

NATIONAL AGROMETEOROLOGICAL ADVISORY BULLETIN



08th September 2022 to 08th October 2022

Issued on 08th September 2022



Department of Meteorology

Department of Agriculture

2022.09.08

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Weather and Climate update

Department of Meteorology

Rainfall Analysis-August 2022

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 August 2022. Northern, North-western and Central provinces and Anuradhapura and Rathnapura districts received more than twice of the normal (climatological) rainfall during the month.

Observed rainfall as a percentage of normal during the month of August 2022 is shown in the figure 1(a) and observed cumulative rainfall as a percentage of normal from 1st January 2022 to 31st August 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.

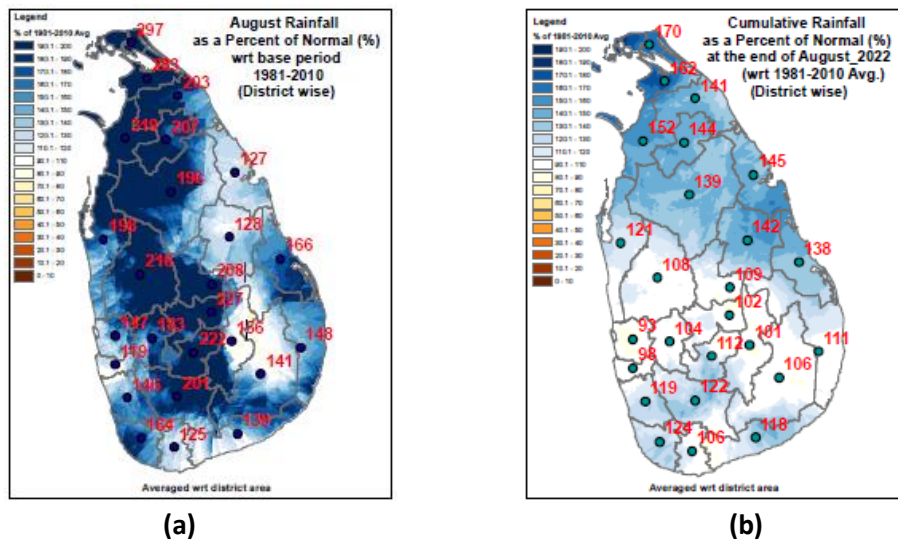


Figure 01 : Observed Monthly rainfall as percentage of long-term average (1981-2010) during August 2022 (a) and cumulative rainfall from 01st January 2022 to 31st August 2022 as percentage of long term average (1981- 2010) (b)

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Temperature analysis (August)

Average maximum temperatures(day time) were a little below normal over Northcentral and Uva provinces and Kilinochchi, Vavuniya, Trincomalee and Kurunegala districts and near normal over remaining areas of the country during the month of August 2022. Average minimum temperatures(night time) were predominantly near normal over the country during the month of August 2022.

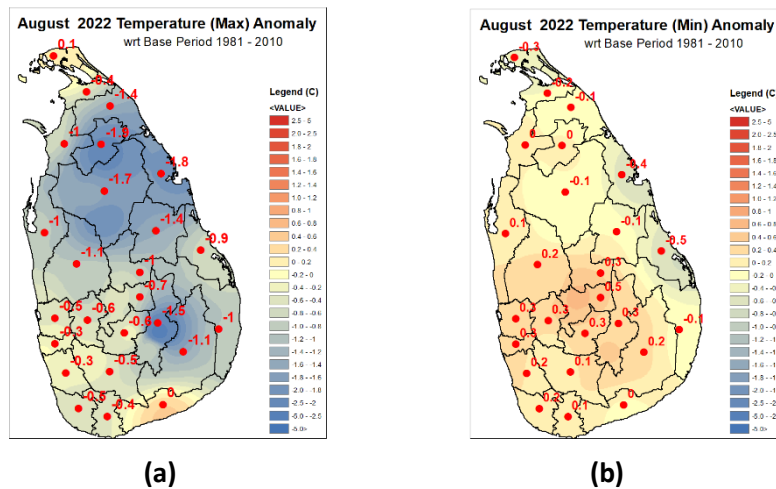


Figure 02 : Average Maximum (a) and Minimum (b) Temperature anomalies during the month of August 2022 compared with the long-term average (1981-2010)

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

(Updated on 1st September 2022)

Above normal rainfalls are likely over the South-western parts of the country and near normal rainfalls are likely elsewhere of the country during 2-8 September. During the weeks of 9-15 September and 16-22 September below normal rainfalls are likely over North-western, Western Sabaragamuwa and Southern provinces and near normal rainfalls over elsewhere of the country. During the week 23-29 September near normal rainfalls are likely over the country. (figure 03).

