



Operational setup of a diagnostic chain, implemented within the Proterina-C project, to include weather measures in the RISICO system for dynamic wildfire risk evaluation in Sardinia (Italy)

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Within the Operational Project "PROTERINA-C" (a forecast and prevention system for climate change impacts on risk variability for wildlands and urban areas), co-funded by the European Regional Development Fund (ERDF) under the Italy-France Maritime Program, methods and strategies, already in use in the regions of Sardinia, Liguria and Corsica, for the predictions of wildlands fires have been developed and adapted; RISICO System, by CIMA Foundation which plays the role of technical and scientific support for the region of Liguria, used by the Italian National Civil Protection Department, is one of them. In such a prediction model of risk of wildlands fires it is arranged the integration, on a regional scale, of products related to the main meteorological, diagnostics and prognostics forcing measured by ground stations, weather radar and advanced limited area weather prediction models. With the aim to improve prediction of wildlands fires in Sardinia, an operational chain to insert in RISICO weather data provided in near-real time by the meteorological monitoring network has been designed and developed. In fact, the forecast errors can be reduced by conditioning the initial state of dynamic models of fuel moisture on the information obtained from sensors on land, at every time interval at which the fields of meteorological variables of interest are available. A dataset of wildlands fires occurred in Sardinia has been considered in order to evaluate the system effectiveness; for these cases the developed setup has improved the fires risk assessment to respect a version of RISICO initialised only by a mesoscale numerical weather prediction model. In the present work the system setup, the configuration of the network of meteorological stations and some preliminary analysis results are argued.