

Fire Danger Forecast in the European Forest Fire Information System (EFFIS)

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Abstract

The severity of the fire seasons during the more recent years in Europe resulted in enormous losses in terms of human lives and environmental damage. Although the devastating effect of fires both at regional and global scale is widely acknowledged, the actual assessment of fire danger at these scales is still challenging. The European Commission, aware of the problem that forest fires pose on people and the environment, set up the necessary mechanisms to develop coherent forest fire information for Europe. Several services of the European Commission (EC), including the Directorate-General Joint Research Center (DG JRC), are today working to consolidate the European Forest Fire Information System (EFFIS) which includes a Fire Danger Forecast module.

EFFIS is being developed as a dynamic system to incorporate information on forest fires as it becomes available. It is intended as a web interface system in which users can retrieve information for any area of interest in Europe.

The EFFIS – Danger Forecast module was initially meant as a unified platform for the implementation of selected national fire weather indices throughout Europe, in order to have a common reference for fire danger assessment, and to support cooperation among national services during major events or in case of trans-border fires. Fire danger rating is therefore harmonized at the European scale, which permits the extraction of coherent information for Europe, and the intercomparison of fire danger level between European countries or regions.

After the first years of operation and confrontation with users, research efforts at DG JRC regarding the Danger Forecast module of EFFIS are currently focused on the calibration and adaptation of the Canadian Fire Weather Index (FWI) to Europe, taking into account the broad range of environmental conditions that are found.

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