Generalitat de Catalunya
Departament d'Interior
Relacions Institucionals i Participació
Direcció General de Prevenció, Extinció d'Incendis i Salvaments
Divisió Operativa
GRAF

Lo Forestalillo

Nº 108 24-08-2007

Catalan Fire Status Report

Photograph: Catalan and French firefighters after having worked together in a fire in Narbona. Source: P. Franc (Fr).

What we had

Compared trend from the beginning of the year until:

	22/08/2006	22/08/2007
Num. of fires (VA+VU+VF)[1]	4516	4067
Area (ha)	4553	**1676** (*)

1 VA: AGRICULTURAL VEGETATION
VU: URBAN VEGETATION
VF: FOREST VEGETATION

(*) PROVSIONAL AREA WAITING FOR VALIDATION

Number of fires (VA+VU+VF) from 14/08/07 to 22/08/07, larger than 2 ha.

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Description of the situation

Drought evolution (live fuels and coarse dead fuels availability)

Precipitations are still with us. These last days have been rainy, but rainfalls have not been so heavy as in the beginning of August. Nevertheless, in the south of the country it has not rained so much and the fire season is still quite intense. It is important to observe the weather evolution during the following weeks but for the moment it seems that the rain has not finished yet.

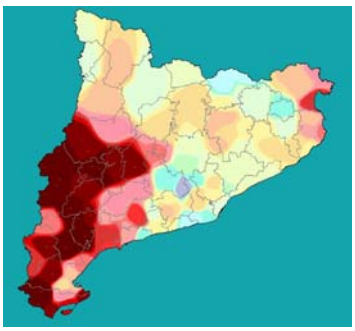


***Fig. 3**. Accumulated drought (Drought Code Index) of **23/08/07**.*

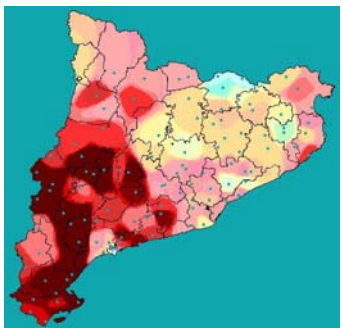


***Fig. 4**. Accumulated drought (Drought Code Index) of **24/08/06**.*

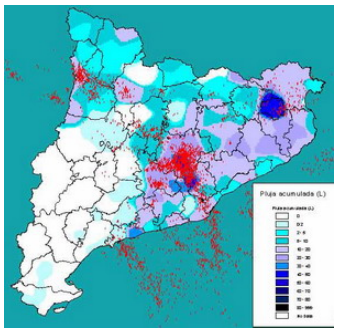
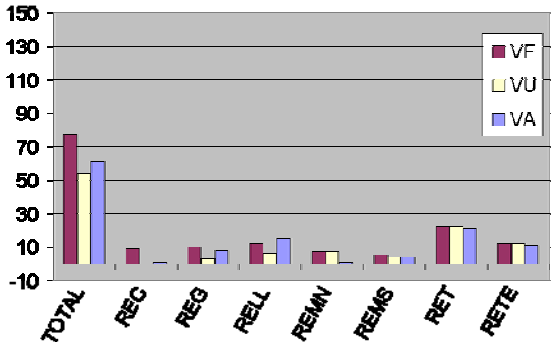


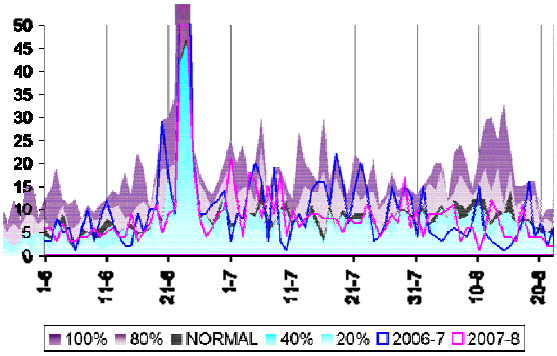
***Fig. 5**. Lightning and accumulated rainfalls of **21/08/07** and **22/08/07**.*

Fire services trends (VA, VU and VF)

During this last week most services were in the region of Tarragona. With regard to forest vegetation, services were not very important because they were in regions mostly affected by the rain and due to lightning. However, it is important to mention that, as it is shown in the maps of accumulated drought, regions with major risk are, at the same time, the ones which have a greater number of forest vegetation services.



