



Case Study Report FRISK-GO

Adding value with a European Forest Risk Facility

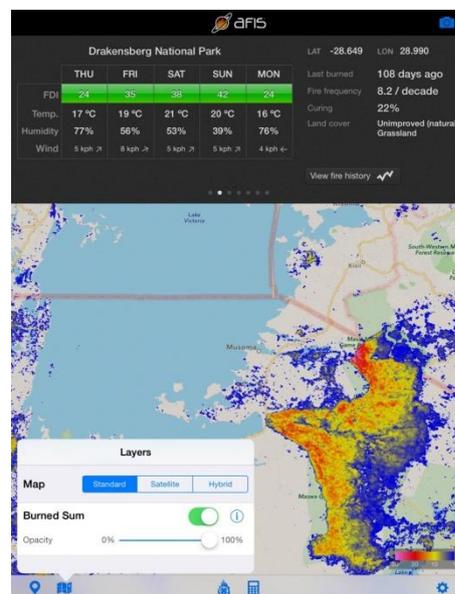
Advanced Fire Information System

Alexander Held, Joao Bandinihera, Oriol Vilalta

Case study reports are a tool to investigate and document how a European Forest Risk Facility can add value to current actions using concrete examples based on real events/incidents

A) Brief description of the event/incident description

Portugal is one of the most vegetation fire affected countries in Europe. The 'Advanced Fire Information System – AFIS', originally developed in South Africa by the Council of Scientific and Industrial Research (CSIR), launched a mobile AFIS app to be used on smartphones. <http://www.afis.co.za/mobile/>.



AFIS is used across the world for fire information, fire reporting, burned area assessment, fire danger rating and fire management planning.



B) Approach taken

FRISK acts as facilitator

The use of the AFIS App in Portugal was the highest outside South Africa by far. An investigation showed that it is used all across Portugal starting from the volunteer fire fighters to academics. This motivated the CSIR to develop a customised version in Portuguese and run a pilot project with a fire management organisation in Portugal. The European Forest Risk Facility acted as facilitator building on its extended contact network and thus was instrumental in establishing the AFIS Pilot project.

What does AFIS provide

AFIS provides access to the latest wild fire locations, fire danger forecasts, historical fire reports and much more. Examples of services are listed below:

- Today's fire danger index displayed on a map for locations defined by the user, including the current location.
- Fire danger forecasts based on daily numerical weather forecast inputs (e.g. wind speed, air temperature, relative humidity) and fire statistics for the current locations, or wherever the user drops a pin on the map.
- Satellite-detected real-time active fires displayed around the defined locations.
- Current vegetation "curing" or dryness relative to 14 years of satellite-derived vegetation greenness data.
- Detailed information about detected fires (e.g. intensity and time of detection).
- Fire history showing a location's fire events in the last 14 years in relation to historical vegetation curing using graphs, as well as statistics such as fire count, frequency and time since last burn.
- A fire danger calculator which allows anyone with access to weather information to calculate their own fire danger ratings based on their local measurements.
- Share observations of fire with the community by uploading geotagged photos to the AFIS Web Viewer.
- A global map of fire counts for the last 14 years.

Input to further development of AFIS

The fire management organisation in Portugal is incorporating a customised AFIS version in their operations and dispatch room. During the establishment the idea was born to develop an additional smartphone app to report fires directly to the operations and dispatch room and the AFIS dashboard, both from fire look-out towers as well as from mobile users as fire crews or forestry crews. The so called "AFIS Watchtower" App is currently in the field test phase.



C) Added value

AFIS can provide additional fire information, increase the number of tools in the toolbox and provides a very user friendly surface. The fire network in Europe has grown and extended, new technology is applied and customised for use in Europe. Portuguese users are trained in the use and application of the AFIS system and AFIS dashboard and the fire look-out towers are provided with a new and easy to use fire reporting capacity.

Since the AFIS app is available now in Portuguese, also the use of the app has increased tremendously in Spain.

The European Forest Risk Facility is currently investigating with its partner the Pau Costa Foundation PCF to run an AFIS pilot project also in Spain for the coming fire season 2016. Looking into the future the European Forest Risk Facility could act as a platform for further distributing and supporting further testing in other countries which would see potential for applying such a mobile app for fire suppression and mitigation.