



Geospatial based Environment for Optimisation Systems Addressing Fire Emergencies

Acronimo: **GEO-SAFE**

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Responsabile UNIPG: **Prof. Alfredo NAVARRA**

Abstract: In EU and Australia, every year thousands of square miles of forests and other lands burn due to wildfires. These fires cause important economic and ecological losses, and often, human casualties. Both EU and Australian governments are aware of how crucial it is to improve wildfires' management and containment. Scientists from different specialties, both in EU and Australia, have already developed methods and models in order to improve the management and decision process pertaining to preparedness and response phases in case of bushfire. The present project, named Geospatial based Environment for Optimisation Systems Addressing Fire Emergencies (GEO SAFE), aims at creating a network enabling the two regions to exchange knowledge, ideas and experience, thus boosting the progress of wildfires knowledge and the related development of innovative methods for dealing efficiently with such fires.

More precisely, the GEO SAFE project will focus on developing the tools enabling to set up an integrated decision support system optimizing the resources during the response phase, through:

- Developing a dynamic risk cartography of a region with regard to the possibility of a wildfire. The task will involve data collection (satellite and remote sensors), risk analysis and development of a tool enabling to forecast fire extension, and in particular to predict fire and risk evolution during the response phase.
- Designing and testing a resource allocation tool for the response phase using the dynamic risk cartography. One of the problems to consider will be the resource allocation for securing key places (schools, hospitals, ...) given time dependent constraints. Problems will be identified through connections with final users, and the proposed solutions will be tested on simulated data.
- Developing analyses of relevant management processes as well as training tools in order to facilitate the implementation of such solution to be completed.