Plot 1.** Total services and region services according to the type of vegetation involved for the last week, from **13/08/07 to 22/08/07.



***Plot 2.** Fire index Mbs13 (services in forest vegetation) from 01/06/07 until 22/08/07 (magenta), compared to last year Mbs13 for the same period in 2006 (blue). Trends over time of number of **normal services (grey, 50% percentile), less than normal services (cyan) and maximum services (lilac)** for the last 5 years.*

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By region

REG

Precipitations and high humidity levels of these last days will be felt for a large period of time. Only long northerly wind episodes could increase the low existing risk level.

What 's forecasted There will be high instability at the end of this week. The entering week will be of changes, with sea winds from different directions but without risk situations.

REMN

Precipitations and high humidity levels of these last days will be felt during several days. There are not important services to mention.

What 's forecasted Instability at the end of the week will be high. The entering week will be of changes, with sea winds from different directions but with a low risk level.

REMS

Precipitations and high humidity levels of these last days are being felt in the region. There are not important services to mention.

What 's forecasted Low levels of activity are forecasted because there will not be risk situations during the following days, only instability and high humidity levels.

REC

Precipitations of these last days reduced the number of services drastically. There are not important services to mention.

What 's forecasted During the following days instability and a lack of west wind episodes will reduce the risk of intense fire behaviour.

RETE

The stop of a north-west wind episode reduced the high risk level that this region was dragging on since several days. But accumulated drought keeps high and persistent. Services present in the region could be effectively resolved (fire in Horta de Sant Joan).

What 's forecasted The forecasted instability will permit the recovery of night humidity levels and the slow down of north-west wind episodes. Weekend rainfalls are forecasted but they will be heavy, localized and irregular, as it is typical in August.

RET

The drought episode was still persistent, mainly in the interior of the region, because coastal rainfalls (dispersed precipitations) have only reduced a little the risk. Only the service in Cabra del Camp is worthwhile to mention, but there were no complications.

What 's forecasted The forecasted instability and the precipitations will be felt in the north of the region and in the coast. Rainfalls in the Priorat should be observed in order to estimate if they are significant.

RELL

Last rainfalls in the north of the region have reduced the accumulated drought level, but in the southern part of the Montsec mountain the risk of having intense fire behaviour keeps on. It is important to take a good look at the fire in Camporrells (Aragón) to extrapolate possible fire behaviour.

What 's forecasted The announced instability will be more intense in the interior mountain regions and in the canyons with sea winds entering. Rainfalls are forecasted in these areas of the region.

Activity level

Low **Normal** **Medium** **High** **Critical** **Large wildfire**

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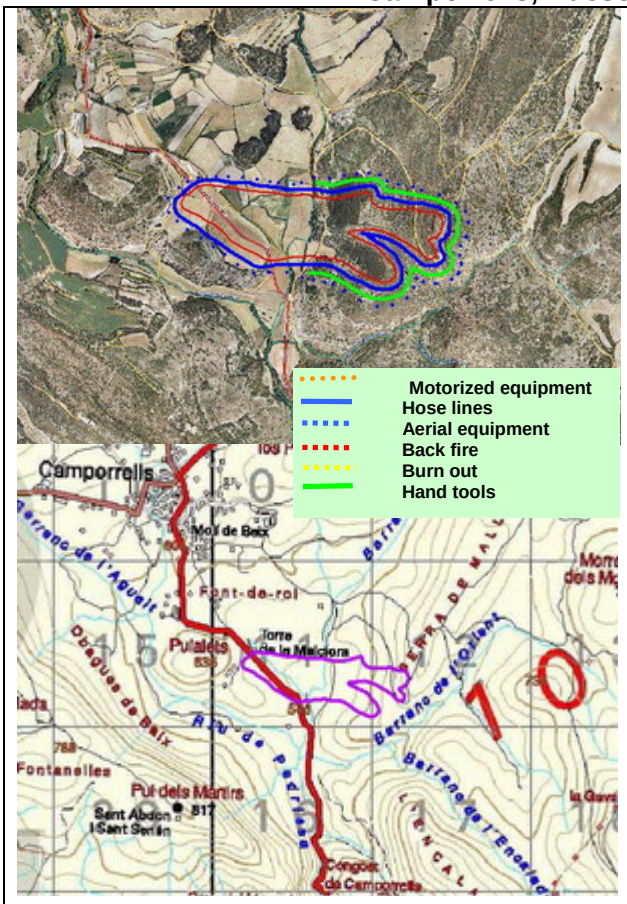
Important information

