



SRI LANKA

Climate & Food Security Monitoring Bulletin April - June 2019

Department of Meteorology

Ministry of Public Administration, Disaster Management and Rural Economic Affairs

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June 2019

According to the forecast issued in the previous bulletin (March 2019) for April to June, most parts of the country received below normal rainfall during April and May. Temperatures were above normal as predicted, and frequent heat weather advisories and precautions were issued.

The probabilistic forecast issued in April suggests, below normal rains in the months of June and July. So far, rains received during the first ten days of June shows above normal rainfall in many regions of the country (Figure 2). The situation will continue to be monitored closely, also considering impacts on drinking water and agriculture.

1. Access to water:

- ◆ Total precipitation received March, April and May was reported as below normal compared to the long-term average. Rainfall was above normal in June.
- ◆ Some areas in the Eastern province are experiencing prolonged dry-weather according to the Standard Precipitation Index (SPI) for the last 9 months.
- ◆ Water levels of major reservoirs in the Eastern province were at 36% of the total capacity as at 15th March 2019, almost 30% less than in March 2018. Senanayaka tank in Ampara District (largest tank in the country with 947 MCM) has only 17% of its total capacity.
- ◆ Country wide water capacity was above 50% until April, and dropped below 50% in May and fell to 36% by mid-June due to evapotranspiration in the warm weather conditions.

Figure 01: Monthly Water Capacity of Major Irrigation Reservoirs until mid-June

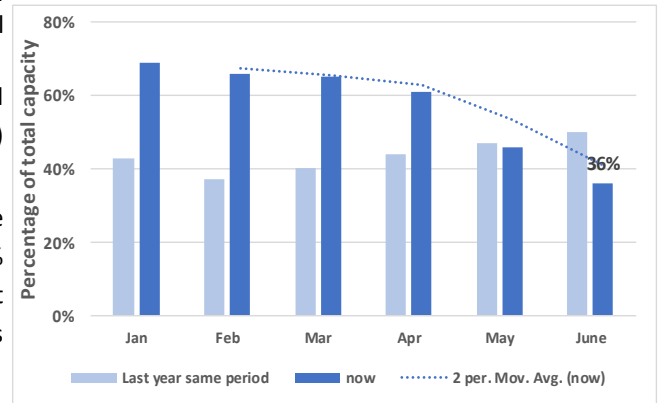
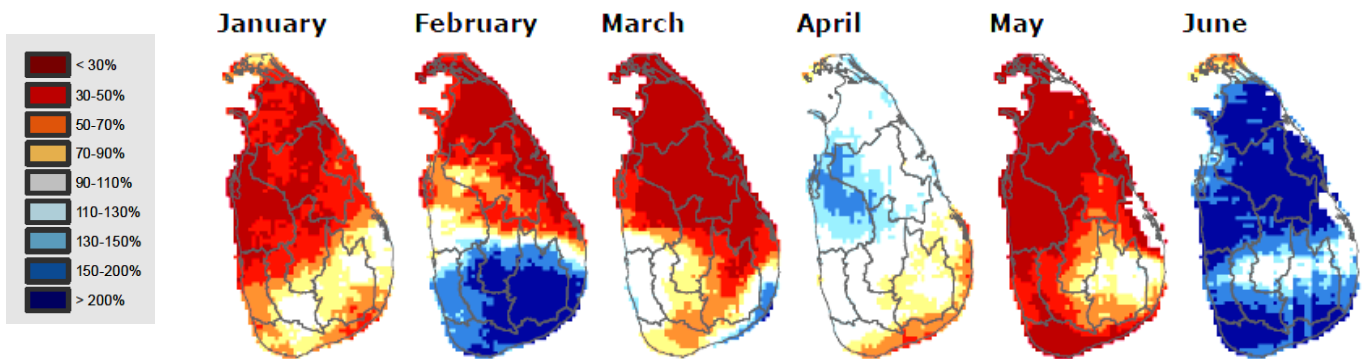


