



SRI LANKA

Climate & Food Security Monitoring Bulletin

April - June 2019

Version 2

Ministry of Public Administration, Disaster Management and Rural Economic Affairs
Department of Meteorology, Disaster Management Center, National Disaster Relief Services Center

Technical Assistance: United Nations World Food Programme



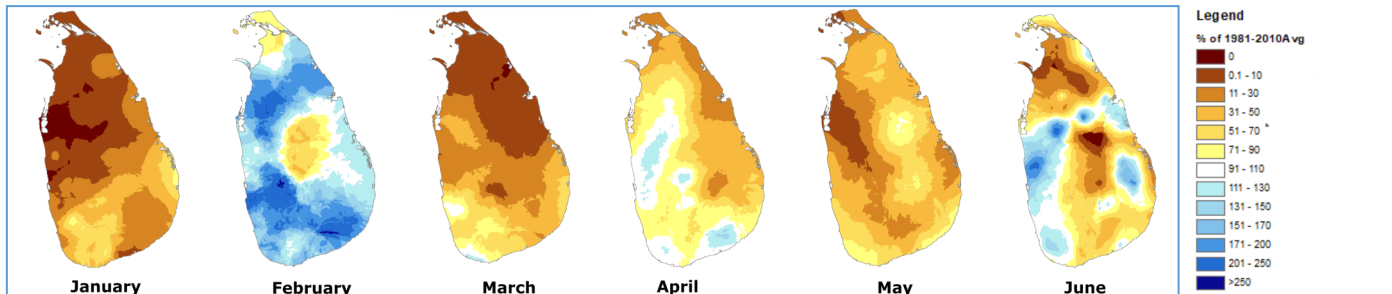
June 2019

Dry spell over many parts of Sri Lanka is continuing, which was started in December 2018. At present drinking water distribution is ongoing by the Ministry of Disaster Management, together with district and divisional administration over 17 districts. This is not identified as a drought, the country experiencing below normal annual rainfall since 2016 except the last year.

If the dry weather continues, the condition may negatively influence over many sectors and may create heavy impact on Agriculture and Health specifically. The Seasonal forecast issued by Department of Meteorology is showing the dry spell may continue until next inter-monsoon in mid-October, therefore this bulletin is planned to envision decision makers and planners make aware on this ongoing situation and to take necessary actions.

1. Meteorology: observation and forecast

Figure 01: Rainfall deviation from normal (anomaly) - 2019



- ◆ Rainfall received in March, April, May & June 2019 was reported as below normal compared to the long-term average.
- ◆ Figure-01 shows rainfall deviation against average (anomaly) and from May onwards its becoming drier context mainly in dry-zone areas. Some amount of rains received in June in some parts of south-west, but rainfall to dry-zone is mostly negative.
- ◆ Some areas in the Eastern province are experiencing prolonged dry-weather based on the Standard Precipitation Index (SPI) in past nine months Figure-02, further maps on SPI shows; pockets in Ampara, Monaragala, Matale and Badulla districts are facing severe water stress levels due to inadequate rainfall and high evapotranspiration in past few months.
- ◆ Temperatures were above normal as predicted, and frequent heat weather advisories and precautions were issued.
- ◆ A detailed seasonal weather outlook issued in June, indicates below normal rainfall in most parts of the in the dry-zone for July to September.

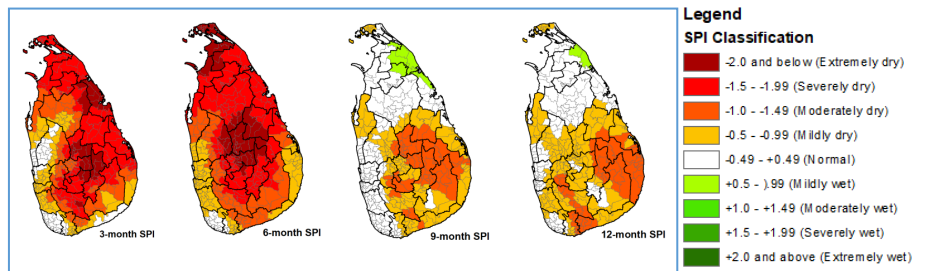


Figure 02: Standard Precipitation Index (SPI) June-2019

2. Hydrology and access to water

- ◆ Water levels of major reservoirs in the Eastern province at 26% of the total capacity as at 30th May 2019, almost 26% less than in May 2018. Senanayaka tank in Ampara (*largest tank in the country with 947 million cubic meters*) has only 9% of its capacity by end of June.
- ◆ Country wide water capacity was above 50% until April, and dropped below 50% in May and 30% by end-June due to evapotranspiration in the warm weather conditions showed in Figure-03.
- ◆ Many Districts are suffering inadequate water availability and some parts having access issues on domestic and hygienic conditions, especially . This is a long-term issue in some areas of the country and water stress for environment might also increased.