3.1.-IMPORTANT FIRES

Camporrells, Huesca (21/08/2007)



- **Meteorology:**

A general north wind episode affected us from 19th until 23rd August in the morning. Heavy west wind blew in the interior of Lleida and in the Pre-Pyrenees of Huesca. This dry wind caused a partial recovery of the humidity levels during the two nights previous to the fire. During the afternoon of the fire this situation involved uninterrupted west winds of 15 km/h speed, with gusts of wind of 30 km/h (Alfarràs meteorological station). Humidity levels were about 30% and it increased until a 70% level the next night.

- **Fire behaviour:**

The fire commenced at 17.30 hours and it spread in a flat terrain of stubbles. It passed into the forest vegetation of the side of the mountain exposed to wind and insolation. Fire runs completely aligned reached the crest line of the mountain, where the fire head lost alignment and left flanks moving and losing intensity.
Fire runs completely aligned behaved as a passive crown-fire and flanks spread with low intensity involving undergrowth. An oaks' forest was mainly affected. It was situated in a rocky terrain where there was not a lot of undergrowth and it had herbaceous plants and bushes of low density.

Region of the fire head where it loses alignment as it arrives into a rocky area.

UME's means located in the fire.

- **Operations and tactical approach:**

The first attack was done by SOS Aragón at the stubbles terrain with hose lines and with the support of agricultural working tractors. In the forest area the fire was directly attacked with hand tools, a hose line and with the support of an important deployment of aerial equipment. The right flank and the fire head were directly attacked with a hose line prepared by firefighters of Aragón and Catalonia. The GRAF Lleida unit finished out hot points. BRIF from Daroca worked in the left flank using hand tools. The GRAF technical unit finished out hot points of the head fire.

It is worthwhile to mention the lack of communication between extinction services of Aragón and Catalonia, as well as the arrival into the fire of the UME, a new unit of the army devoted to the extinction of forest fires, to work on finishing off tasks and mop-up of the perimeter.

- **Extinction equipment:**

Firefighters of Catalonia: 12 ground means (6 BRPs) and 4 aerial equipment
BRIF of Daroca: 1 helitransported team
SOS Aragón
UME: 3 BRPs, 1 BNP, 1 maintenance engine, 1 logistics engine, 3 intervention engines, 2 command engines (equivalent to a mobile column with an Incident Command Post-ICP).

- **Burned area: 21,3 ha**

Aerial discharge of an Aragonese double propeller helicopter (Kamov) on the left flank.

Photograph description: The fire in the flanks had only potential to burn surface vegetation despite being completely aligned. It was due to an almost bare vegetation.

3.2.- Exchange program between firefighters of the Government of Catalonia (Generalitat) and French firefighters

- **The exchange program has been drawn up into the framework of the European Fire Paradox Project**
- **Catalonian firefighters have been assigned to fire stations of Narbonne and Carcassonne, in the French region of Aude**
- **It is planned to do a similar exchange program with French firefighters in Catalonia**

Catalonian firefighters take part in an exchange program during the months of August and September with firefighters of the French region of Aude.

Between 15/08/07 and 15/09/07 approximately 40 firefighters of all the emergency regions of Catalonia, divided into groups of 5 or 6 members, will travel to France, where they will be assigned to fire stations of Carcassonne and Narbonne, in the region of Aude.

Each group of firefighters will stay for 4 days taking part in any type of service of the fire station. Furthermore, they will also be trained in-situ in historical forest fires and general services.

With this kind of exchanges it is expected that Catalonian firefighters, besides taking part and attending emergencies together with French firefighters of the fire station, will have the opportunity of observing and analyzing the emergencies management, i.e. working methodologies, action protocols, equipment employed, etc.

