

JMA's warm season outlook for 2008 summer

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Abstract

The Japan Meteorological Agency (JMA) issued the warm season outlook for the coming summer over Japan on 25 February 2008. The outlook calls for above-normal temperature with a 50% probability in western Japan and Okinawa/Amami, and both near-normal and above-normal temperatures with 40% probabilities in eastern Japan. The warm season and Baiu (rainy) season precipitation outlook calls for no particular conditions for whole Japan.

As a recent feature of Japan's climate in summer, Okhotsk high index and Mid-latitude height Index in East Asia tend to be positive, and long-term upward trends are clear in the three-month (June-July-August) mean temperatures over Japan except northern Japan. The La Niña event is likely to weaken gradually and its effect is also expected to become weaker. According to the statistical study, it is likely to be a hot summer in eastern and western Japan during La Niña events. As to precipitation, normal or above-normal precipitation is likely on the Pacific side of eastern and western Japan, and Okinawa/Amami.

The JMA's seasonal forecast model predicts that convective activities will be enhanced over wide areas in the tropics (South China Sea, Western Pacific, South Indian Ocean, and the Atlantic). On an average, the axis of the subtropical jet is expected to shift northward from its normal position, indicating hotter-than-normal conditions. At the 500 hPa geopotential height, positive anomalies are predicted over Japan and general circulation indices with good prediction skill, such as Ogasawara high index, Mid-latitude height Index in East Asia, also indicate positive values, indicating a hot summer.

Meanwhile, SAMOI (Summer Asian Monsoon Activities) is predicted to be slightly above normal. Expansion of the subtropical high over Japan is predicted to be near normal, indicating a near normal summer.

The most positive area of 500 hPa geopotential height anomalies is predicted to be located from around Japan to eastern coast of China, and positive Okhotsk high Index indicates that cold spell is likely to occur bringing cool weather mainly to northern Japan.

Considering all the above, it is predicted that the northward expansion of the subtropical high over Japan is near normal and that the Baiu front is active mainly over the western Japan.

In midsummer, the expansion of the subtropical high is likely to shift westward to western Japan and Okinawa/Amami, bringing hot weather with light precipitation. In northern and eastern Japan, a near normal summer is expected while cool and wet weather is likely to occur temporarily in northern Japan.