



## **Forest fire hazard model definition for local land user (Tuscany Region)**

**C. Conese (1), L. Bonora (1), M. Romani (1), E. Checcacci (1) and E. Tesi (2)**

1. National Research Council Institute of Biometeorology, Italy (C.Conese@ibimet.cnr.it / Fax +390555226026 / phone +390555226025)
2. Tuscany Region, Italy (e.tesi@regione.toscana.it)

A forest fire hazard model is presented for the evaluation of the probability that forest fire can occur on a region, this is expressed in terms of hazard level of that particular region.

The model groups all parameters in order to calculate different levels of indexes, whose combination generate the final Fire Hazard Index.

This paper describe the architecture of the model and the different parameters that are processed using different weight for represent spatial and seasonal variability. Two separated hazards, static and dynamic, are generated.

The Static Fire Hazard (or Land Fire Hazard) refers to all factors that do not change or change very slowly in time and includes natural features as morphology (slope and aspect), land use and vegetation cover and the infrastructural factor, it is obtained considering any structure connected with the human activities: urban areas and road network.

The Dynamic hazard takes into account all parameters showing short-term variations. The main factors are two: climatic and microclimatic conditions and vegetation status.

All these parameters are combined and as result of the elaboration, we obtain the final fire hazard index in raster format that can be superimposed on a topographic regional map. The system also allows to obtain statistical maps on a municipal level.