It is programmed that French firefighters of the region of Aude will travel to Catalonia at the end of this year or at the beginning of the following year.

These exchanges have been drawn up into the framework of the European *Fire Paradox* Project.

The exchange has already produced the first results. Catalonian firefighters took part in the extinction works of one of the major forest fires that the region of Aude had this year 2007. Their task consisted in bringing new knowledge of attack methodologies and research of opportunities to stop the free propagation of flames. At the same time, Catalonian firefighters did a 1 km length expansion burning taking advantage of the anchorage located on the forest trail. This operation was successful and it was useful to introduce French firefighters into the use of fire as an extinction tool. Furthermore, Catalonian firefighters could see operating different methodologies used by French firefighters. Unlike Catalonian firefighters, French firefighters use hoses of 22 and 45 cm in diameter.

Source: Press Office
http://www.gencat.net/interior/emergencies.htm

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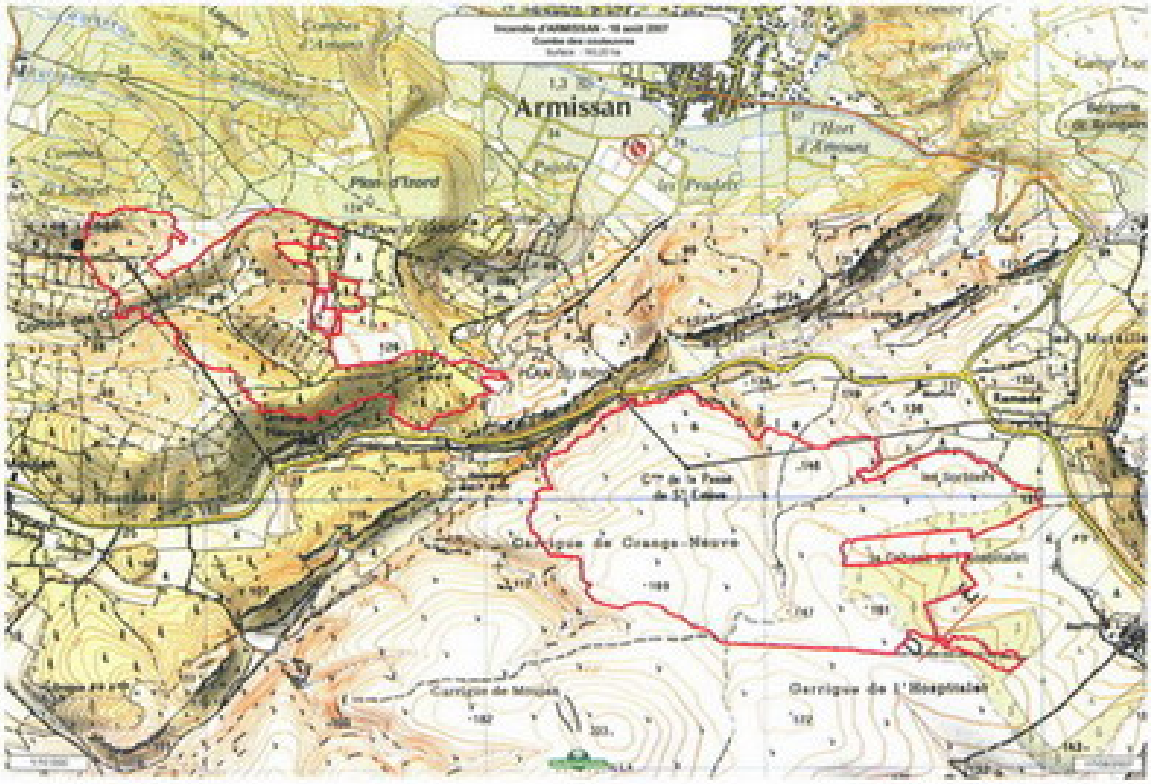
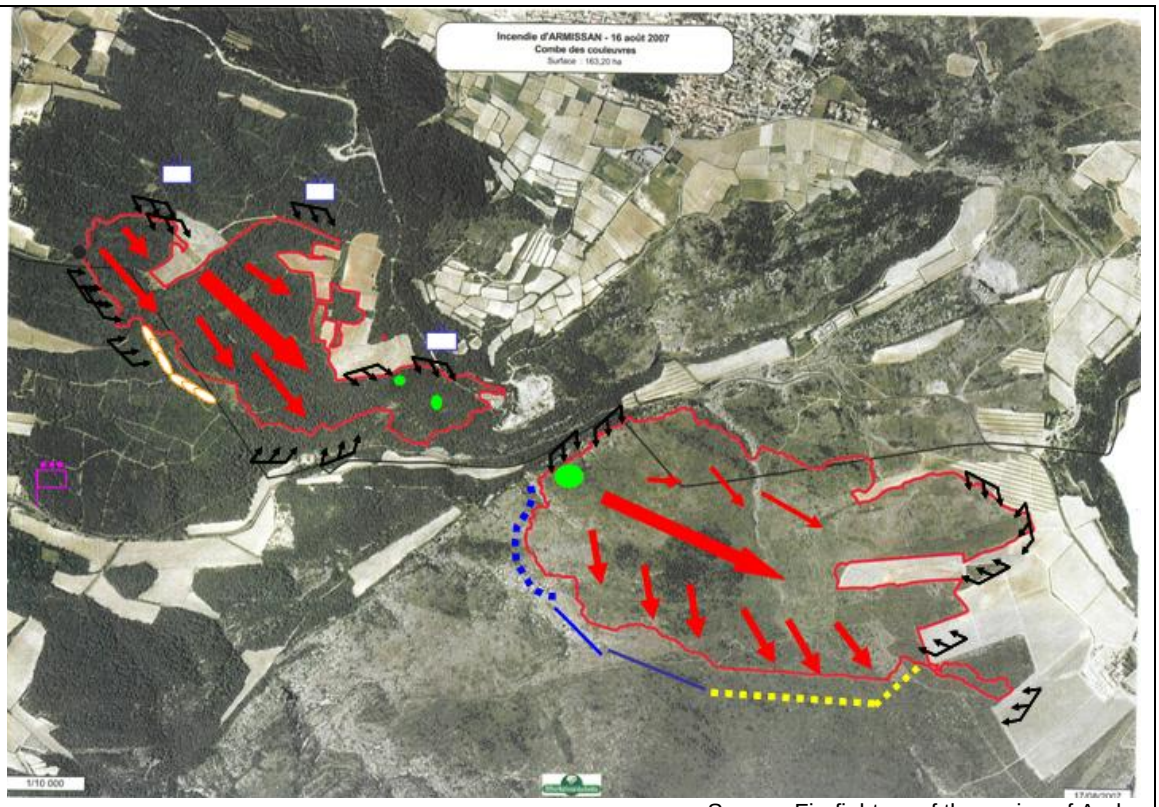
3.2.1- ARMISSAN, Combe des couleuvres (France) 16/08/2007. Operating exchange between Catalonian and French firefighters



