

Drought and Flood Monitoring Bulletin

Providing Weather Climate and Water Information for Safety and Sustainable Development

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PREAMBLE

The December Drought and Flood Monitoring Bulletin (DFMB) have been prepared using the WMO recommended Standardized Precipitation Index (SPI) technique. As expected, the dry season and associated dust from Niger Republic intensified with extended and reduced horizontal visibility in most parts of the country. However, little rainfall was experienced in some parts of Abuja and the south due to deepening of the equatorial low pressure and emergence of subtropical low pressure in Northern Niger Republic, resulting in the Inter-tropical Discontinuity (ITD) position shifting from 8.7°N to 9.2°N northward.

The maps presented are for the 1-month (i.e. December, 2017), the 3-month (October - December, 2017), the 6-month (July - December, 2017) and the 12-month (January, 2017 - December, 2017) SPIs respectively. They depict the degrees of wetness and dryness across the country during the periods under review.

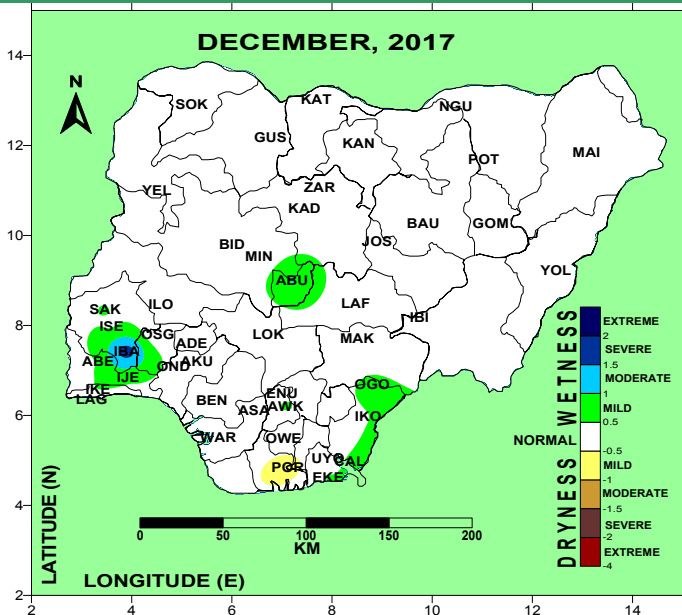


Fig.1: 1-Month Standardized Precipitation Index (for meteorological)

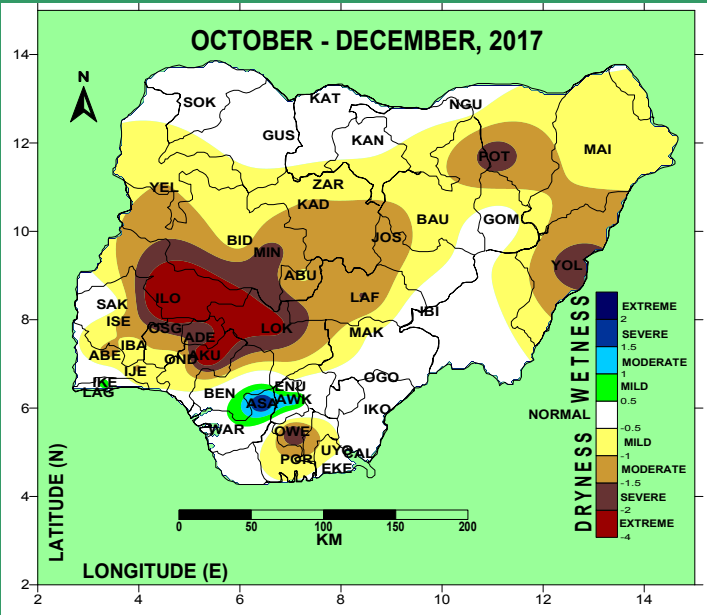


Fig.2: 3-Month Standardized Precipitation Index (for agricultural drought)

OBSERVED FEATURES

The 1-month Standardized Precipitation Index (SPI) for December (Fig. 1) shows the degree of dryness and wetness across the country. As expected there was no rainfall event in most parts of the country. Mild to severe wetness was observed within the surroundings of Oyo, Ogun, Osun, Lagos, Anambra, Akwa Ibom and River states.

On the 3-month Standardized Precipitation Index SPI analysis shows extreme soil moisture deficit in and around Kogi, Kwara, Ekiti, Ondo, Edo slightly reducing in intensity over Yobe, Adamawa, Imo and their immediate environs. However, places such as Delta, Anambra and their surrounding environs still remained relatively wet to support dry season farming, while other parts of the country remained normal (figure 2).

