

Climate change and drought monitoring in Republic of Macedonia in the XXI century

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The presentation comprises recent achievements and updated research results of projected climate change in Republic of Macedonia in 21century, related to previously elaborated National Communications on Climate Change as obligation under the UN Frame Convention on Climate Change.

The direct GCM output projected to Macedonia show more intensive increase in air temperature in summer season than in winter season and much higher values of expected change than expected global temperature change. Almost no change in precipitation is expected for winter season in general on the area of Macedonia, but quite a strong decrease in summer precipitation. The local projections of climate change indicate that different climatic regions of Macedonia will respond different on large-scale climate changes. The continental climate region in southern part of Macedonia shows the weakest response to large-scale climate change in a sense of absolute temperature and precipitation changes, and the northwestern part under the prevailing mountain climate impact the strongest response. In mentioned regions the difference between a strong increase in temperature in summer season and weaker in winter season is not as evident as in sub-Mediterranean climate.

Among many risks caused by future climate change is drought which is a common phenomenon in Macedonia causing many problems in agriculture, forestry and water management. The monitoring and data management regarding drought issue can be considered as partly satisfactory. There is need of improvement in two areas: (1) improvement of monitoring and observation systems; (2) improvement of data management systems. Establishment of Drought Management Centre for South East Europe (DMCSEE) is a response to the need to alleviate problems caused by drought on a regional scale.