• **Meteorology:** Fire dominated mainly by a north-west wind, but with a tendency of turning into the north. Currently we do not have quantitative data of the nearest meteorological stations • **Burned area: 163.20 ha**	• **Extinction equipment:** The group of firefighters which took part and executed operations of parallel attack (burn out) and direct attack with hand tools was composed of 2 sergeants (sector foremen) and 3 members of GRAF (1 sergeant, 1 crew chief and 1 firefighter). We have not computed and validated the number of French firefighters involved yet.



Source: Firefighters of the region of Aude.

- **Behaviour:**

The fire started very close to the road, wind blew the fire and it followed the axis of the crest of the mountain.

It was a surface fire of high intensity when the wind was in favour but the intensity was low in upwind areas. Torching was observed in young pine reforestation stands. The fire reduced its intensity and rate of spread, and firefighters were able to extinct it when it entered into agricultural fields or it spread upwind.

It has ability to generate secondary focus with the potential of growing up (500 m of distance). One of these secondary focuses complicated the extinction of the fire. It passed through D168 road and initiated new fire runs burning an area larger than the "first" fire burned area.

It is worthwhile to mention that the fire began at night and, due to the synoptic situation that dominated the fire, a comparison could be drawn between this fire and the fire of Ventalló (REG, 2006).

