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Current changes in seasonal rainfall and the impact of the NAO in Serbia

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Climate fluctuations are highly dependent on changes in atmospheric circulation. The physical properties of air masses and their geographical distribution are of great importance because they determine the weather over large areas.

The North Atlantic Oscillation (NAO) is the most significant mode of natural climate variability in the Northern Hemisphere. It has a major impact on weather and climate in the North Atlantic and mainland Europe. There are two phases of NAO, positive and negative. When it is positive in Europe, warmer and wetter weather prevails. When it is negative, the weather in Europe is colder with more rainfall.

The Republic of Serbia is located in Southeastern Europe, in the western part of the Balkan Peninsula, the northern part of the country is located in the Middle Danube Lowland, the Sava Valley and the Tisza Valley. In the middle part are the river valleys of Drina, Kolubara and Morava. In the southern part of the country are occupied by mountains up to 2000 m high.

The aim of the article is to study the current changes in seasonal precipitation in the Republic of Serbia. For this purpose, data from 15 climate stations were evenly distributed over the territory and the influence of the NAO during the winter months. Three of the stations are mountainous - located over 1000m. The rest are alpine with lower altitude. The data is for seasonal values 1990-2019 were obtained from NIMH Serbia.

In structure of the research introduction presents the topic, tasks and bibliography. The Data and Methods section shows the geographical and climatic features of the study area and explains the methods. The next section provides results on seasonal changes and the impact of NAO. The conclusion shows the main results we have reached.

Key words: NAO, climate change, seasonal precipitation, Republic of Serbia