

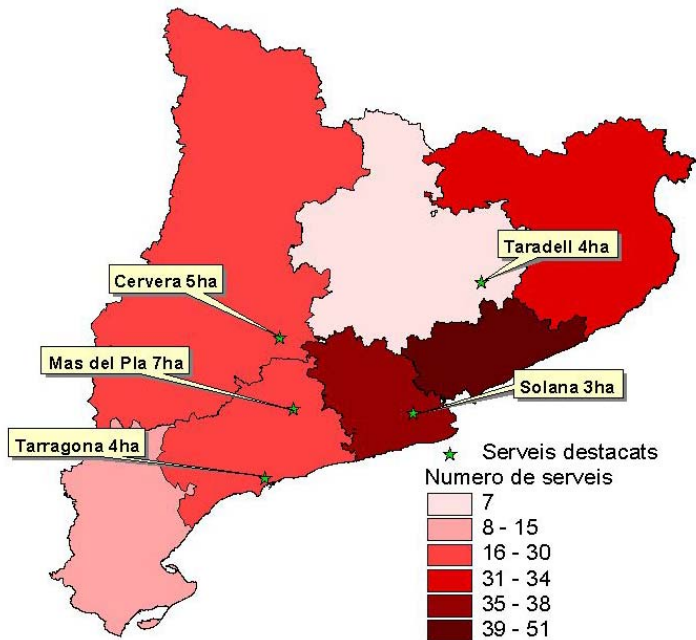


Photo of the Vilamarxant fire, proof that the campaign continues.

What we had

Tendency compared until:

	23/07/2005	27/07/2006
Nº Services (VA+VU+VF)	6115	3938
Surfaces (ha)	5994	2661



Number of service (VA+VU+VF) from the 20/07 to the 28/07/06, and services larger than 2 ha.

Description of the situation

Evolution of the drought (availability of live fuel and large dead fuel)

The situation has not changed the last days. After some days of a relative calm with a smooth entrance from south, it continues to increase the drought in the south and east of the country. During the days 24 and 25, the south situation has gained force and gives conditions for fires with high intensity behavior. In these areas, the vegetation continues to dry, increasing the fuel charge. The forecasts at short and middle term mark different episodes of rain which can reverse the tendency in the more dry zones.

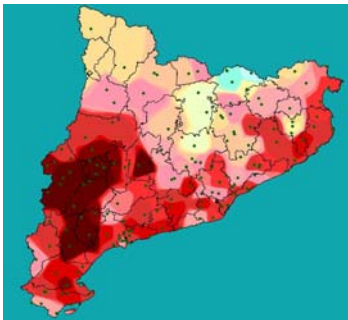


Fig. 3. Accumulated drought (index Drought Code) on 24/07/06.

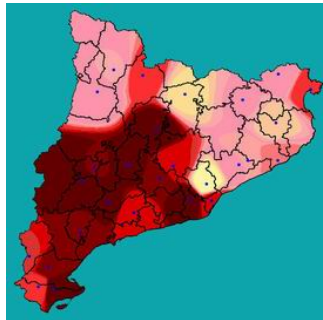


Fig. 4. Accumulated drought (index Drought Code) on 31/07/05.

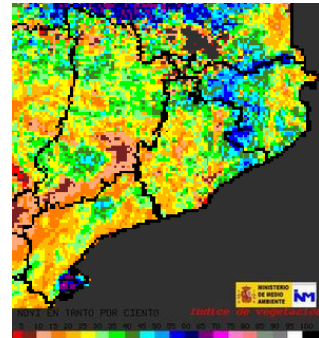
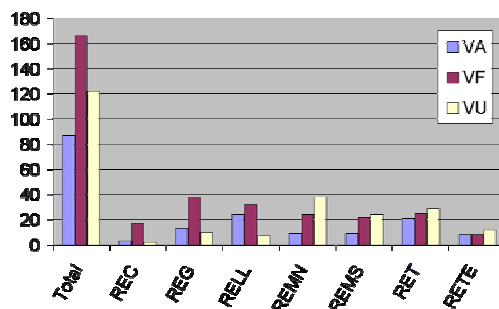


Fig. 5. Index NDVI on 20/07/06, just after rain.