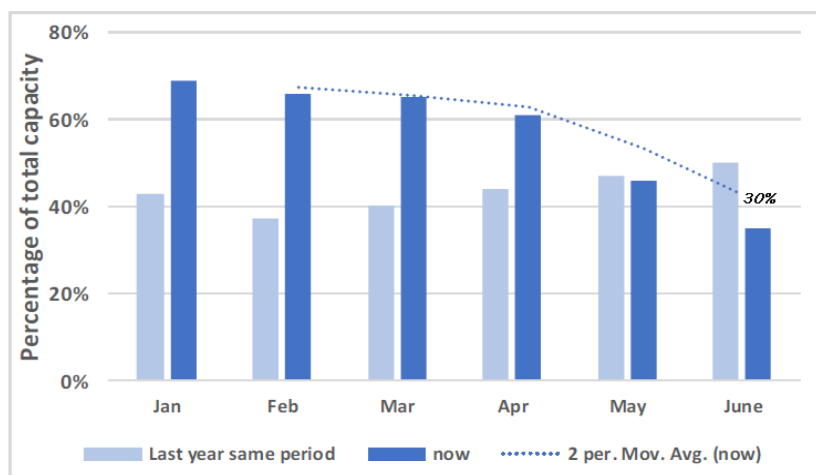


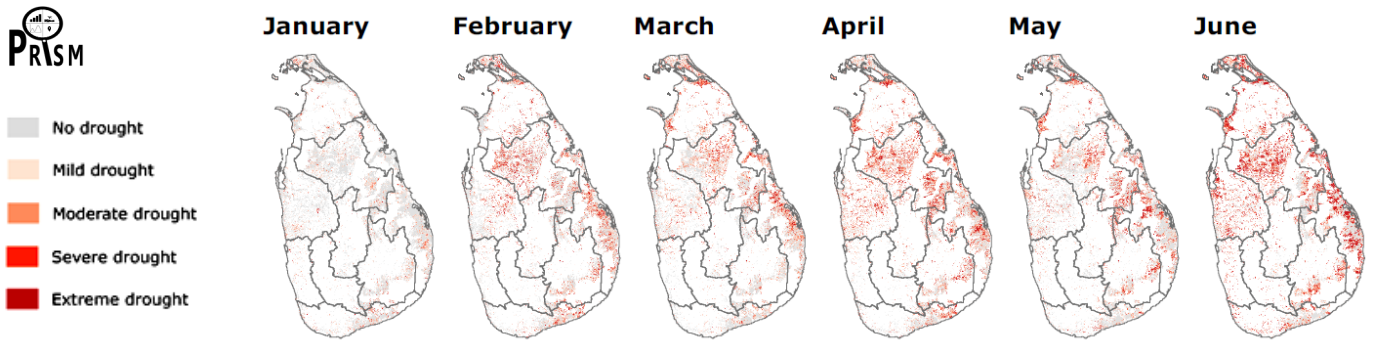
Figure 03: Monthly water capacity of major irrigation reservoirs until end-June

Source: Department of Irrigation

Note: This represent the water status in 73 major reservoirs, it is important to look on the medium and minor tank status around the country which takes a stake in water stress.

3. Impacts Agriculture and Food Security

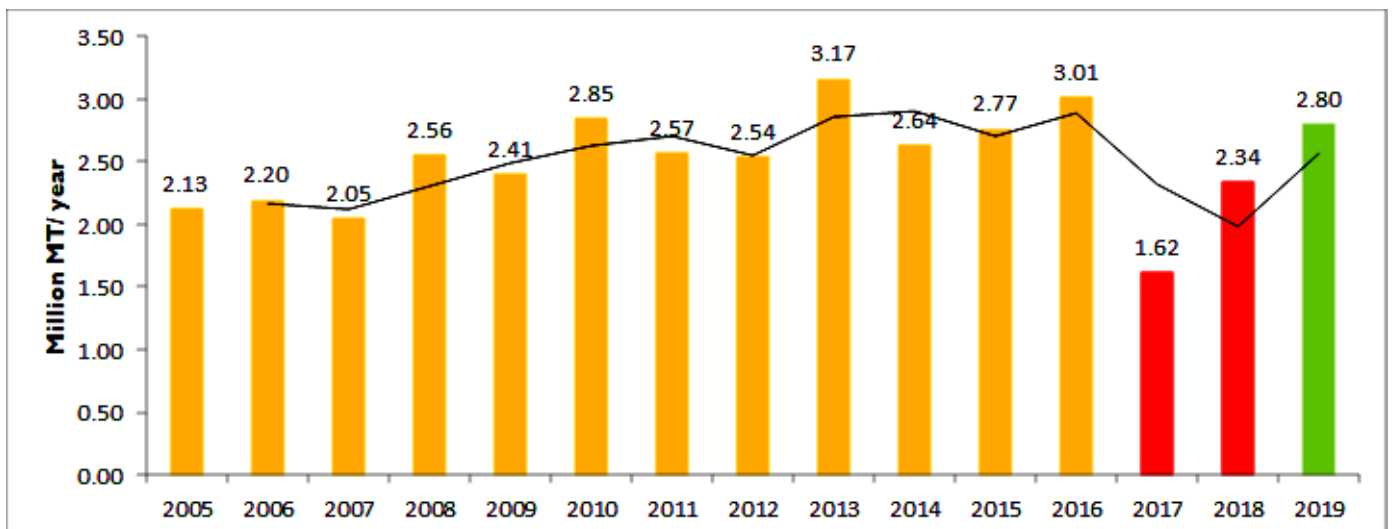
Figure 04: Vegetation Health Index (VHI) - January - June 2019