Figure 02: Rainfall anomaly January – June 2019

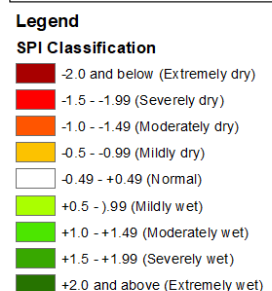
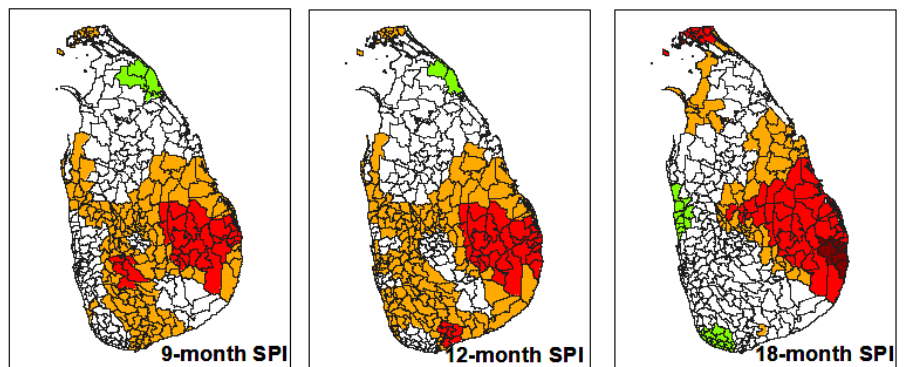


Source: Platform for Real-time Information and Situation Monitoring (PRISM)

2. Impacts of Dry Weather on Crops

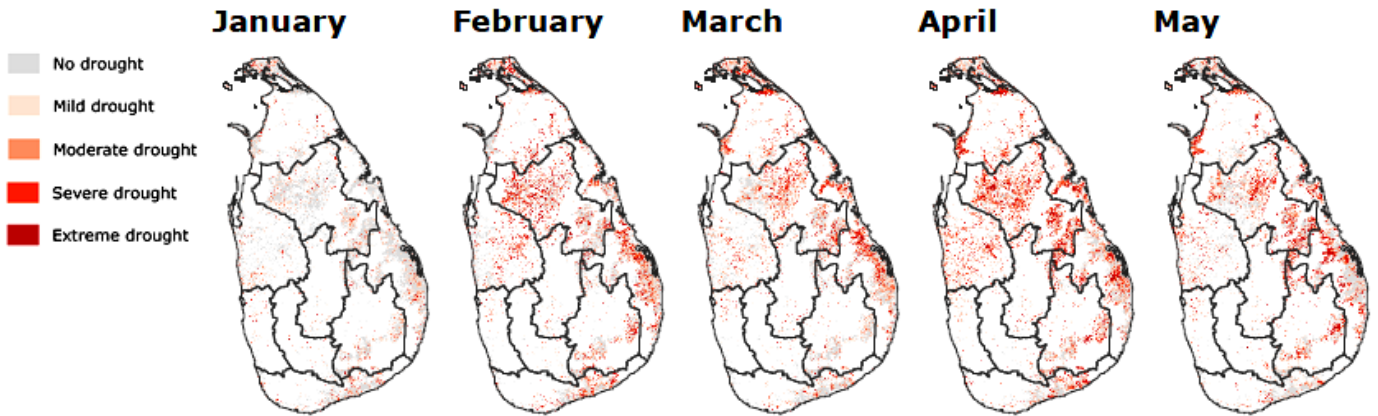
- ◆ Pockets in Ampara, Moneragala and Badulla Districts are facing severe water stress levels according to the 9-month SPI (See Figure 03).
- ◆ Vegetation Health Index (VHI) maps shown in Figure 4 illustrate that the seasonal crops cultivated in the dry zone are currently facing water stress due to dry weather (mainly Vavuniya, Anuradhapura, Polonnaruwa, Puttalam, Kurunegala, Hambanthota, Ampara and Moneragala Districts). This situation will impact agricultural production, especially paddy and chena cultivation.
- ◆ Perennial crops including tea, rubber and coconut are not yet severely affected by the water stress. Productivity of coconut has picked up in May compared to last three years due to the intensified rains received to the North Western monsoon in 2018.

Figure 03: Standard Precipitation Index (SPI) 2019



¹ Rainfall anomaly compares the current monthly rainfall to the historical 30-year average level between 1961 and 1990: Dept. of Meteorology