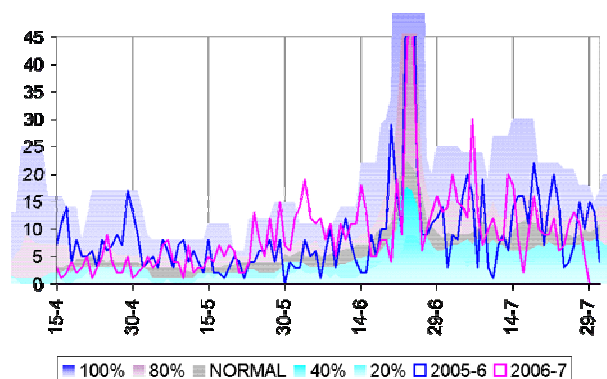
Evolution of services (VA, VU and VF)

These last days have been influenced by the deficiency of remarkable forest fires. In general, the proportion of services by region is maintained but we started to foresee some tendency. The VF begin to dominate in most of the regions, the entry of the high vegetation will do that the superficies affected will increase. The VA are decreasing but the VU are maintained from the summer activity (local fair, life of the street, tourism, ...).



Graph 1. Total number of services by regions and type of the last 15 days, from the 11th of July to the 27th of July

Graph 2. Mbs13 (Forest fire services) from the 15/04/06 to the 27/07/06, compared to the same period in 2005/6. The evolution of the year is also compared the number of normal services (in grey, percentile 50%), less of the normal (in blue) and more (in violet) of the last 5 years.





By regions

REG

The last episodes of instability have given some rain in the north and west of the region. There is no important service, excepted Vilarnal (20/07) which has shown intensity, and the lightning fire of Orfes with spots in 50m.

What is forecasted Movement of the hot air mass to the north and withdraws as from Thursday, moment from which we can register some rains. The next Saturday will start a brief episode of south. It is not forecasted low HR.

REMN

The last episode of south had given high relative humidity on the coast (favored by marinade) and lower inside. The instability episodes do not give rain on the coast. There is no important service.

What is forecasted End of the situation of south and retired as from Thursday, moment in which it will increase the instability and the possibility of precipitation that will take step to a new episode of south in which it is not anticipated that the relatives humidity are very low.

REMS

The last episodes of instability do not give important precipitation inside and no rain on the coast. Yet but there has been not important service.

What is forecasted The south situation retires as of Thursday, moment in which precipitation are possible, and next week end will start again a new situation of south, during which the relative humidity will not go down.

REC

The region do not had important services. In fact, the last registered precipitations during the lasts episodes of instability have favored the tranquility.

What is forecasted Retired as from Thursday of the south situation that has affected us the lasts days and beginning an episode of instability (that foreseeable will affect all the region and specially the north part). The tranquility concerning the services will continue.

RETE

Even though the region present a high index of accumulated drought, there is no important activity. The last precipitations have been concentrated in the zone of Ports.

What is forecasted Retired as from Thursday of the situation of south, moment in what precipitation will be more probable than take step to, again, a new situation of south, but associated with high relative humidity.

RET

Even though the drought situation of the region, the activity is quite low. The zone of Prades-Montblanc has recorded precipitation (even though little) that will favor fires with lower intensity in the next days.

What is forecasted Low activity until the moment in what low relative humidity and wind of a certain intensity will be recorded. In a short term, retired of the situation of south as from Thursday and increase of instability. The start of a new south episode is forecasted next Saturday but without low relative humidity.

RELL

The region is clearly divided: the north part has received important precipitations and the extreme south part where no precipitations have been recorded or quite few.

What is forecasted End of the south situation and precipitation (specially in the north part) as from Thursday, then a new south situation starting Saturday but the relatives humidity will not decrease a lot. It will be necessary to consider the precipitations recorded to by valuing the truce to respect the availability of fuel.

Level of activity

■ Low
 ■ Normal
 ■ Medium
 ■ Important
 ■ Critical
 ■ Large Fire



Important aspects

3.1.- Outstanding fires after rains

A summer period of rains is not equivalent to the end of the forest campaign. The relaxation of the operations after summer rains is habitual, but it is necessary to have present the magnitude and the severity of the phenomena that surround the evolution of the campaign we lived. This year, the seasonal drought is hard and, simultaneously, rains fallen in many regions have not been so many generous ones.

