



Monitoring forest fire in Portugal

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Forest fires are one of the most important natural risk affecting Portugal, specially over the summer time with enormous direct economical impact and indirect consequences of introducing fast changes on the land cover. Just a sustainable management of forest allows continuity on the forest exploitation. The Portuguese climate, characterized by a warm and dry summer season, has conditions for the occurrence and propagation of severe forest fires in the Summer.

The Forest Fire Risk Index, the ICRIF, is produced and distributed in near real time by the Portuguese Meteorological Institute (IM), combining meteorological conditions indicators, vegetation status and structural information. The ICRIF value, ranging from 0 to about 100, is calculated weighting the FWI value with a factor connected with a fuel burn index, and the vegetation index NDVI. The correlation, for each district area, between the number of pixels with higher ICRIF (above 25 or 35) and the forest fire occurrence numbers/burnt areas was, during the forest fire season of 2006, calculated showing values above 60%.

It will be presented the evaluation of the meteorological products to fire prevention during the forest fire seasons of the last two years, comparing the number of high-risk

pixels in each Portuguese District area and the amount of fire events (area and number of fires).

References

Bossard, M., Feranec, J., Otahel, J. - CORINE Land Cover Technical Guide - Addendum 2000, Technical Report no 40, May 2000, European Environment Agency

Bugalho, L., Pires, V. - Monthly Analyse of NDVI at Portugal and their Relationship with Soil Water Balance - Proceeding of 4^a Simpósio de Meteorologia e Geofísica da APMG, 14 a 17 Fevereiro 2005