

# ONLINE SEMINAR SERIES

April 1<sup>st</sup> 2025, 11:00 AM – 12:00 PM CET

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## Tracking Wildfire Dynamics in the Republic of Srpska, Bosnia and Herzegovina

This seminar will be divided into two interconnected parts. The first part will explore trends of a simplified meteorological fire danger index in the Republic of Srpska (BiH), while the second part will focus on the use of high-resolution satellite imagery to detect small-scale wildfires in the City of Banja Luka. Together, these segments will provide a comprehensive understanding of wildfire dynamics in the region.

Meteorological fire danger indices are used to assess components of fire risk that vary according to weather conditions, utilizing quantitative or qualitative indicators derived from a combination of meteorological variables. For the analysis of the mentioned indices, hourly data from 10 meteorological stations were used, which were later interpolated in a GIS environment. The results of the analysis showed that the months of July, August, and September are the most critical in terms of meteorological conditions for the occurrence of wildfires. Minor differences exist between stations located in different morphological macro-units. Additionally, the analysis of meteorological indices indicates a trend of prolonging the fire season. On the other hand, the analysis of wildfire patterns using high-resolution imagery in the area of Banja Luka indicates two key periods when wildfires occur – spring and summer. Geospatial analyses have shown that the spatial patterns of wildfires in the territory of Banja Luka follow certain established trends, and there is a noticeable difference between the locations and number of wildfires detected through remote sensing products and those where the firefighting unit intervened.



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