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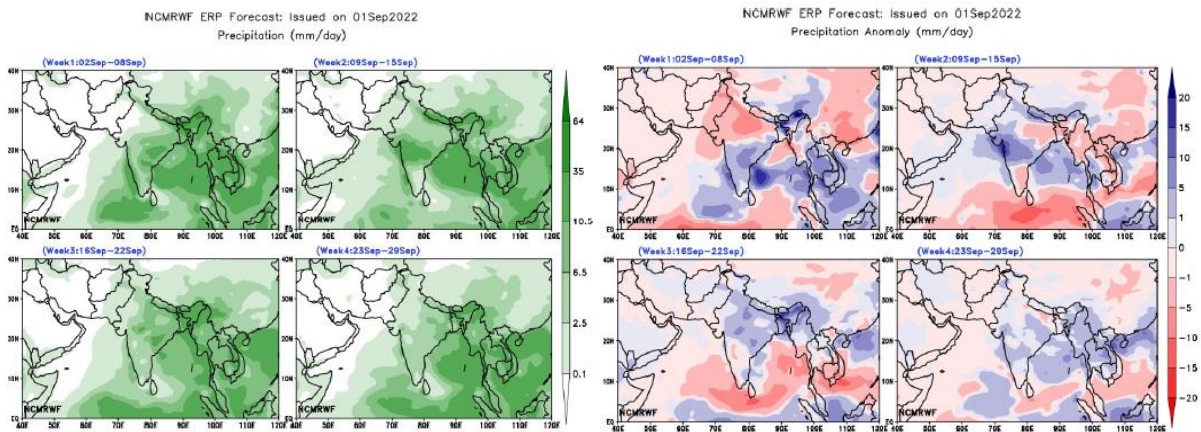


Figure 03 : Weekly rainfall Forecast and the Rainfall anomaly (mm/day)

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 September-October-November (SON) 2022

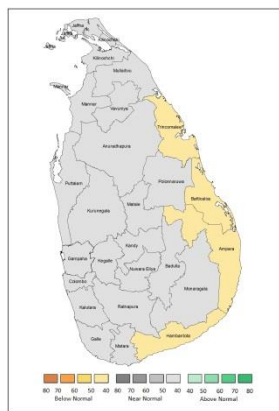


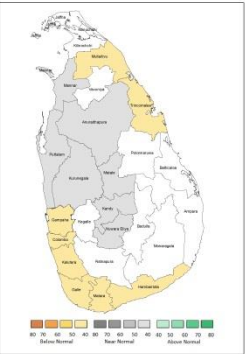


Figure 04 : Seasonal Rainfall Forecast for September-November 2022 (SON 2022)

Below normal rainfalls are likely over Eastern province and in Hambanthota district and near or a slightly below normal rainfalls are likely over remaining part of the country during the season of September to November(SON) 2022 (Fig. 4).

Generally low-level atmospheric disturbances are possible over and vicinity of Sri Lanka during October and November. If so, rainfall can be enhanced.

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Monthly Rainfall Forecasts for September-October-November 2022

Month	Rainfall forecast
<div style="display: flex; justify-content: space-around; align-items: center;">  <div style="border: 1px solid black; padding: 5px; text-align: center;">September</div> </div>	<p>Below normal rainfalls are likely over Southern and Western provinces and in Trincomalee and Mulative districts. Near normal rainfalls are expected over Central province and in some parts of Anuradhapura, Puttalam, Kurunegala and Mannar districts. There is no clear signal for remaining parts of the country. Accordingly, there is equal probability of having above or about or below normal rainfalls over no signal areas during the month of September 2022.</p>
<div style="display: flex; justify-content: space-around; align-items: center;">  <div style="border: 1px solid black; padding: 5px; text-align: center;">October</div> </div>	<p>There is a higher probability of having below normal rainfalls over most parts of the country during the month of October 2022. However, generally low level atmospheric disturbances are possible over and vicinity of Sri Lanka during the month of October. If so, rainfall can be enhanced.</p>
<div style="display: flex; justify-content: space-around; align-items: center;">  <div style="border: 1px solid black; padding: 5px; text-align: center;">November</div> </div>	<p>There is a possibility for below normal rainfalls over Eastern province and near normal rainfalls over elsewhere of the country during the month of November 2022. In addition to that, in general, low level atmospheric disturbances are possible over and vicinity of Sri Lanka during the month November. If so, rainfall can be enhanced.</p>

