



Lo Forestalillo

Nº 85

21-6-2006

Situation of Forest Fires in Catalonia



LIGHTNINGS, RESCOLDS AND CEREAL FIELDS

Effects of the behavior of the right flank in Alforja fire (13/6/2006)

What we have had

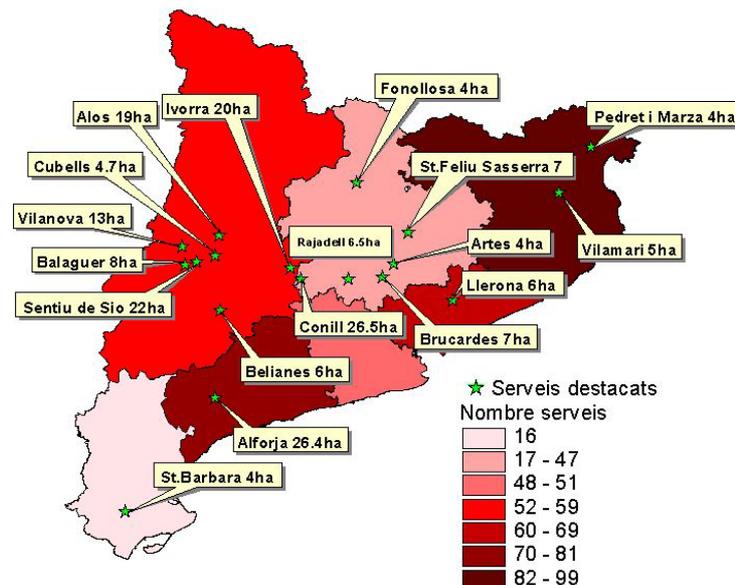
Compared tendency from 1/1/06 until:

	18/06/2005	18/06/2006
Nº Services (VA+VU+VF)	4618	2361
Area (ha)	2174	1838

VA: services of agricultural fire
 VU: services of urban fire
 VF: services of forest fire

FAITH OF ERRORS:

From the Forestalillo 81 we come an erroneous datum in the number of hectares during 2006, due to the management of the data base. So we were amounting twice the burned area of Vandellòs fire. With this faith, it remains the datum corrected and it is brought to light.



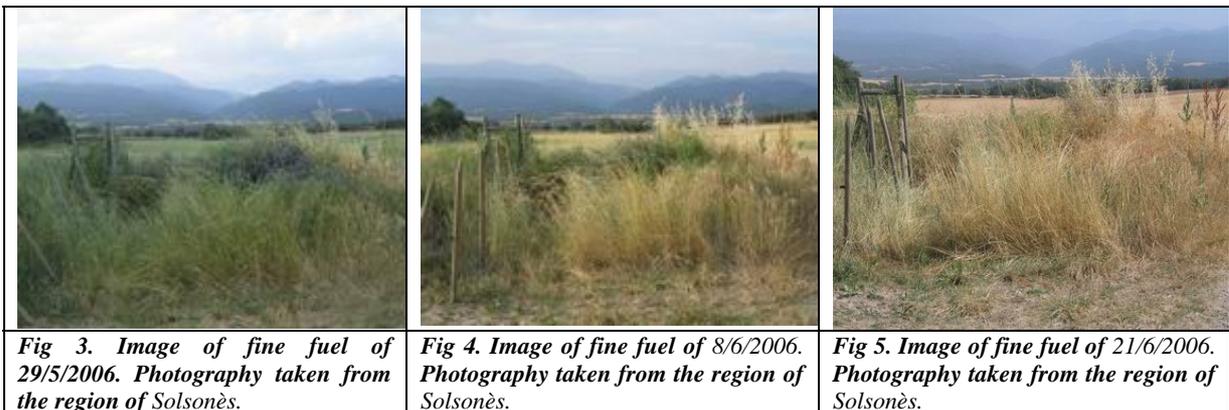
Number of services (VA+VU+VF) from 01/05 until 18/06/06, and services larger than >2 ha.

