

# Seasonal outlook for summer 2016 over Japan

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## 1. Oceanic conditions

In formulating seasonal forecasts, it is necessary to take into account the current oceanic conditions, their future evolution and the atmosphere-ocean interaction.

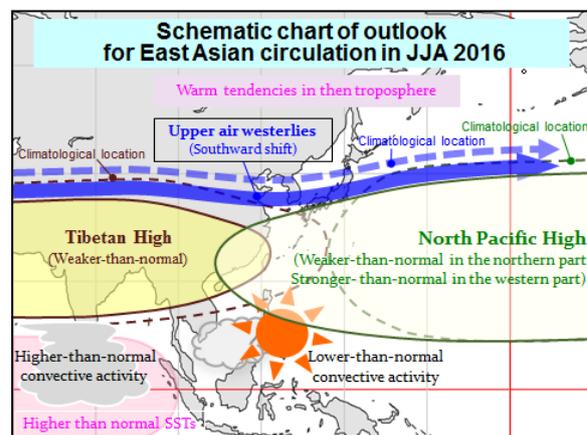
El Niño conditions, which have persisted since the Northern Hemisphere summer 2014, are decaying. In February 2016, the SST in NINO.3 region (JMA's El Niño monitoring region covering 5S-5N, 150W-90W) was above normal with a deviation of +2.0°C, which is 0.7°C lower than in January and but it was still remarkable.

JMA's coupled general circulation model (CGCM) predicts that the NINO.3 SST will gradually come closer to its normal and the equatorial Pacific will become ENSO-neutral conditions in the coming summer. On the other hand, the Indian Ocean SST is expected to remain above normal until the coming summer.

## 2. Outlook for the Asian summer monsoon (See the figure to the right)

According to JMA's CGCM prediction, reflecting expected SST anomaly in the tropics, convective activity is predicted to be enhanced in the equatorial eastern Indian Ocean while suppressed over the seas east of the Philippines. These anomaly patterns are consistent with those seen associated with the warmer Indian Ocean under post El Niño conditions and imply that the Asian summer monsoon will be generally weaker than normal over east and southeast Asia. In association with the weak Asian summer monsoon, the Tibetan anti-cyclone will develop less than its normal and the sub-tropical jet stream will shift southward compared to its normal position.

Around Japan, the North Pacific high is likely to be weaker than normal over Northern Japan. On the other hand, it is predicted to be stronger than normal over Okinawa/Amami (the area that stretches in the most southwestern part of Japan).



## 3. Summary of the outlook for summer for Japan

JMA issued its outlook for the coming summer (June – August) 2016 over Japan in February 24, 2016. The details are as follows.

Summer mean temperatures are expected to be above normal with 60% probability, 50% in Okinawa/Amami and Western Japan respectively and to be near or above normal with 40% probabilities for both categories in Eastern Japan. On the other hand, regarding Northern Japan there is no reliable signals. Precipitation amounts are expected to be near or above normal with 40% probabilities for both categories in Northern, Eastern and Western Japan. On the other hand, any reliable signal is not forecasted for Okinawa/Amami.