EMS7/ECAM8 Abstracts,
Vol. 4, EMS2007-A-00020, 2007
7th EMS Annual Meeting / 8th ECAM
© Author(s) 2007

The influence of the North Atlantic Oscillation on the precipitation and temperature in Europe during winter months in the 20th century

D. Mihajlovic, K.S. Canic

Meteorological and Hydrological Service of Croatia, Zagreb, Croatia (email: mihajlovic@cirus.dhz.hr tel: +385 (0)1 4565 736)

The North Atlantic Oscillation (NAO) is one of the prominent modes of variability in the North Hemisphere winter climate. It is associated with winter fluctuations in temperature, precipitation and storminess over most of the Europe. In our study we will focus on the precipitation and temperature anomalies in Europe during positive and negative NAO phase (NAO index greater of +1 and less than -1) at winter months in the 20th century. The first step will be to calculate time series of the Standardized Precipitation Index and Standardized Temperature Anomaly at monthly scale in the 20th century by using gridded data set (for European continent). The next phase will be to calculate average precipitation and temperature anomalies during high or low NAO phase for each individual winter month. Using spatial distribution maps we will be able to examine which areas has the strongest precipitation or temperature response to the NAO phenomena. Also, we will show how did the trends of the NAO index during winter months in the 20th century relate to the trends of precipitation and temperature trends in the two locations at Europe (southern part of Scandinavian Peninsula and southern part of Iberian Peninsula). This kind of analysis will help us to understand the influence of the NAO during winter months at 20th century on climate variability in Europe.