- **Operations and tactical approach:**

The fire was strengthened during the night due to the blowing a north-west wind; this situation conditioned the strong attack of French firefighters, which is mainly based on the use of aerial equipment. During the night mobile attack columns tried to line the fire in order to stop the opening of the flanks. Meanwhile, Catalonian firefighters tried to stop the spread of the head fire beginning an expansion burning of 1 km length that closed the right flank and the head. This action prevented reburns in the next morning in this working zone. In the morning, aircrafts went around the fire extinguishing the propagation but keeping it instable, with several reburns. The use of aircrafts represents a high economic cost because French aviation is very powerful. Three black grouped arrows of the previous image represent French mobile attack columns. Each black arrow represents 3 BRPs, 1 BNP and a light engine, which do a direct attack with hoses of 45 cm in diameter.

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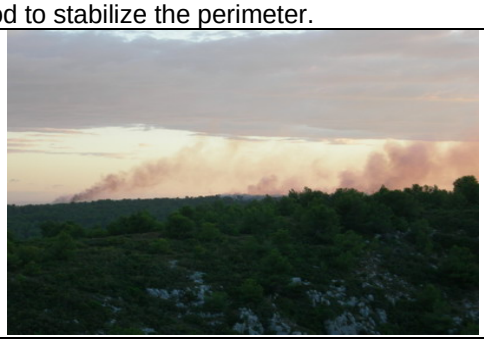
Image of the burn out in the right flank and the head, anchored on the forest trail and supported with a water vehicle due to the heavy blowing wind. The operation had a length of 1 km.	Image of the area where the technical fire was performed by Catalonian firefighters. There were not reburns in this area; anchoring points are good to stabilize the perimeter.
	
Catalonian firefighters took part in making decisions and contributed to new methodologies and attack operations.	Length of the right flank, of about 3 kilometers, the next morning when French aerial aircrafts started working.
	
French attack is prominently based on a powerful aerial attack, with an important fleet of airplanes of great capacity to transport water.	French BRP. It is worthwhile to mention that French firefighters do not attack the perimeter the same manner as we do it in Catalonia. Their operations are frontal and their hoses are 22 and 45 cm in diameter.

Source: Images of Catalonian firefighters and French firefighters of the region of Aude (P. Franc).
Information: Oral communication of French firefighters and commanders present in the extinction.

3.3.- MANAGEMENT OF PLAGUES WITH FIRE IN CEREAL FIELDS OF CASTILLA Y LEÓN

Technical fire as a tool to manage forests and attack forest fires is a fact that, more or less, we all bear in mind but its applications are still wider. The management of plagues is a complex problem and a lot of times they are difficult to manage, particularly in extensive farming.

In Castilla y León this summer they have an important problem with the common vole *(Microtus arvalis)*. It is destroying crops of different cereals, the species density can reach the amount of 2000 individuals per hectare and it can be found at homes, swimming pools and everywhere. Furthermore, it carries diseases such as tularemia (a type of pneumonia) and it seems, according to different sources, that there may be 150 people affected and it can already be considered a public health problem. This situation is due to a mild winter in terms of temperatures.

Burning of stubbles is being carried out to eliminate refuges and food of the plague, and to force the animals to go to wastelands or to field limits treated with pesticide. Personal of Castilla concluded that burning large expanses of land of 80-300 ha per day with a drip torch was exhausting and time-consuming, and they thought about another system.

A bale of straw was tied to a tractor. This way it was possible to quickly untie it if necessary. Afterwards different stripes were lighted upwind and short fire runs were allowed to burn.

Source: Fco. Javier Plaza Martín. Nature Protection Section. Territorial Service of the Environment. Ávila. **Gorvernment of Castilla y León**.

3.4.- VII Pulaskinada, within the acts of the 150th anniversary of the fire station of Mataró

We invite you to take part in the VII Pulaskinada this 15th of September. This year it will take place in the city of Mataró and it will be within the acts of the 150th anniversary of the fire station of Mataró. The forest fires campaign finishes in Catalonia with this celebration. It is a ludic day and different races are programmed to highlight inventiveness and skills of all firefighters. The editorial team of "Lo Forestalillo" encourage you to take part in it and to visit the website of the 150th anniversary of the fire station of Mataró (www.bombersmataro150.cat). See you in the Pulaskinada!!