Qualità dei modelli digitali del terreno per la valutazione del rischio nella gestione degli incendi boschivi

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Abstract
In the Mediterranean area, the forest fires represent a danger to the security and safety of our natural heritage and human lives. "Prevention, preparedness and mitigation" are aims on which must be based the strategies to reduce damages caused by forest fires. In this context, predictive risk assessment and the ones in real-time are important tools for both planning and for the management of operations on field during fires. The purpose of this analysis is prediction of possible scenarios related to real or potential fires by the identification of the most "high-risk" areas.
There are a lot of models for the evaluation of risk assessment, based on a Monte Carlo simulation approach. However, in this case, especially were used numerical models of fires spread. These models, were developed within the European project AF3 (Advanced Forest Fire Fighting-www.af3project.eu). These models are estimated based on different parameters (e.g. wind direction, intensity, fuel type, fuel moisture). In addition, it important to consider information about topography and land use, such as land cover and land use maps, and geo-morphological characteristics of the site represented mainly in digital terrain models (DTM).
The goal of this research was to study the effects of the accuracy and the resolution of the DTM, used in the risk analysis and the quality of risk model in terms of computational load and accuracy of analysis. For this purpose, has been considered a test case, in which have been estimated different risk models.