

Primary factors of cold winter 2011/2012 in East Asia

Shuhei MAEDA and Shotaro TANAKA

Climate Prediction Division, Japan Meteorological Agency

In wide areas over East and Central Asia, seasonal mean temperature anomalies for winter 2011/2012 were below normal, and almost all the areas experienced below-normal temperatures in consecutive three months from December 2011 to February 2012. It was reported that more than 600 people died due to cold waves in Central Asia and Eastern Europe. In Japan, frequent cold surges caused heavy snowfall during the winter, which were responsible for more than 100 fatalities, traffic hazards and loss of agricultural production. Considering these severe impacts on socio-economic activity, the Advisory Panel on Extreme Climate Events of the Japan Meteorological Agency (JMA), which consists of experts on climate science, investigated primary factors of the long-lasting cold winter, and then JMA issued a statement on the event based on the investigation of the Advisory Panel on 27th February 2012.

In the FOCRAII, I will explain the primary factors of the cold winter that were associated with the La Niña, a meridional dipole pattern of SST anomalies in the tropical Atlantic, and less-than-normal sea ice extent in the Barents Sea (Fig. 1).

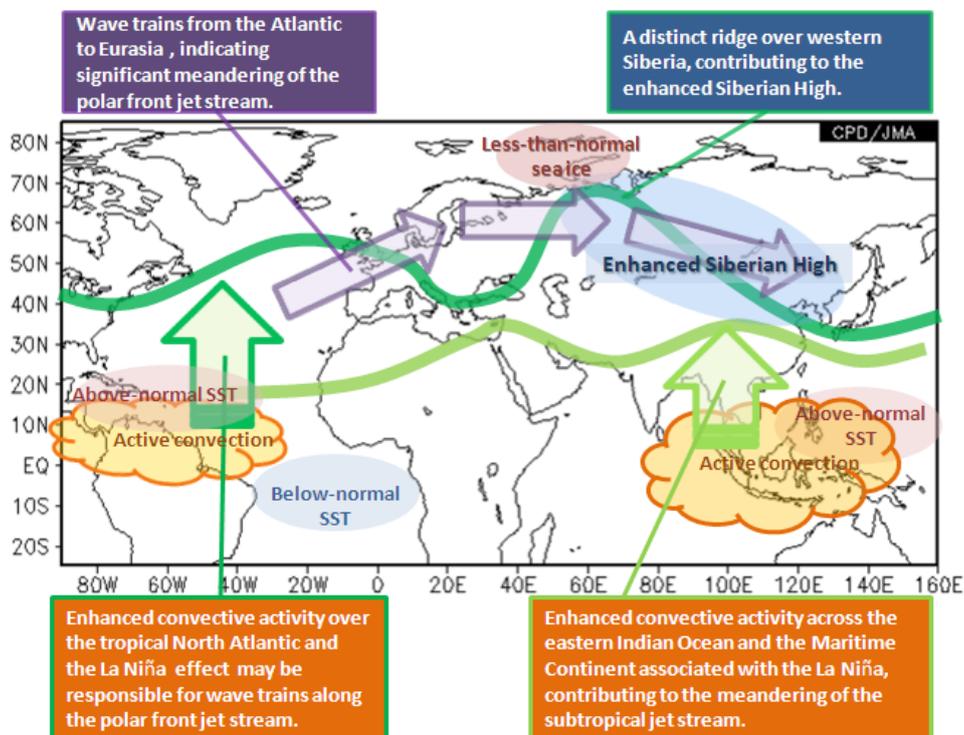


Fig. 1 Primary factors contributing to cold winter 2011/2012 in East Asia.