Description of the situation

Evolution of drought (availability of live fuel, and large dead fuels)

The predicted period of instability has arrived at last, although it has not been generalized all over the territory as it was predicted. We have had isolated cloudbursts in the metropolitan regions, and intense storms in the Pyrenees area. However, the effects of these rains are not going to last, and the lightnings that felt down with the rain woke up four days afterwards.

During the 4 last days, the availability of the dead fine fuel has been scarce, and the effect has been noticed with a decrease in the services of agricultural vegetation. In Alforja fire (13/6/2006) we have seen that the extinction system can reach flanks and back easily and has problems with spots



From the 4th of July we have had an episode of hot air mass from the sahara which is entering Catalonia above the sea, bringing a hot but quite wet air mass. During the weekend, we have had some instability and rain, which has not modified deeply the map of drought. However, we observe a light improvement in the north of the RELL, and an accentuation of the drought in the RET and in the metropolitan regions.

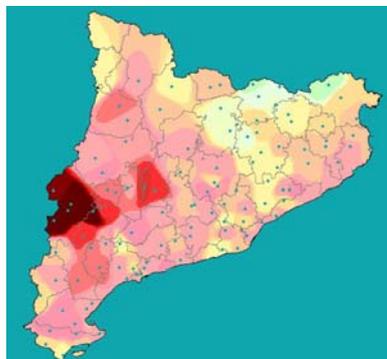


Fig. 4. Drought accumulated in 18/06/06.



Fig. 5. Drought accumulated in 18/06/05

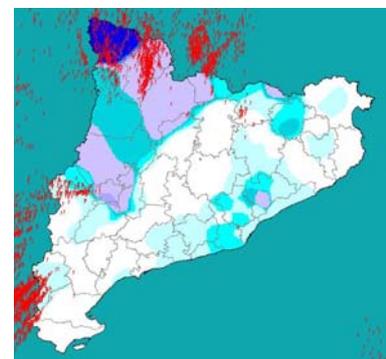


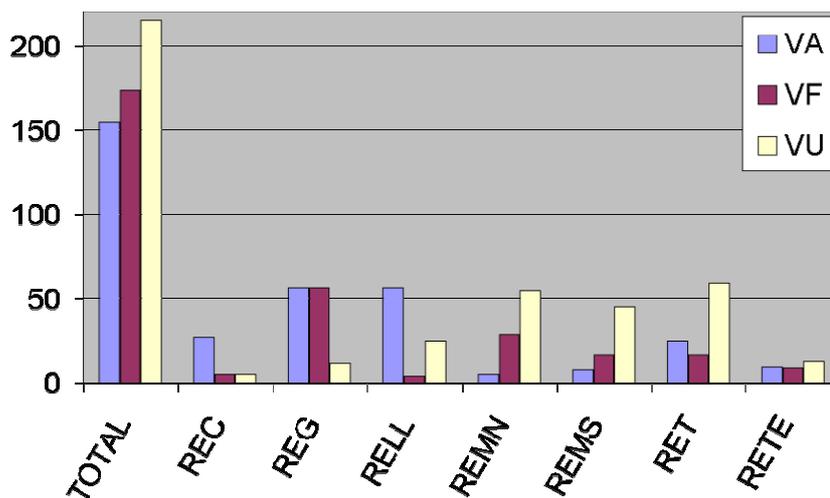
Fig. 6. Map with the rains and the lightnings recorded among the 15th and the 18th June.

