticipated rains during the latter part of September.
- It is suggested to select 4 or 4½ month rice verities, for the farmers who are going to start the coming *Maha* season on time. Since these rice varieties have high yield potential, it will help

to increase national average paddy yield. Further it may be avoided synchronizing flowering with low temperature in December by proper adjustment of planting dates.

- **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 September in consultation with the members of the technical advisory committee and other relevant resource persons and stakeholders.

Technical Advisory Team Members

- *Ms. Anusha Warnasooriya (Director – Climate Change and Research) Department of Meteorology*
- *Eng. D. Abeysiriwardena (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. 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*
- *Ms. Aruni B. Abeysekera (Assistant Director of Agriculture-Agro-climatology and Climate Change) - Natural Resources Management Center*

Special Thanks:

- *Mr. Gamini Senarathne (Deputy Director of Agriculture) Crop Coordinator - Mung Beans) In Service Training Institute(ISTI), Angunakolapelessa*
- *Mr. M.S. Thilakasiri (Deputy Director of Agriculture– Seed Paddy) Seed and Plant Material Development Center (SPMDC)*

Compiled by, Aruni B. Abeysekera, Assistant director of Agriculture (Research),Division of Agro-climatology and Climate Change.

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)

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
			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 (04.08.2022)

NO	RANGE	NO OF TANKS	STORAGE (Acft)				
			GROSS	DEAD	PRESENT	EFFECTIVE	
						Acft.	%
1	AMPARA	9	1,052,327	16,259	231,326	215,067	21
2	ANURADAPURA	10	555,566	27,583	304,384	276,801	52
3	BADULLA	7	78,266	4,138	36,624	32,486	44
4	BATTICALOA	4	140,120	1,085	46,001	44,916	32
5	HAMBANTOTA	10	378,065	34,172	195,962	161,790	47
6	GALLE	2	3,160	-	3,082	3,082	98
7	KANDY	3	28,450	386	19,308	18,922	67
8	KURUNEGALA	10	142,381	5,670	102,523	96,853	71
9	MONARAGALA	3	44,900	2,640	18,867	16,227	38
10	POLONNARUWA	4	351,700	24,300	247,055	222,755	68
11	PUTTALAM	2	74,233	8,400	35,874	27,474	42
12	TRINCOMALEE	5	190,895	2,555	79,402	76,847	41
13	MANNAR	4	67,924	675	34,901	34,226	51
	TOTAL	**73**	**3,107,987**	**127,863**	**1,355,308**	**1,227,445**	**41**

(Source: Water Management Division, Department of Irrigation)

Table 5: Major irrigation range-wise cultivation performance of *Yala*, 2022 (02.08.2022)

Range	Available Extent (Acs)	Planned Extent (Acs)		Cultivation Performance %	
		Paddy	OFC	Ploughing	Sowing
Ampara	156,437	127,938	14,487	100%	100%
Anuradhapura	97,075	73,487	11,594	94%	94%
Badulla	22,965	7,204	8,611	97%	97%
Batticaloa	58,537	50,433	730	99%	99%
Colombo	18,271	13,640	596	98%	96%
Galle	37,379	26,599	0	75%	74%
Hambantota	71,799	61,363	7,153	93%	93%
Kandy	36,534	29,262	5,232	99%	98%
Kurunegala	44,733	32,086	5,104	97%	95%
Monaragala	19,440	14,158	2,410	100%	100%
Polonnaruwa	87,953	80,649	8,250	95%	95%
Puttalam	16,868	11,443	3,563	73%	66%
Trincomalee	60,465	59,538	0	96%	96%
Mannar	46,057	9,002	2,470	81%	81%
Total	**774,513**	**596,802**	**70,200**	**95%**	**95%**

(Source: Irrigation Department)

Table 6: National Cultivation progress of Paddy, *Yala* season, 2022 (01.08.2022)

No	District	Cultivation target given by the head office (Hectares)	Cultivation Progress of *Yala* season 2022			
			A (Hectares)	B (Hectares)	A + B Total (Hectares)	A+B Cultivation Target (%)
			Extent of land sown or planted	Extent of land under basic land preparation only		
1	Colombo	2,809.20	3,125.43	0.00	3,125.43	111
2	Gampaha	11,640.19	9,857.09	4.00	9,861.09	85
3	Kalutara	11,899.12	11,154.47	198.58	11,353.05	95
4	Kandy	11,997.98	10,142.16	804.05	10,946.21	91
5	Matale	17,458.77	14,452.96	77.14	14,530.10	83
6	Nuwara Eliya	5,020.02	2,789.48	391.21	3,180.69	63
7	Galle	12,618.90	10,570.59	574.96	11,145.55	88
8	Matara	15,500.00	12,463.77	1,418.09	13,881.86	90
9	Hambantota	37,982.13	33,389.41	359.40	33,748.81	89
10	Kurunegala	76,070.24	58,242.06	1,318.91	59,560.97	78
11	Puttalam	19,380.24	13,761.40	190.08	13,951.48	72
12	Anuradhapura	91,571.96	61,509.21	6,048.50	67,557.71	74
13	Polonnaruwa	68,972.51	62,094.95	257.10	62,352.05	90
14	Badulla	18,830.21	11,073.49	787.20	11,860.69	63
15	Moneragala	20,438.14	17,807.02	688.88	18,495.90	90
16	Rathnapura	13,502.22	12,097.39	500.23	12,597.62	93
17	Kegalle	7,226.53	386.00	3,515.00	3,901.00	54
18	Ampara	68,471.75	61,428.95	9.00	61,437.95	90
19	Trincomalee	28,605.00	28,260.26	1,578.74	29,839.00	104
20	Batticaloa	32,700.50	32,260.60	71.02	32,331.62	99
21	vavuniya	5,886.30	6,060.00	0.00	6,060.00	103
22	Jaffna	0.00	0.00	0.00	0.00	0
23	Mannar	3,606.88	2,047.84	22.13	2,069.97	57
24	Mulathiu	8,984.70	7,583.10	0.00	7,583.10	84
25	Kilinochchi	10,935.00	10,304.00	209.20	10,513.20	96
Total		**602,108.49**	**492,861.63**	**19,023.41**	**511,885.04**	85

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