Geophysical Research Abstracts,
Vol. 10, EGU2008-A-09331, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-09331
EGU General Assembly 2008

Analysis of fire regime variability in connection with inter-annual climate variability in Mediterranean areas

M. D'Andrea, P. Fiorucci, F. Gaetani, R. Minciardi
CIMA Foundation - Centro Internazionale per il Monitoraggio Ambientale, Italy

Most of the recent literature sustains that climate change in terms of rising air temperature is going to determine an increasing forest fires risk scenario, characterized by high number of fires and huge burnt areas. More objectively, an analysis of some time series relevant to the wildfires occurred within the Mediterranean area shows a decreasing trend line since '90.
A feasible justification of this behaviour can be partially found on the increasing number of resources that are mobilized, both at National and European level, for the risk management and the fire suppression. However, it is apparent the relation existent between the forest fire regime and the actual potential energy available in situ in terms of fuel load and, more generally, in terms of potential linear intensity (kW/m). In this connection, the authors investigated on the effects that some meteorological variables have on the state of the vegetation, whose composition and quantity, as often happen in nature, can be considerate as self-organized in a critical state.

A new methodology for the analysis of the fire regime variability has been used to identify some correlations with the interannual variability of air temperature. A time series of 27 years of forest fires occurred within the largest Mediterranean island, i.e. Sardinia (Italy), has been considered as case study.