



# Lo Forestalillo

Nº 83      30-05-2006

Situation of Forest Fires in Catalonia

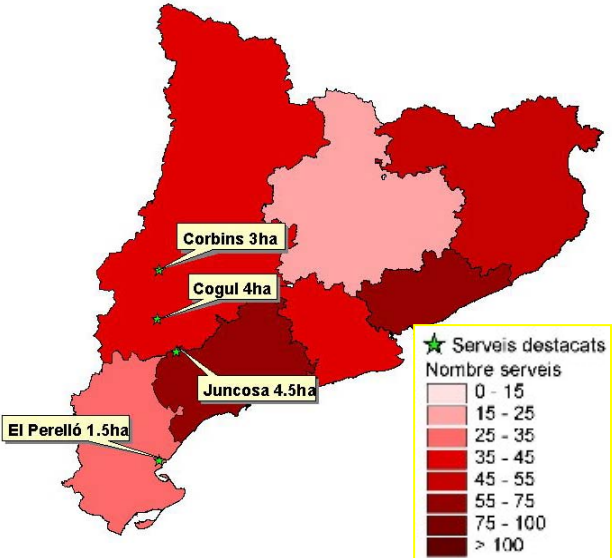


Distance of the spots in Ulldemolins wildland fire (Priorat)

## What we had

Compared tendency from 1/1/06:

	28/05/2005	28/05/2006
Nº Services (VA+VU+VF)	4177	1652
Surface (ha)	2106	2604



Number of services (VA+VU+VF) from 13/05 until 25/05/06, and services larger than >2 ha

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



## Description of the situation

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

As the spring progresses, we can observe the drought effects suffered by our forests. In the next picture, you can see the drought effects in a littoral forest, in the Corredor (Maresme). The pine crown has a lot off drought leaves, that will fall in short, either on the ground or on the shrubs. This is a strategy used by Mediterranean species to survive the hydrologic stress.

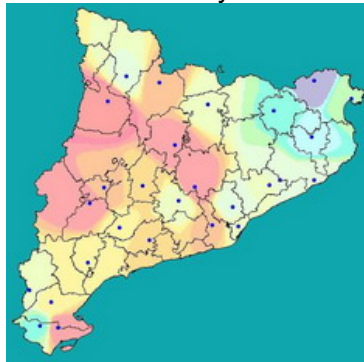


**Fig 3.** Picture of the top trees of a forest in the Catalonia littoral mountains. The colour of the drought trees is a typical image in the end of summer, but it isn't normal in the end of spring. This is a characteristic of the drought level that the evergreen trees are suffering.

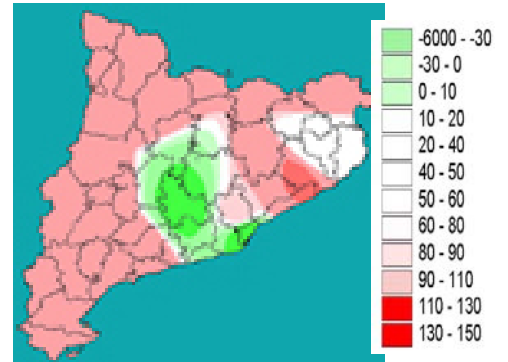
As we said in the last Forestalillo, the 10 and 100 hr dead fuels presence due to winter snow storms, in lots forests in the pre-littoral mountains, will cause large distances spotting and will increase the fire fronts intensity. At this moment, the 1 and 10 hours fuels are been available, and, if it doesn't rain, the most thick, will start to be available. Because of this, it's very important to track the accumulate drought, and day to day, monitor the night humidity recovery from the fine fuel that marks availability of 10 hours fuel.



**Fig. 4.** Accumulate drought (DC) 28/05/06.



**Fig. 5.** Accumulate drought (DC) 17/05/05



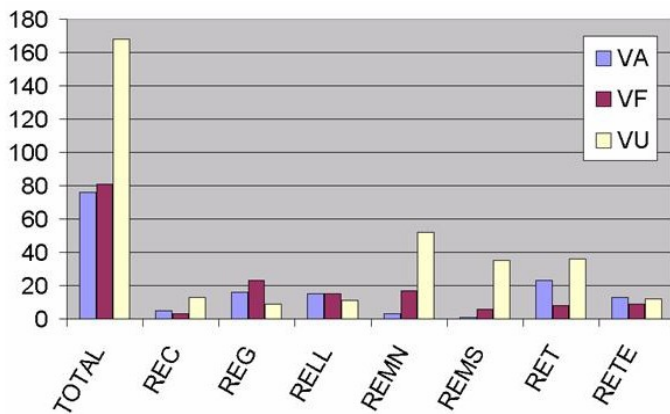
**Fig. 6.** Percentile % of drought (DC). Above normal, reds. Below normal green. Normal white 28/05/06