Figure 04: Vegetation Health Index (VHI) - January - May 2019

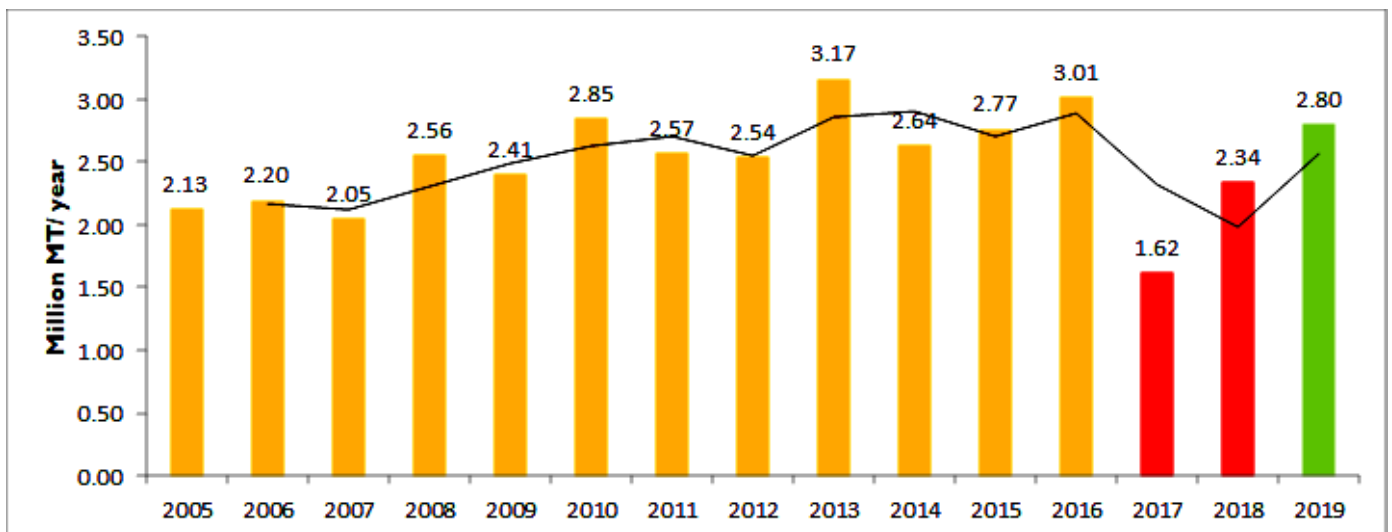


Source: Platform for Real-time Information and Situation Monitoring (PRISM)

3. Food Security

- ◆ The Maha season 2018/19 concluded reporting paddy cultivation extent of 759,571 ha. This is a 91% achievement from the target (832,785 ha). Rice production in Maha 2018/19 season will alone be sufficient for 9.36 months – until mid-September 2019. The Yala 2019 harvest will be available from August 2019, therefore ensuring domestic demand for rice is met by local production (See Figure 5).
- ◆ With the start of first inter-monsoonal rains, the seasonal agricultural practices, including paddy cultivation, for Yala 2019 commenced in May. The total rice production in Yala 2019 is estimated to be 970,000 MT, ensuring the total availability of rice meeting the national demand for 2019. Comparatively, the Yala production of 2018 was 850,000 MT.
- ◆ Yala paddy production in certain pockets of North Western, North Central, Uva and Eastern Provinces will be impacted as paddy cultivation was not undertaken due to lack of water storage in small-scale irrigation tanks.
- ◆ Other field crops, vegetable and fruits will face the challenge of current dry weather, and may result in reduced yields.

Figure 05: Total Rice Production Outlook

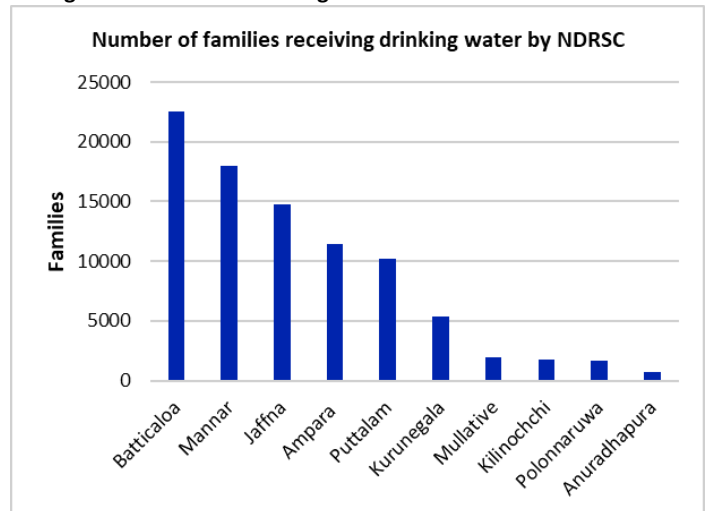


Source: Socio Economic Planning Centre of Department of Agriculture

4. Drinking Water Needs

- ◆ Access to drinking water has been reported as a challenge in several districts since March this year. Special attention needs to be given to the intermediate zones mainly in the drought prone divisions in Kurunegala and Puttalam Districts.
- ◆ The limited availability of ground water, as well as the reduction of tank water levels, have seriously affected households drinking water. Currently, divisional level water distribution is ongoing in 63 DS divisions in 14 districts.
- ◆ Sanitation measures are also becoming a challenge as water used for bathing and washing is limited in some areas.

