



PROTERINA-C: assessing the effects of Climate Change to enhance Community adaptation and Civil Protection response to wildfire risk.

Quirico Antonio Cossu (1,3), Francesco Gaetani (2), Antonella Bodini (3), Erika Entrade (3), Paolo Fiorucci (2), Ulderica Parodi (4), Simona Canu (1), and Floriana Manca (1)

(1) Environmental Protection Agency of Sardinia, Sassari, Italy (qacossu@arpa.sardegna.it), (3) Institute of Applied Mathematics and Information Technology, Milano, Italy (antonella.bodini@mi.imati.cnr.it), (2) CIMA Research Foundation. International Centre on Environmental Monitoring, Savona, Italy (francesco.gaetani@cimafoundation.org), (4) Regione Liguria, Settore Protezione Civile ed Emergenza, Genova, Italy (Ulderica.Parodi@regione.liguria.it)

PROTERINA C is a project funded by the EU under the Italy-France Maritime Programme. The objective of PROTERINA C is to make a multi sectorial assessment of the impact of climate change over an area of South Europe particularly affected by large and destructive wildfires: Sardinia, Liguria (Italy) and Corsica (France). A key concern of PROTERINA C is to investigate on the effects that climate change could have on the environment (fuels) and, in turn, on the whole wildfire risk of the considered area. A set of structural and non-structural measures to mitigate the effects of climate change on wildfire risk will be considered and eventually implemented with reference to some pilot areas.

In this work we present the results obtained from the Phase 2 of the project, whose objective was to investigate on the influence that possible climate change signals could have on wildfire risk.

Observational data (daily rainfall and temperature data) have been analyzed using time series with more than 30 years of complete records. This analysis, including trend analysis of a few selected indices of extreme events, has been used to characterize the territory with reference to the sizing and the timing of the wildfires occurred within the same period of time.

The work provided a comprehensive analysis on the effects that climate conditions have on the average state of different kinds of fuels and, in turn, on wildfire risk scenarios, highlighting the biota and the zones of the considered area more exposed to the effects that climate change has on their vulnerability.

The partnership of PROTERINA C includes the Civil Protection Directorates and the Environmental Agencies of Liguria and Sardinia Regions, along with scientific and academic bodies from Sardinia, Liguria and Corsica.