

Seasonal outlook for summer 2019 over Japan

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JMA issued its outlook for the coming summer (June – August) over Japan in February and updated it in March and April based on output from its seasonal Ensemble Prediction System (EPS). The following outlook is based on the EPS products with the initial month of March.

1. Outlook summary

- Seasonal mean temperatures are expected to be near-normal all over Japan except in Okinawa/Amami.
- Seasonal precipitation amounts are expected to be above-normal tendencies all over Japan except in Okinawa/Amami.
- In Okinawa/Amami, seasonal mean temperature is expected to be above-normal tendency and seasonal precipitation amount is expected to be near-normal.

2. Grounds for outlook

It is likely that El Niño conditions will continue by the coming summer. The Sea surface temperature (SST) are expected to be above-normal in the equatorial Pacific. Corresponding to the expected SST anomalies in the tropics, the convection will be enhanced over the equatorial Pacific and suppressed over the Asian monsoon region, especially around the Philippines.

In upper circulation fields, the Tibetan High will be weak and the subtropical jet stream is expected to shift southward over East Asia due to the weak Asian monsoon. In the sea level pressure field, positive anomalies are predicted to the east of the Philippines due to the suppressed convective activity there. On the other while, negative anomalies are predicted over Japan. They suggest that negative phase of the Pacific-Japan (PJ) pattern tends to appear and the Subtropical High will not extend towards mainland Japan. Consequently, moist air could possibly flow over mainland Japan along the edge of the High. This tendency can bring wetter conditions during this midsummer all over Japan except in Okinawa/Amami.

Additionally, the Okhotsk High, which often cause cool summer over northern Japan, is also predicted. It is expected to bring temporarily cool air to northern Japan.

Furthermore, overall temperatures in the troposphere are expected to be above normal due to the prevailing long-term increasing trend. These tendencies are likely to increase the chance of above-normal temperatures.