Evolution of Services

What we have had

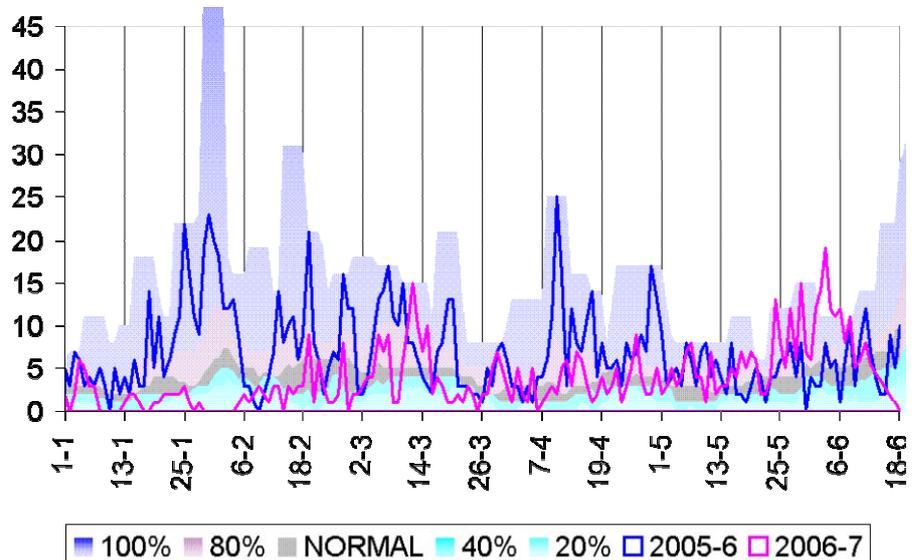
The services of urban vegetation have shown a continuum increase, especially in the metropolitan regions. Services related with agricultural activity are more important in the internal basins (RELL, REG, REC). However, during the last week the number of services has diminished, in comparison with the last year, coinciding with a movement of the hot air mass through the Mediterranean, implying an increase of the humidity.

About the behavior of fire, we have to highlight the intensity of the grasslands and cereal fields, and the low intensity of the back and flanks of the forest fire, while we have seen moderate intensity when the fire burned in full alignment (3/3). In any case, the heads of the fires with some factor (slope, wind, isolation) unfavorable for propagating are inside the capacity of extinction of the direct attack with water and hoses.



Graphic 1. Total number of services by region and type in the last 15 days, from the 1st June until the 19th June. VA=agricultural, VU=WUI, VF= forest

Graphic 2. Mbs13 (services of forest fire) from 01/01/06 until 18/06/06, compared with the same period in 2005/6 (blue line) and compared to the normal number of fires (in grey 50% percentile, in blue lower than normal, in rose higher than normal) for the last 5 years.





For regions

REG

The last episodes of instability didn't mean precipitation in the Region, but lightning ignitions (Cabanelles 18-06), when fine fuel was available. Highlight the fires of Pedret and Marzà 14-06 and Vilamarí 12-06 (4 and 5 hectares respectively).

What is forecasted Period of instability marked by values of relative dump high during all the week and that will rise intensity from Friday. Increase of VA and VU services due to the proximity of the celebration of Sant Joan (Saint John). VF of low intensity .

REMN

The last records (exception of 18 liters in Granollers) achieved didn't suppose a decrease of the risk of fire. It still continues disposable the fuel and activity associate with fine fuel has been recorded (Llerona 13-06, 6ha). In forest terrains the fires show low intensity.

What is forecasted Week marked by the instability and the increase of the services associated with fine fuel, fundamentally VU and VA, given to the proximity of the celebration of Sant Joan.

REMS

Last rains have not supposed a reduction in the drought index. Last week any service of importance has not been recorded, but in its limits with the REC and the RELL in fields of cereal, with fast propagations that indicate the state of the fine fuel in the zone. However, the VF show a pattern of propagation of low intensity.

What is forecasted Instability, especially at the end of the week. Possibility of ignitions for lightning (half north of the Region) and increase of services related with the fine fuel because of the Celebration of Sant Joan.

REC

The fires of stubbles (Fonollosa 11-06, Artés 12-06, St. Feliu Sasserra 14-06) make evident the capacity of the fields of stubbles for burning in a fast way and with intensity. However, the fires burn by the surface and with low intensity when they arrive to the forest areas.

What is forecasted Episode marked by the instability and the increase of the ignitions for lightning (especially in the north of the Region). Increase of VA and VU for the proximity of Sant Joan celebration.