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Agro-met Advisory :September 2022

Natural Resource Management Centre, Department of Agriculture
(For the months of September, October and November 2022)

Department of Meteorology (DoM) has issued the weather predictions and seasonal outlook for the coming three month period, September to November 2022 as follows,

- Rainfall forecast for **September 2022**

Below normal rainfall has been forecasted over Southern and Western provinces and in Trincomalee and Mulative districts. Near normal rainfalls are expected over Central province and in some parts of Anuradhapura, Puttalam, Kurunegala and Mannar districts. No weather prediction has been issued for the other areas.



- Rainfall forecast for **October 2022**

Below normal rainfall has been forecasted over most parts of the country. However, **DoM further predicted a possibility for developing low level atmospheric disturbances that may lead to higher rainfall.**



- Rainfall forecast for **November 2022**

Below normal rainfall has been forecasted over Eastern province and near normal rainfalls are expected over elsewhere of the country.

DoM further forecasted the possibility for development of low level atmospheric disturbances over and vicinity of Sri Lanka, that can be resulted higher rainfalls.



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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.

The average effective storage of major reservoirs belong to the Irrigation Department (ID) is about 37 %. Recently updated summary of daily water levels & storage of major reservoirs are attached in Table 4. According to the irrigation range wise tentative water issuing schedule of ID, Anuradhapura, Batticaloa, Galle and Kurunegala ranges will receive water for the coming 2022/23 *Maha* season during first two weeks of October. After 15th of October, the irrigation ranges namely Ampara, Badulla, Moneragala, Puttalam, Trincomalee and Mannar will receive water for the cultivation activities. ID will issue water for Hambantota, Kandy (Kandy, Matale and Nuwara-eliya) and Polonnaruwa irrigation ranges after 1st of November.

Mahaweli Authority of Sri Lanka (MASL), states that the water issuing for *Mahaweli* systems will start on 1st of October and will be completed within the month, except *Mahaweli* system C (which will be around mid-November). However, during the ‘*Mahaweli* Water Management Panel’ water issuing schedules will be finalized. According to the Department of Agrarian Development (DAD), water availability of minor reservoirs has shown a considerable variation. Therefore, final decisions taken during *Kanna* meetings will be very important.

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.

Paddy cultivation:

- Paddy farmers are highly advisable to plan their land preparation activities getting maximum benefits of rain-water to minimize the impact of predicted below normal rainfall during second inter-monsoon season (October and November period).
- It is recommended to select **3 or 3½ months age classes of paddy varieties**, considering the updated weather prediction, present reservoir status and availability of agricultural inputs.

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- However, farmers can go for 4–month age classes of paddy varieties, if the irrigation tank in a given paddy tract is almost at the Full Supply Level (FSL). These farmers are advisable to start the land preparation activities before mid-October.

- The Seed and Plant Material Development Center (SPMDC) of the Department of Agriculture ensure the seed availability of aforesaid age classes, considering their seed stocks, seed paddy production program for multiplication of seed paddy and ‘farm save seed’ stocks.

- Paddy farmers have to consider following information, when selecting the age classes of seed paddy, to receive a higher potential yield.
 - The most suitable period for harvesting paddy in *Maha* seasons is February (along with the flowering stage during January). Because unfavorable weather conditions (such as extreme cold weather) during flowering stage will leads to yield reductions. Furthermore, the characteristic dry weather condition during February reduces the yield losses due to intense rains.
 - Farmers under irrigated rice systems, have to consider the availability of irrigation water to continue the season with the selected age classes.
 - The recommended period for **land preparation activities** for paddy is **three weeks**.

- Following agronomic practices are recommended to the paddy farmers, to carry on the land preparation activities paying special concern on weed control.
 - Use the Disc plough (4-wheel tractor) or Mould-board plough (2-wheel tractor) for ploughing (6” – 9”) during the first land preparation.
 - After the primary tillage, the bunds should be cleaned and organic matter can be added.
 - Maintain the standing water level covering ½ of the each ploughed soil clods, (*Heekata*) and allow 10-14 days, to germinate weed seeds.