Figure 06: Status of Drinking Water Distribution — June 2019



Source: National Disaster Relief Services Center (NDRSC)

5. Contingency Planning and Immediate Response

The following short to medium term recommendations to be implemented with immediate effect to reduce the impact of dry weather and to address the current issues.

Drinking Water

- ◆ Prepare a contingency budget for water transportation and rehabilitation of secondary water sources to be used from July to early October 2019.
- ◆ Renovate the water-wells, boreholes and tube-wells as secondary sources of drinking water.
- ◆ Establish systems to control water supply to manage the demand with existing water capacity.
- ◆ Establish water purification units based on the availability in key locations to supply safe water.
- ◆ Increase awareness and media campaigns among public and private sector to conserve water and minimize water wastage.

Agriculture

- ◆ Farmers to be supported with agricultural inputs for cultivating arable lands in the wet zone which have sufficient access to water resources.
- ◆ Production of drought tolerant crops should be promoted for home gardening, especially in the wet zone.
- ◆ Renovation of agro-wells to be prioritized to feed livestock and water supply for additional up-land crops.

Food security

- ◆ Market prices and crop production cycles to be closely monitored in order to ensure the supply of essential food items to the markets under a guaranteed price.
- ◆ Cash for work and other climate resilience building activities to be implemented to address short-term food insecurity while the community level agricultural infrastructure is developed in participation with drought affected communities.

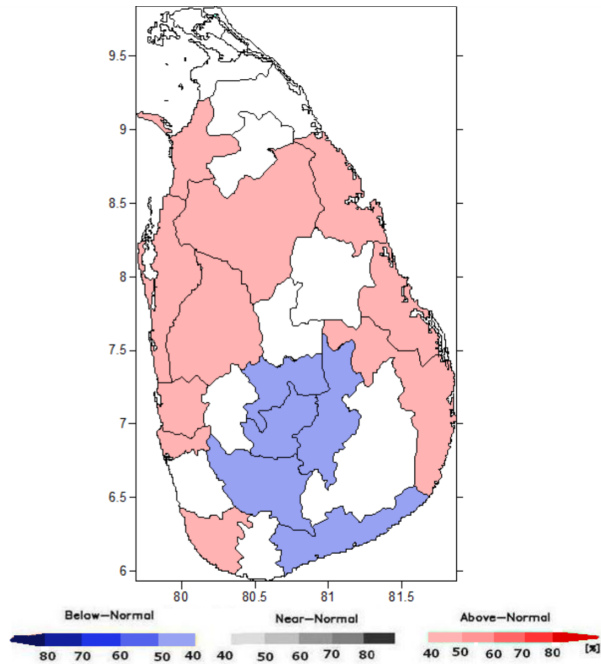
Planning

- ◆ Government inter agency planning meeting on drought impact and measures to be convened.
- ◆ Drought surveillance through mobile Vulnerability Assessment and Mapping Approach (mVAM) to understand the severity of the impact in the hard-hit areas in Ampara and Moneragala Districts.

In addition to the short-term measures, a multi-sector long-term action plan for drought impact reduction to be developed and implemented by the Government. The progress of the implementation to be closely monitored and reported to the National Disaster Management committee.

6. Climate Outlook

Figure 07: Temperature Forecast for July—August 2019



Source: Department of Meteorology

A detailed seasonal climate outlook issued by the Department of Meteorology in May, indicates below normal rainfall in most parts of the country for July to August. A positive Indian Ocean Dipole (climatological phenomena) is persisting, resulting in the suppression of monsoon rains. However, the same outlook shows above normal rainfall in Hambantota and Badulla Districts.

Figure 7 shows temperatures are predicted to be slightly above the average maximum temperature in Anuradhapura, Trincomalee, Batticaloa, Ampara, Galle, Colombo, Gampaha, Puttlum, Kurunegala and Mannar Districts, and slightly below the average maximum temperature in Badulla, Kandy, Ratnapura, Nuwara Eliya and Hambantota Districts. This might further aggravate evapotranspiration in North-Eastern, North-Central and North-Western areas across the country, creating water scarcity for drinking, domestic and agricultural purposes until next monsoon.

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Disclaimer: This bulletin looks into the key aspects of climatic seasonal trends and their impact on the population and food security during the first and second quarter of year 2019, through the products of Platform for Real-time Information and Situation Monitoring (PRISM). PRISM system is hosted at the Disaster Management Centre, has the capability of automatic capture of climate related and space based information.