RETE

In the last episode of instability very disperse rains and little amounts (<1,5 liters) have been recorded. This zone, it continues (together with the south of the RELL and the north of the RET) being the one that shows higher index of drought.

What is forecasted Increase of the ignitions for lightning because of the high instability (especially in the weekend, where rains are not discarded) and of the services of VA and VU.

RET

The north of the RET continues showing the drought more pronounced (together with the south of the RELL). It highlights the fire of the Alforja (13-06) 26,4 hectares, that it showed a surface pattern of propagation of high intensity in full alignment (3/3).

What is forecasted Increase of the ignitions for lightning (especially to the limit with the RELL) because of the high instability and of the services of VA and VU for the proximity of the Sant Joan celebration. Rains are not discarded, preferably at the end of the week.

RELL

The Region continues showing the highest drought accumulated, especially in the south. Highlight the largest cereal fires of Catalonia this year, that burnt in a very fast way (Ivorra 8-6, 20 ha.; Vilanova of the Salt 12-6, 13,5 ha.; Sentiu de Sió 15-6, 22ha.), but when they arrived to forest terrains, they lose inertia, and propagate with low intensity.

What is forecasted Increase the instability and the ignitions associated with episodes of lightning, especially on the north of the Region, at southern part. Increase of the ignitions near WUI areas due to the proximity of the Celebration of Sant Joan.

Level of activity

Little
 Normal
 Half
 Important
 Criticism
 Great fire





Highlights

3.1.- Availability of the large fuel.

Interpreting fires, we can understand the progression of the availability of large fuels. The facility in which the large trunks are consumed, the resprouts or reproductions in fires with large amounts of duff, and the number of lightings that we have had for the period of the year, bring us to light about large fuel availability. The persistent drought of spring has made that, progressively, the largest diameters of the dead fuel is available.

This means that during the phase of surveillance of the fire, the presence of this material in the perimeters has to be watched; that the possibility of the spots, thrown away by the forehead of fire, is higher. For this same reason, we will have to plan the research and surveillance of possible lightings fires due to storms.



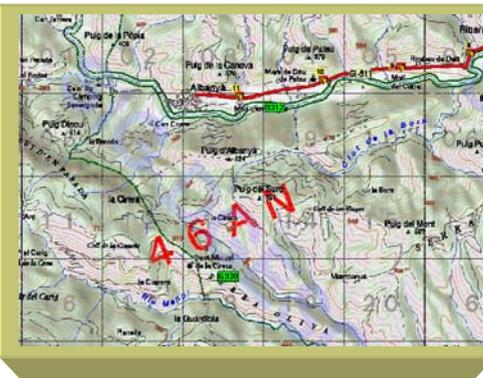
Right flank of Montmell fire (Juncosa) at 6/6/2006. Once this flank has no active fire resprouts or reproductions can be observed, due to the existence of large fuels from others fires in the zone.



Detail of trunks burning slowly, to the limit of the perimeter, and that can compromise the work made, hours after our performance. It is necessary to separate this material from the green area.



Image of a lightning fire a day after the storm. The availability of the large fuel allows that the ignition lasts and is manifested 24 hours afterwards.



Location of a lightning fire in 18/6/2006, probably from the storms of the 16th and 17th, that once extinguished, reproduced in the morning of the 20th.



3.2.- Cereal fires.

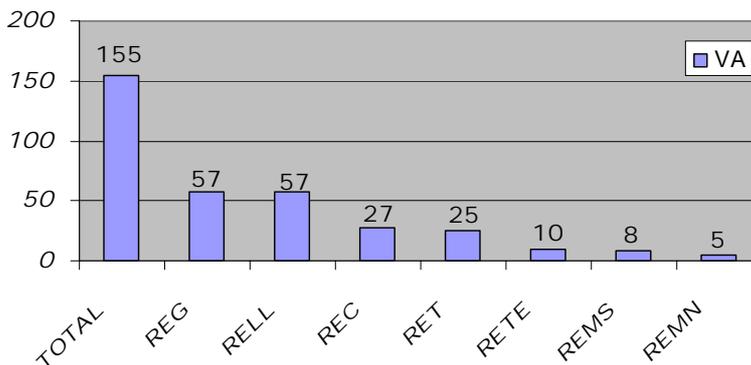
This year we have activity of cereal field fires. Remember that in 2005 we didn't have cereal fires due to the large drought that didn't allow cereal to grow.