The year '98 were already remarkable fires a few days after rains, but the San Mateu de Bages fire in July will take place in our memory in the space reserved for historical fires. The previous days of summer rains usually are very hot. Shortly before rains, the fuel is already available and even though the water increase the humidity momentarily, the later risk situation like south entrance (Gaià '98 : 150ha, 20mm the 18 previous days, Margalef '05: 320ha, 40mm the 15 previous days) or North situations (Riba-Roja '05 : 750ha, 40mm in the 30 previous days) cause fires behaviors equal or greater than before, even though the vegetation was better than now.



Fig 6. Picture of the smoke column from Talamanca, in south situation

Fig 7. Picture of the smoke column from Riba-roja d'Ebre in wind situation.

		Temp °C	HR %	Dir.Vent
Gaià	22/06/98	23.8	36	Sud
Vinaixa	01/08/01	28.6	31	Sud
Talamanca	19/07/03	37	25	Sud
Margalef	26/05/05	30	10	Sud
Riba-roja	22/05/05	31	25	Nord

In addition, in the south of the country the situation is really different because it has practically not rain and, therefore, follows the drought situation and the situation is totally available to burn.

Finally, even though it seems the campaign is finish, be careful to the next risk situations so that no fires take us with deprived.



3.2.- Fires in Scotland.

This last week, our Scottish colleagues are working to suffocate different forest fires they have. The fuel which burns is mainly peat.

The following photos show a forest fire near *Aviemore*, characterized by a low intensity and a slow speed. Normally there are superficial and subsoil fires, but due to the little precipitation of the last weeks, they can imply forest (photo 1) and giving some small torching (photo 2).



Fig. 8. Localization of the zone affected by the fires near Aviemore.



Fig. 9. Four pictures of the fire ; (1)forest area affected, (2) entorching, (3)bulldozer defense line & (4) burned trees.

Usually there are not difficult fires to control but to extinguish due to the thickness of the peat layer which can be more than 70cm and by fact maintain laten hot spots to enough depth. To stop the propagation and avoid reproduction outside the perimeter, it is necessary to do a defense line, its depth can defined by the depth of the mineral soil.

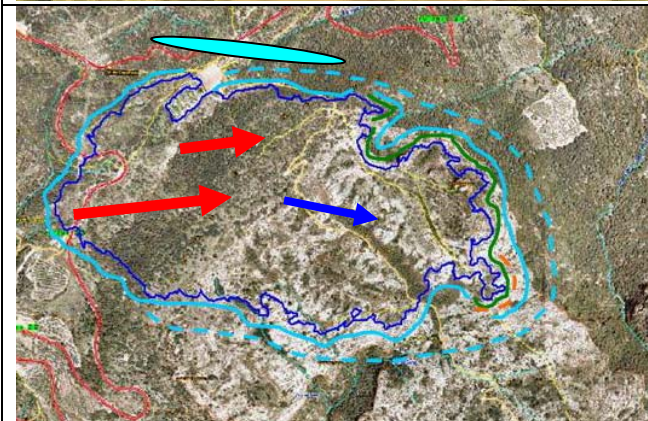
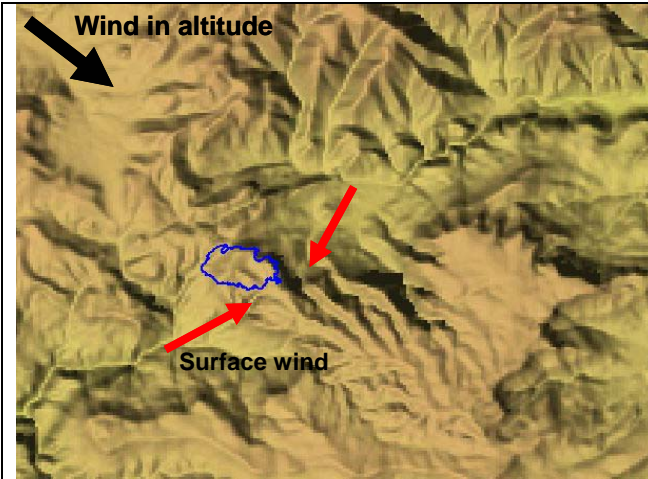
To extinguish that kind of fire, the use of water is not efficient, the extinction is not fast and the prevision, for that fire in particular, is planned for November.

