

# Seasonal Outlook for summer 2010 over Japan

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## **ABSTRACT**

JMA issued the seasonal outlook for the summer (June-July-August) 2010 over Japan on February 25, 2010. The outline is as follows.

In the operational JMA atmosphere-ocean coupled forecast system, the current El Niño conditions are likely to end in spring. It is expected that subsurface warm waters in the central equatorial Pacific which will migrate eastward are likely to keep SST anomalies positive over the central and eastern Pacific for two or three months ahead, and subsurface cool waters west of the warm waters are considered to migrate eastward and contribute to cancelling the positive SST anomalies in the equatorial Pacific in the months ahead.

Though NINO.3 SST will gradually become normal, Indian Ocean SST will remain above normal during boreal summer. Therefore, convective activities over the tropical Indian Ocean are predicted to be above normal, but those over the Asian monsoon region and subtropical Northwest Pacific are predicted to be below normal. These anomalies of convective activities will cause the westward extension of the North Pacific high and southward shift of the subtropical Jet through a weak Tibetan high. These predicted circulation anomalies suggest that the northern Japan is expected to be influenced by rain fronts and cold air more often than normal and the southern Japan is expected to be covered by the North Pacific high with above-normal temperature.

Additionally, in the year 2003, which was post El Niño same as this year, extreme cool and wet summer hit Japan with serious damage and losses of crop production, though long-term upward trends are clear in summer nationwide.

Considering the factors mentioned above, the temperature of summer 2010 is expected to be below normal in Northern Japan. Moreover, rainy season (Baiu) precipitation is expected to be above normal in Northern Japan. Meanwhile, hot and dry summer is expected in Southern Japan.