

## SÍGNEO, an application software in support to fight forest fires

Currently, natural or anthropological catastrophic events are a potential danger to communities, infrastructure and conservation areas. In Uruguay, forest fires occur more frequently and extend in a bigger land dimension, affecting particularly the coastal zone, which is a high value tourism zone.

In the information society and especially in those sectors related to electronic government, technological advances allow to carry out risk management appealing to new tools. These software tools and specifically geographic information systems and remote sensing help the updating of data, fundamental characteristic of spatial data infrastructures.

One challenge is to make available to managers, technicians directly involved in the topic and to society as a whole, a useful and easy access in order to plan and act just in time to defend the social and environmental values.

This research aims to build a daily automated mapping of a forest fire potencial index integrating satellite imagery (Moderate Resolution Imaging Spectroradiometer ), meteorological data and forest fuel models (coming from a reclasifficiation of a Land Cover System Clasification map). The work includes the definition and adaptation of a risk index that combines high dynamic variables such as humidity, temperature and vegetation greenness and other less changing as vegetable fuel models, also suitable to our country.

According to this, the Department of Geography, Faculty of Sciences (Uruguay) with support from the Institute of Computing, Faculty of Engineering, is developing a software application based on the outcome of the investigation.

Nowadays we have a prototype called SIGNEO v2, to test the model which can be used with gvSIG (version 1.9) as the basic software and Sextant as container of algorithms (version 0.5). We sought to create a tool that can support generic models, designed to be extensible (using XML schemas), free software and to multiplatform, as requirements. We also prepare documentation, for both users and developers, and complying with the Open Geospatial Consortium standards and the Spatial Data Infrastructure's guidelines, the result is delivered by web map service.