But this activity is not extraordinary, but similar to 2003 and many other before. For the time being, the more affected regions are those of Girona and Lleida, but the activity will move with the activity of the harvesting. During the last days it can be noticed the increase in the number and importance of this fires in the afternoon, with the minimum moisture. Among other determining factors, the altitude of the cut is decisive to the number of ignitions during the exploitation of the crop. This year precisely, the grain is small due to lack of rains, and only the straw is profitable, forcing the height of the cut to be smaller.



Perimeter of the fire of St. Feliu Sasserras at 14/6/2006. This affected 7ha. of cereal's fields.

SERVICES OF AGRICULTURAL VEGETATION DURING THE FIRST FIFTEENTH OF JUNE



Graph of the number of agricultural vegetation services of the last 15 days for regions.

DAY	NAME	SURFACE Ha	Region
15-6-06	Conill	27	REC
14-6-06	St Feliu Sasserra	7.1	REC
12-6-06	Rajadell	6.5	REC
12-6-06	Artés	4	REC
11-6-06	Fonollosa	3.5	REC
14-6-06	Pedret i Marzà	4	REG
14-6-06	Cistella	3	REG
18-6-06	Ordis	2.5	REG
7-6-06	Cassà de la Selva	2.3	REG
8-6-06	Ivorra	20	RELL
8-6-06	Balaguer	7.9	RELL
17-6-06	Belianes	6	RELL
13-6-06	Llerona	6	REMN
7-6-06	Sarral	3	RET
7-6-06	Santa Bàrbara	4	RETE
14-6-06	Flix	3	RETE



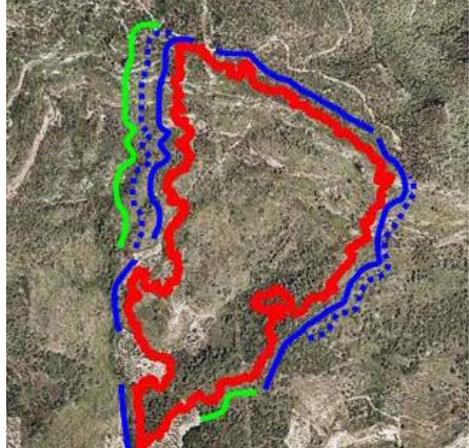
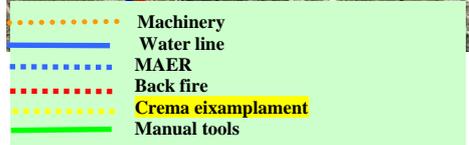
Perimeter of Ivorra fire (RELL) of 08/06/2006, this affected 22ha. of fields of sown field and fields cut with straw.

Fire of sown fields and stubbles more distinguished (>2ha), from the 7th until the 18th June, classified by regions and for affected area.

3.3.- Main fires.

After the fire of the Montmell of 6/6/2006 we have to highlight the fire of Alforja in the RET. Another time the Tarragona shows the higher activity. Remember that the most distinguished fires of this year have been in the same area. Except the Medol fire in winter, the other 3 were very inaccessible (Vandellós, Alforja, Montmell).

