

Summary of the JMA's Outlook for the 2006/07 Winter

By Shingo Yamada
Tokyo Climate Center, JMA
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1. Seasonal Numerical Ensemble Prediction for the 2006/07 winter

1.1 Outlook of Atmospheric Condition in the Tropics

Winter-mean atmospheric circulation fields in the tropics and sub-tropics resemble the ones typically observed during El Niño events, corresponding to the weak El Niño-like SST anomalies fed to the AGCM.

1.2 Outlook of East Asian Winter Monsoon

The predicted probabilities of above-normal category of 500 hPa geopotential height anomalies are high in eastern Asia, which suggest weaker-than-normal winter monsoon and above-normal temperatures will be dominant over eastern Asia. However, there are large uncertainty in the area where the climate is strongly affected by the Arctic Oscillation (AO), which is predicted to be near-normal with considerable spread.

2. 2006/07 Cold Season Outlooks for Japan

2.1 Outlook of Temperature in Japan

For 2006/2007 winter in Japan, winter mean temperature is likely above normal with possibility of 50% in its eastern, western, and south-western parts, near or above normal with possibilities of 40% both in its northern part.

2.2 Outlook of Precipitation in Japan

Snowy days are likely to be less than normal in the regions facing the Japan Sea. Wetter-than-normal weather is expected in the western part and in the Pacific side of the eastern and northern parts of Japan, due to weaker winter monsoon surges and frequent cyclone passages along the Pacific coast.

[Appendix] Grounds for the outlook

A.1 Active convective area is likely to shift eastward to the central Pacific, responding to the weaker east-west gradient of SST along the equator in the Pacific.

A.2 The above tropical condition suggests that eastern Asia is likely to be covered by positive 500 hPa height and positive sea level pressure anomalies, which means weaker than normal cold winter monsoon surges and warmer than normal temperatures around Japan.

A.3 Zonal mean thickness temperature in the NH mid-latitudes (30-50N), which has good positive relationship with surface temperatures in Japan, has long-term tendency to be warmer than normal and is predicted to be above normal.

A.4 The AO index, which shows the situation of the polar air accumulation and discharge, has a long-term tendency to be negative. That means temporary cold air surges are likely especially in the northern parts of Japan.