# Evolution of Services

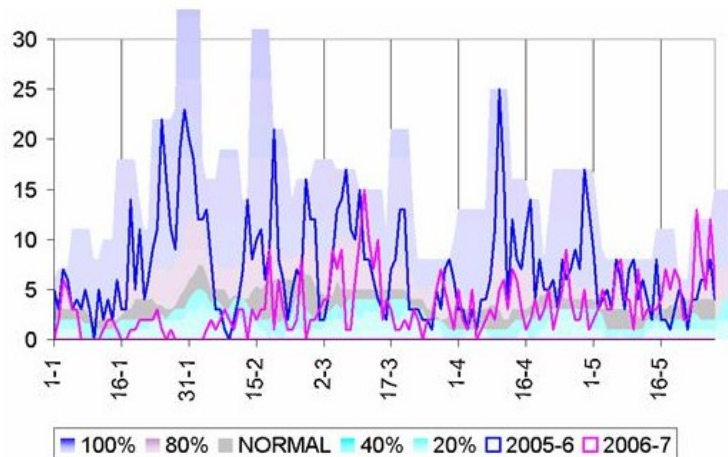
## What we had

The rains shortcoming, have made that the services in the opened and sunny terrains, were the most important ones, because herbs, without the protection of trees cover, are drying up quickly (abandoned terrains, sites without building, margins of fields and roads). The last different fires of this kind of vegetation are an example of this situation.



**Graphic 1.** Total number of services by region and type. VA=agricultural, VU=WUI, VF= forest (13/05/06 to 28/05/06).

**Graphic 2.** Mbs13 (services of forest fire) from 01/01/06 until 20/05/06, compared with the same period in 2004/5 (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



As it is shown, the forestry services level is higher than the last year. This situation is due to the availability of the dead fuel, that it propagates in the open sites (crowns, pastures and shrubs), and also has the capacity to propagate under the trees, because the humidity is very low and this situation allows to hold the ignition process.

## What is forecasted

We are waiting for fast fires, propagated by the dry herb and involving, more and more, the scrub or the tree tops with hydrologic stress. During the episodes of south or those of general wind (north or west wind) it will be when the behavior of the fire is more intense, with spots after the main spreads. The fields of cereal already start to be available, as a matter of fact, inside of the country they have started to pick up.



## Regions

REG

The stress of the forest vegetation and the availability of the fine and light fuel will entail major intensity in the VF and an increase of the services of VA and VU, especially in the margins and cereals in the agricultural zones of the pages.

**What is forecasted** Tranquility except in the episodes of north wind in which fast surface fires can be given with punctual torching.

REMN

The dry and stressed vegetation starts to mark the model of the services in open zones and with fine and dry fuel. The cereals are still maturing but the straw is already dry.

**What is forecasted** Relative tranquility, the services of urban and agricultural vegetation will increase in a progressive way.

REMS

The driest zones of the region are the ones that limitate with REC and RET, however, the north of the region aims as more dangerous for the presence of sown fields and the exit of the west wind of Lleida.

**What is forecasted** Increase of the services this week, with the entrance of dry environment and the campaign of harvesting. This situation will make increase the VA and the VU.

REC

The start of the cereal gathering opens the campaign of stubbles in the region, with a high availability of the dead fine fuel everywhere, in margins and also in grassland and undergrowth.

**What is forecasted** The entrances of south and west, especially to the S and SW of the region, will generate the most intense fires with the first spots at a certain distance.

RETE

By the moment the activity rests low in the region, although the drought levels are quite a lot of high for being in May. The last agricultural burns of the month and the wind of this week can originate some important fire in the internal basins.

**What is forecasted** Progressive increase of the activity regarding services in agricultural and urban terrains.

RET

By the moment the worst conditions had been given in the interior of the region (Priorat and Alt Camp), with low humidities. Is necessary to pay attention to the regions more influenced by the wind of north (Baix Camp and Baix Penedès).

**What is forecasted** We wait for an increase of the ignitions in the regions with sown fields (Conca de Barberà), as well as to the urban ones (Tarragonès, near the capital).

RELL

Activity associated with fine fuel and in episodes of low relative humidities. The RELL continues showing an index of accumulated drought by the period, especially at the half south, where the first fires of the season have appeared, although they have little extension (Corbins, 26/05; la Pobla de Cèrvoles, 29/05).

**What is forecasted** The situation of north winds (in spite they are feeble) will last until the next Saturday, when an entrance of hot air mass from the Sahara is waited (also with low relative humidities). Progressive increase of the activity associated with agricultural and urban services.

### Degree of activity

Low
  Normal
  Medium
  Important
  Critical
  Big fire





## Aspects to highlight

### 3.1.- Manual tools are necessary

Once again, we want to highlight the need to use the manual tools, not only in remote fires where the water lines do not arrive and in the fires where we have to implement the **direct attack** or the **combined attack** anchoring discharges of aerial resources, but in all fires, and especially, in those who present thick fuels of past fires.

We can combine the manual tools (pulaskis, forest shovels, hoes...) with the water lines, making work these at the front and behind the lance. We also can combine them with the water rucksacks, in order to stir stumps, thick fuels and considerable thicknesses of organic material.