On the picture 3, we can see a defense line done with a bulldozer. The priority has been done to the width instead of the depth, which was not enough to stop the propagation of a subsoil fire.

That kind of fire in our country can only be found in some Pyrenean zones. One of the problem we could observe will be the uprooting of the trees caused by the combustion of the formed ground made up mainly of peat.



3.3.- Fires in detach.
 La Febró 29/07/2006



..... Farming implement	○ Critical points
— Water lines	➔ Principal runs
..... Aerial resources	➔ Lost of alignment
..... Backfire	
..... Tactical burn	
— Manual tools	

- **Meteorology:**
 15:30 fire ignition: 29°C, 24%, 5Km/h W-SW
 19:00 perimeter stabilization: 19.9°C, 42%, 3Km/h NE-E.
 20:21 Fire controlled: 17.2°C, 52%, 5Km/h E.

- **Behavior:**
 Superficial fire which jump, at the first moment, the road. Topographic fire of high intensity in favor of wind and slope at the beginning. At the top of the crest, the fire finds a change of vegetation, and make a change of substantial behavior, that favors its control. The possibility of spots on Clapafonts slope was limited by the topographic wind on that slope.

- **Operations and tactical expositions:**
 The perimeter was encircled by water lines and manual tools worked on the front part of the left flank benefiting of the discontinuity and the discharge of aerial resources. It considers the left flank as having the most potential if the fire goes between Capafonts road and the cliff.

- **Fire fighting resources:**
 26 BRP
 4 GRAF units
 5 Control (CG, CR, 1CS, 2 GRAF)
 4 Water bomber seaplane
 4 Water bomber airplane and 1 Foca.
 7 Water bomber helicopters
 1 Helicopter to transport personnel
 2 Helicopters to command

- **Burned area: 51 ha**

Picture on the approach of the fire by reinforcements coming form other regions. At this moment, the column decrease and seen more diffuse, even if with the distance, it look like if the wind in altitude breaks the column



Smoke column seen from Cogullons. Until this moment, topographic fire with high intensity and tendency to burn the ubac slope of Capafonts. Quite vertical column in superficies.



3.3.- Forest management and extinction opportunity.

More and more, people in charge of planning and forest management, technicians and engineers, are integrating the experiences and proposals from people in charge of fire extinction. Nowadays, the forest management is today the most efficient tool to prevent large forest fires. They remain far the protectionist approaches favorable to “non management” like a way to avoid fires.

This evolution and convergence of the people in charge of management and extinction, is allowing to validate many of the methodologies of forest management and to determinate the localization and the dimensions of the prevention equipment. It is a necessary to have a technical view of the world of “fire prevention” and evolving to an efficient risk management. An evolution that implies to assume fire like a tool to manage the ecosystems, and therefore, to integrate the fire in the forest management, and at the end to be considered as an element more of our landscape.

The forest management that integrate the fire in its planning and arrangement has 3 basics objectives: to favor the mosaic in the landscape, divers and adapt to each massive according to the fire of design that can be large fire; to equip with structural resistance the forest masses vaccinating them because the next large fire that affects them not causes irreversible damages and they arrange opportunities to survive; and, in last term, to maintain and to create opportunities to extinguish and secured areas.

These 3 objectives are obtained through:

- Avoid horizontal continuities: by supporting a landscape of broken mosaic
- Avoid vertical continuities: by not allowing fire of summits
- Reduce the fuel load: by decreasing the fire environment and the spots.



Natural discontinuity (horizontal) on La Febró fire the 29/07, that is really good opportunity.



On the left photo, an infrastructure considering fire of the area, forest track drawn up with a loss of alignment. On the top photo, a forest structure resisting to the passage of the fire (vertical discontinuity), favorable to a low intensity behavior and extinction actions.