ALFORJA 13/6/2006

 <p>  <ul style="list-style-type: none"> Machinery Water line MAER Back fire Crema eixamplament Manual tools </p>	<p>EVALUATION AND TACTICS Topographic fire of coast. Affected by the slope and little influenced by the sea breeze (from east), which was very soft.</p> <p>Surface fire of high intensity with torching, affecting tops due to the radiation, lengths of flame >10 meters. Few spots and at short distances < 20metres.</p> <p>In the first moments priority was given in the left flank, for its potential (near the little river), and the right flank without been attacked until the other was finished. The head arrived to the top, where it remained confined</p> <p>The tactic more used was the direct attack, although in some specific areas people worked with manual tools and with chainsaws to give time to the lines, to stabilize the most advanced parts of the flanks.</p>	<p>METEOROLOGY</p> <p>4:00 A.M. HR%: 48-50%</p> <p>15:11 P.M. (starting) HR%: 39% Temp: 23°C Wind: SE, <5Km/h</p> <p>20:00 P.M. (stabilization) HR%: 60% Temp: 18°C Wind: SE,</p> <p>23:00 P.M.(control) HR%: 90% Temp: 13°C Wind: 0</p>
<p>Perimeter of Alforja fire (13/6/2006), 26.4ha.</p>	<p>RESOURCES OF EXTINCTION</p>	
	<p>15 BRP 4 Commands 2 Amphibian 2 AVAS 4 Helicopters 1 Helicopter of command</p> <p>Surface burned: 26.4ha</p> <p>Image of the right flank of the fire burning against the wind and in descendant. We can observe the long cliff where the head is stopped, as well as the agricultural area was part of the right flank stopped nearby to the beginning of the fire. The left flank was having a great behavior, even when it had more potential. This flank didn't progress because remained lower than the strength of the wind.</p>	



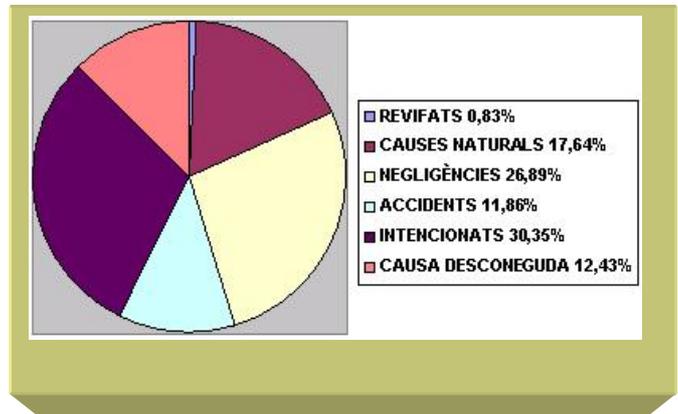
3.2.- This week has finished the period in which is allowed to burn with ordinary permission of the Department of Environment and House.

According to the DECREE 64/1995, of 7 March, by which they settle measures of prevention of forest fires, from the 15 June and until the 15 September the authorizations for switching on fire in the forest and 500 meters all around in the towns considerate of high risk of fire forest (indicated in the annex of this decree) remain canceled. Either works that generate vegetal rests, except express and exceptional authorization of the general director of the Natural Environment, will not be authorized.

A distinguished column of smoke of an authorized agricultural burn in less than 500 meters of forest in the Serra del Montsià.



Cause of the fires, in percentage in the period 1994-2004. Font: <http://mediambient.gencat.net/>



As we can observe in the right image the causes of the fires can be divided into three big groups. The first cause of ignition is the intentional ones (30%), followed by the negligence (27%) and by the lightings, with a distinguished 18% of the fires.

In the traditional agricultural regions, like the RETE, the RET and south of the RELL, where there is crop of olive trees, these are pruned, in the spring, and usually burn the rests. When it finishes the period in that the authorizations for burning are granted, the number of services is usually reduced.

However, the problem of the forest fires doesn't have to be searched in the cause of the ignition instead in the cause of propagation. For making an example known, in the forest fire of Vandellòs it has been spoken a lot about the cause but in any moment about the forest management of the zone and about the existing infrastructures (paths, safe zones to locate vehicles, ponds, etc). It is necessary to clarify that there a lot of forest areas not managed, where the extinction of forest fires is very complicated, especially when there are accumulated drought and synoptic conditions of GIF (great fires).