These combinations improve the progression of the water line, since they facilitate it the path, and moreover allow assuring the perimeter with minor consumption of water. Moreover, the fact that sorts out the green fuel, reduces the possibility of reproductions and finally, the combination with the water rucksack allows us to suffocate hot points (of the burned one and the perimetrals), which in many times provoke new spreads because of the rolling. These maneuvers make us more effective in the rowed of the perimeters.

It is necessary then, now that we are in the beginning of the campaign, to sharpen the tools and to guard them in the vehicles, and especially, to think that they are always useful, and that we have to use them; especially this campaign, in which the accumulation of fuel (fine as well as thick) resulting of the droughts of past years and the snowfalls of this years is important.



*Perimeter soaked unstable some hours afterwards.*



*Hot point to the limit of the perimeter that it is necessary to shake,*



*Hot point in the interior of the perimeter, which can roll for us leaking down.*



*Suffocating and stirring rotten thick fuel, with the combination of tools.*



### 3.2.- Propagation by points

The forest fires stated last week, even though they affected little areas, showed a pattern of propagation by points, that is, they threw away spots at a distance.

Ulldemolins fire (Priorat, RET) that affected about 4 ha, recorded a distance of spots fall about the order of 50 m, when its phase of acceleration hardly overcame the 100 m.

The situation of accumulated drought is analogous to the beginning of campaign 2003, afterwards of a rainy autumn and winter and a really dry spring. With everything however, can not be affirmed that this campaign is assimilate to that of 2003, but it must make the follow-up of the accumulated drought and of the episodes of risk for being able to predict the behavior of the future forest fires.

In analogous conditions regarding the accumulated drought and weather conditions, the major burden of fuel in the forests (result of the accumulation of dead fuel of past years and of the fall of material because of the snowfalls of this winter), it aggravates the behavior of fires, that is, they show major intensity and major distance of spots fall.

This behavior manifested by the fires advises to track when the fire is stabilized, the zone of reception of spots for identifying possible ignitions, which will derive in new spreads. Moreover it is necessary to widen the width of tracking of the perimeter towards the green zone, since the higher intensity of the fire perimeter facilitates the ignitions in immediate environment, especially if there is available thick fuel.





### 3.3.- Conference of coordination in stubbles fires

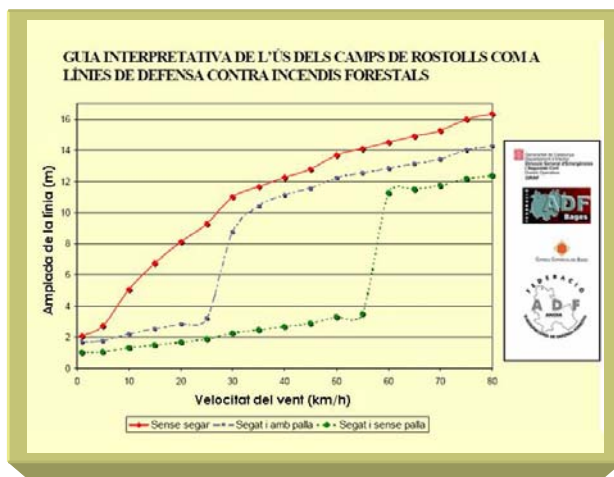
During the month of May and June the DGEISC has organized different conferences of coordination in stubbles fires for ADFs, responsible persons and municipal voluntaries and owners of agricultural terrains all over the Catalan territory, where also members of the Agents Rurals (Forest Service) and of the Mossos de'Esquadra (Police) will assist.

The objective of this conference is multiple, among others:

- Improve the coordination between all the groups who participate in the management of the emergency for fires in agricultural terrains
- Fostering the utilization of agricultural engines (especially farming implements) for the creation of discontinuity of fuel and the opportunities to attack the fire.
- Promoting the adoption of preventive measures about inhabited areas and of the main communication routes, as well as the ones corresponding to the time of the collection of the cereal.
- Explaining the main aspects of security to take into account in the extinction of these fires.
- Introduce the stubbles card to define the width of the discontinuity of fuel depending on the wind speed and of the typology of vegetation

These conferences will take place in the days and in the headquarters shown below:

REGIÓ	DATE	HOUR	PLACE
RELL	31/05	21.00h	Sala Polivalent d'Almenar (Segrià)
RELL	01/06	20.00h	Sala Polivalent de Sant Ramon (Segarra)
RELL	07/06	19.30h	Sala d'Actes del Consell Comarcal de les Garrigues (les Borges Blanques, les Garrigues)
RELL	08/06	20.30h	Sala d'Actes de la cooperativa d'Artesa de Segre (la Noguera)
RET	09/06	20.00h	Cooperativa de Sarral (Conca de Barberà)
REMS	10/06	09.00h	Centre agrícola i cultural d'Òdena (Anoia)
RET	17/06	10.00h	
REMN	13/07	10.00h	Consorci de Gallecs. Gallecs (Vallès Oriental)
REMS	To concrete		Sant Martí de Tous (Anoia)



Width of the plow line necessary to stop a cereal fire depending on the kind of fuel (cereal, stubble with hay and stubble) and wind speed.