

Mapping the forest fire risk in Hungary: Preparations for the aftermath of the climate change

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Abstract

In the Iberian and Balkan Peninsula, Australia or North America wildfires occur in the dry season every year. However, in Hungary (which has a relatively small forestall area) the wildfire risk is non-essential task, in the warm and droughty years occur a large number of forest or bush-fires. One of the potential aftermaths of global climate change in the Carpathian Basin (including Hungary) the frequency and intensity of the heat waves will raise, that increase the fire risk.

Wildfires (uncontrolled fires) in forests and other vegetation are cause by natural forces or human activity. Wildfires in Hungary are predominantly caused by humans; about 95% of all known causes. Most fires are started by negligence and only a small part of fire incidents are caused by arsonists. Only the rest 5% of wildland fires arose by natural way.

In this work we combine different forest fire causing factors with geographic information system for creating forest fire risk map. The most important natural parameters of the fire risk are amount of flammable material, meteorological parameters and topographic attributes. Those parameters can be analysed with GIS technology easily. However modelling of human factors possible indirectly only. Therein can to help us the map of road and railway network and the settlements. ESRI ArcView 3.2 and AV Spatial Analyst software was used for creating input parameters and for the analysis. We demonstrate this method on the Aggtelek-karst (NE Hungary) region as a sample area.

Propuesto para sesión de posters.

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