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

- ◆ Vegetation Health Index (VHI) maps shown in Figure-04 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, Hambantota, 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 in the North-eastern monsoon in 2018.
- ◆ 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.
- ◆ Department of Agriculture has circulated cropping and water management guidelines to farmers through their district networks and agriculture extension officers around the country.

Figure 05: Total Rice Production Outlook

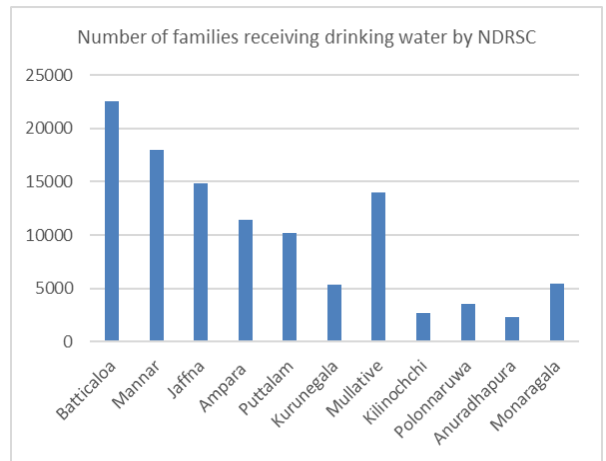


Source: Socio Economic Planning Centre of Department of Agriculture

4. Government response

- ◆ Access to drinking water has been reported as a challenge in several districts since of March 2019. 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 (Figure-06). Currently, divisional level water distribution is ongoing in 81 DS divisions in 15 districts and Rs. 37 Mn allocated.
- ◆ 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 30 June 2019



Source: National Disaster Relief Services Center

5. Social impact

- ◆ Prolonged dry-weather may create more impacts in the areas where people are suffering from Kidney disease and may influence them to demand more safe drinking water from government. Also the existing conditions may create peoples' pressure on compensations and it is important to carefully assess the situation in various dimensions.

6. Contingency Planning and Immediate Response

A Ministerial technical committee assigned and requested to make necessary data analysis and consultation. This process was supported by UN-WFP, and following **short to medium term recommendations proposed** to be implemented 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.
- ◆ Media campaigns among public and private sector to conserve water and minimize water wastage.
- ◆ District and Divisional administrations has to make measures on protection and effective management of water sources

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.
- ◆ Authorities has to make more emphasis on Inland fishing industry

Food security

- ◆ Government needs analyze current social protection schemes and make necessary policy decisions considering most affected families who have recurrently affected by drought since 2016
- ◆ 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 with the participation of the drought affected communities.

Planning

- ◆ Government inter agency planning meeting on potential high 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.

7. Climate Outlook

Figure 07: Temperature Forecast for July—September 2019

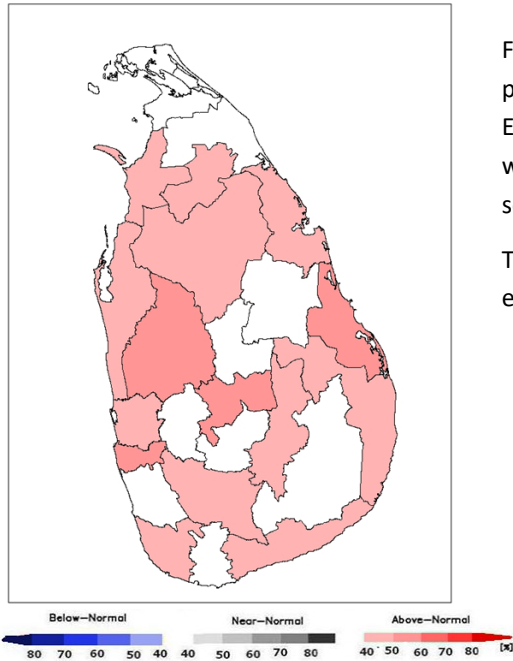


Figure-07 shows temperatures are predicted to be above the average in many parts of the country. This might further aggravate evapotranspiration in North-Eastern, North-Central and North-Western areas across the country, creating water scarcity for drinking, domestic and agricultural purposes until next monsoon.

This may further effect on surface water availability for many sectors including electricity and industrial purposes.

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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.