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- The 2nd ploughing need to be done perpendicular direction to the primary tillage by using a tine tiller or a rotovator and standing water can be maintained at the level of 1”- 2” for 7 days.
 - Then, repairing and replastering of bunds should be done.
 - Compost and decomposed organic manure can be added to the field after second land preparation.
 - Tertiary tillage involves puddling and levelling. Puddling followed by a proper levelling is important for efficient and uniform water management, weed control, proper crop establishment.
 - It is recommended to have three weeks for land preparation including primary, secondary and tertiary tillage and then to crop establishment.
- Encourage seedling broadcasting if parachute trays are available or row seeding, wherever possible.
- Depending on the water issuing schedule of ID and cultivation plans of MASL, famers belongs to the same irrigation range or ‘Yaya’ should have to practice the following recommendations,
- Considering the time allocated for land preparation activities and harvesting period in this document, select the most suitable age class of paddy varieties to your range or ‘Yaya’ during Kanna meetings.
 - Use same age class of paddy varieties to the entire range or ‘Yaya’ and start land preparation activities at the same time, avoiding staggered cultivation.
 - This helps to minimize the irrigation water losses and to reduce the spreading of pest and disease.

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Other Field Crops (OFCs)

- Farmers who are planning to cultivate other field crops including Maize, are advised to start cultivation activities with the onset of the season. Land preparation activities should have to start with incipient rains.
 - Staggered cultivation leads to increase the impact of pest and diseases and the damage especially due to Rodents.
 - It is important to plough cultivation lands perpendicular to the slope, while doing land preparation activities in the upland crops and establish soil conservation bunds.
 - Special attention is needed on improving proper drainage systems to avoid water logging situations.
- ❖ Please consider that this advisory was prepared based 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 October in consultation with the members of the technical advisory committee and other relevant resource persons and stakeholders.

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Table 1: 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)

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Table 2: 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)

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Table 3: Agro-ecological region wise expected rainfall values for **November**

Dry Zone (mm)		Intermediate Zone (mm)		Wet Zone (mm)	
AER	Nov	AER	Nov	AER	Nov
DL1a	217.9	IL1a	189.4	WL1a	305.1
DL1b	168.3	IL1b	174.9	WL1b	273.7
DL1c	202.0	IL1c	226.6	WL2a	242.7
DL1d	166.4	IL2	224.3	WL2b	233.0
DL1e	187.5	IL3	163.9	WL3	222.3
DL1f	157.2	IM1a	242.3	WM1a	289.5
DL2a	196.2	IM1b	252.3	WM1b	285.7
DL2b	191.3	IM1c	156.0	WM2a	232.8
DL3	191.4	IM2a	248.5	WM 2b	248.0
DL4	185.8	IM2b	264.8	WM3a	226.4
DL5	137.4	IM3a	208.4	WM3b	220.6
		IM3b	218.8	WU1	258.0
		IM3c	195.3	WU2a	209.2
		IU1	272.8	WU2b	229.8
		IU2	251.4	WU3	189.6
		IU3a	290.6		
		IU3b	272.5		
		IU3c	227.2		
		IU3d	140.1		
		IU3e	167.0		

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

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Table 4: Summary of daily water levels & storage of major reservoirs (08.09.2022)

RANGE	NO OF TANKS	STORAGE (Acft)				
		GROSS	DEAD	PRESENT	EFFECTIVE	
					Acft.	%
Ampara	9	1,052,327	16,259	227,993	211,734	20
Anuradapura	10	555,566	27,583	275,985	248,402	47
Badulla	7	78,266	4,138	34,340	30,202	41
Batticaloa	4	140,120	1,085	43,988	42,903	31
Hambantota	10	378,065	34,172	170,247	136,075	40
Galle	2	3,160	-	2,898	2,898	92
Kandy	3	28,450	386	20,260	19,874	71
Kurunegala	10	142,381	5,670	111,939	106,269	78
Monaragala	3	44,900	2,640	18,181	15,541	37
Polonnaruwa	4	351,700	24,300	200,120	175,820	54
Puttalam	2	74,233	8,400	32,120	23,720	36
Trincomalee	5	190,895	2,555	61,133	58,578	31
Mannar	4	67,924	675	26,881	26,206	39
TOTAL	73	3,107,987	127,863	1,226,085	1,098,222	37

(Source: Water Management Division, Department of Irrigation)

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