



Evaluating post fire vegetation pattern from satellite SPOT/VGT time series and in situ data analysis: study of a large wildfire in Sardinia Island

R. Lasaponara (1) and A. Lanorte (1)

(1) CNR -IMAA C/da S. Loya Tito Scalco – Potenza, Italy

Fire is one of the most critical factors of disturbance in worldwide ecosystems. Vegetation composition and structure are generally strongly shaped by fire, which tend to operate as a selective force, increasing species diversity, or as a filter, favouring the dominance of some species.

The characterization of vegetation reaction to fires is of primary importance since changes in the status or types of vegetation play an active role in ecological processes (such as productivity level, creation of altered patches, modification in vegetation structure and shifts in vegetation cover composition), as well as in land surface processes (such as surface energy, water balance, carbon cycle).

Up to now pre- and post-fire investigation has been widely performed at stand level, but factors controlling regeneration at the landscape scale are less well known. The use of multispectral satellite time series may help to gain further insights in pre- and post-fire vegetation dynamics over large regions and long time periods.

The assessment of fire impacts on ecological resources requires investigations performed at different temporal and spatial scales, from local to regional level, as well as the integration of various technologies, from field surveys to remote sensing.

In this study the comparison between results from SPOT/VGT time series and in situ data analyses was performed and detailed discussed for a large wildfire occurred in the Sardinia Island. Agreement between satellite based data analysis and independent field survey suggested the feasibility of using satellite time series for evaluating the

post fire vegetation pattern over large areas in a timely and cost-effective manner.