



Case Study Report FRISK-GO

Title: Severe windstorm hits Catalonia in December 2014 – Facilitating knowledge exchange and expertise for addressing post storm actions and mitigation measures

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Adding value with a European Forest Risk Facility

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) The role and value of case studies

A key tool for understanding the needs of the risk community and the role of a European Forest Risk Facility have been (and will continue to be) the collection of 'cases'. They can emerge from real events or be direct requests from corresponding communities and networks. Cases help in identifying needs for action, building and providing access to experts/networks and experience and constitute points of reference. They are documented as 'case study examples' and are used to formulate key services and products a European Forest Risk Facility could provide. In the following one key case study is presented which was initiated and implemented in the framework of the FRISK-GO project.

B) Description and background

On 11.12.2014 windstorm in Catalonia, with its most severe damages in the Barcelona region, is the worst since 2009. It led to power cuts to around 43,000 homes while roads and train lines were affected causing long delays for commuters and travellers. Latest information is that there have been three fatalities mainly due to falling debris in residential areas. Currently Catalonia is tallying up the damage by the winds showing gale force peaking at more than 200 km/h.

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Figure 1. The most severe hit area was along the coast of Catalonia. **Source??:**

According to the Fire Service of Catalonia the most affected areas are Valles oriental, Valles occidental, Anoia, Bages, Baix Llobregat and Barcelones comarcas with damage to infrastructure but also to forests. Based on preliminary assessments most of the damage caused by the windstorm is concentrated in the 'Urban-Wildland-Interface' with more than 300,000 people and their homes affected. Further adjacent forests including many areas used for recreation were damaged.

The number of single incidents responded to by fire services in the first 6 hours following the storm were as many as 2589 (Source: Catalan Fire Service). Immediate measures focus at present on recovering power lines, clearing blocked roads and railroads lines, removing trees having damaged residential homes and businesses in order to reduce further risks of casualties.



Figure 2. Storm damages in urban areas following the windstorm of 11.12.2015 in Catalonia (Photo provided by Marc Castellnou).



The FRISK-GO project took contact with its established networks in the region to get latest updates on actions and damage figures. Reconnaissance flights took place during 12 – 13.12.2014 allowing for a more comprehensive calculation and quantification of the occurred damages. The Cartographic and Geological Institute of Catalonia (<http://www.icgc.cat/>), being a FRISK-GO network partner, is preparing a detailed damage assessment report and corresponding maps. First figures received on 15.12.2014 account for a total of about 1500 ha of forest area affected. 378ha are reported with 90% of all trees damaged, 714ha with more 60% and 358ha with less than 60% severely damaged.



Figure 3. Storm damages forest areas as result of the windstorm of 11.12.2015 in Catalonia (Photo provided by Marc Castellnou).

C) What is at stake?

According to first expert consultations with fire experts, the damaged forest stands are expected to contribute to increased fuel loads for the coming fire season which starts during May/June 2015. This is especially critical as the build up has taken place in the Urban-Wildland-Interface with several hundred thousand people living in the affected area. Of special concern is also the susceptibility of damaged stands to insect outbreaks, which may then add to the fuel load for 2015 and beyond. Especially *Tomicus piniperda* (common pine shoot beetle) can be expected to create serious problems.

D) Added value

Representatives of FRISK-GO were invited to attend management meetings of regional authorities in Barcelona during week 51, 2014. As an outcome FRISK-GO, act in the role of a 'European Forest Risk Facility', will take part in organizing a targeted workshop in Barcelona where local/regional policy and decision makers will meet with experts from science, management, and operations around the recent event, its immediate impacts and consequences as well as potential future implications.



This case example well highlights the role of a future ‘European Forest Risk Facility’ by organizing access to expertise, supporting professional exchanges to affected areas thus enhancing support to Catalan authorities for strategic planning following the current windstorm. A similar approach was successfully implemented for a severe ice storm that occurred in February 2014 in Slovenia and winter fires in Norway January 2014. FRISK-GO organized the exchange of experts between Slovenia and Germany as well as Norway, Spain, United Kingdom and Ireland (more details on other case study reports at: <http://www.friskgo.org/media-center.html>). More information for this case study will be added as it becomes available

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