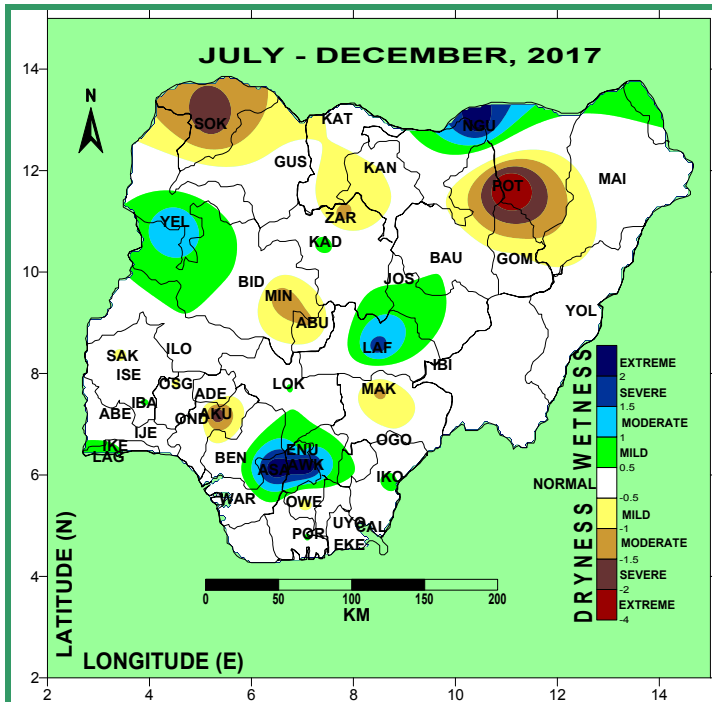


Fig. 3: 6-Month Standardized Precipitation Index (for Groundwater drought)

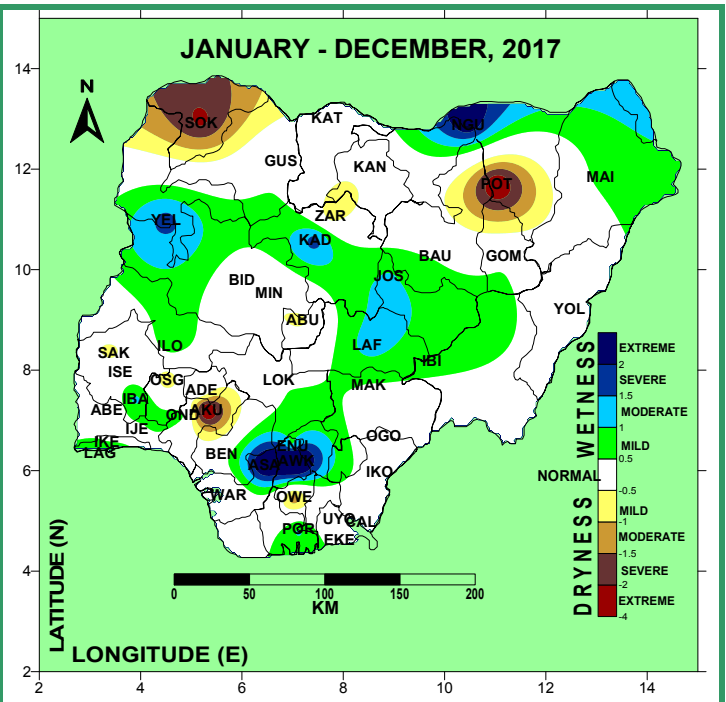


Fig.4: 12-Month Standardized Precipitation Index (for stream-flow and lake storage drought)

The cumulative groundwater condition over the country (fig.3) shows extreme wet conditions over southeast States like Enugu, Anambra, Northern Yobe and parts of Jigawa, Yobe, Borno, Kebbi, Niger, Nasarawa, Plateau, Edo, Delta, Cross River and Lagos States. Conversely, extreme dryness persisted in Potiskum in Yobe State and reached Sokoto, Zaira, Mina, FCT, Makurdi and Akure. Elsewhere near normal condition prevailed.

Analysis of 12-month SPI for stream-flow and lake storage monitoring (Fig.4) shows extreme to severe dryness over Sokoto, Potiskum, Akure and their immediate environs, while reducing in intensity over Zaira, Shaki and Owerri. However, deep wetness were observed over southeast States, Northern Yobe and decreasing in intensity over parts of Kebbi, Kaduna, Plateau, Nasarawa, Borno and others. This is expected to favour the watercourse of Benue River. Normal conditions prevailed over the rest of the country during the period.

OUTLOOK FOR JANUARY, 2018

Drier conditions are expected in most parts of the country in the month of January; with continued southward movement of the ITD. Therefore, water deficits are expected to continue generally across the country with significant reduction in the volume and flow of water in most inland rivers and streams. These are expected to affect dams and hydropower operation especially in the North and Central parts of the country.

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