



# FOREST FIRES IN THE MEDITERRANEAN COUNTRIES

By Paolo Raddi  
Istituto Protezione piante, CNR, Italy

As individuals and as a society, we must take responsibility for our forests and ensure that the most feasible, economic and ecological measures are taken to protect them.



We should seriously ask ourselves what is going wrong after decades of investigation in fire causes, after having put so many efforts in fire prevention and fighting at local, regional, national and community level.

The problem is that the number of forest fires and the burnt area in at least 5 Southern States (Portugal, Spain, France, Italy and Greece) did not present any significant improvement in the last 30 years in spite of the very big efforts (people and money) spent in the prevision and control of fires.

### Number of fires and burnt area in the five Southern member States in the last 30 years



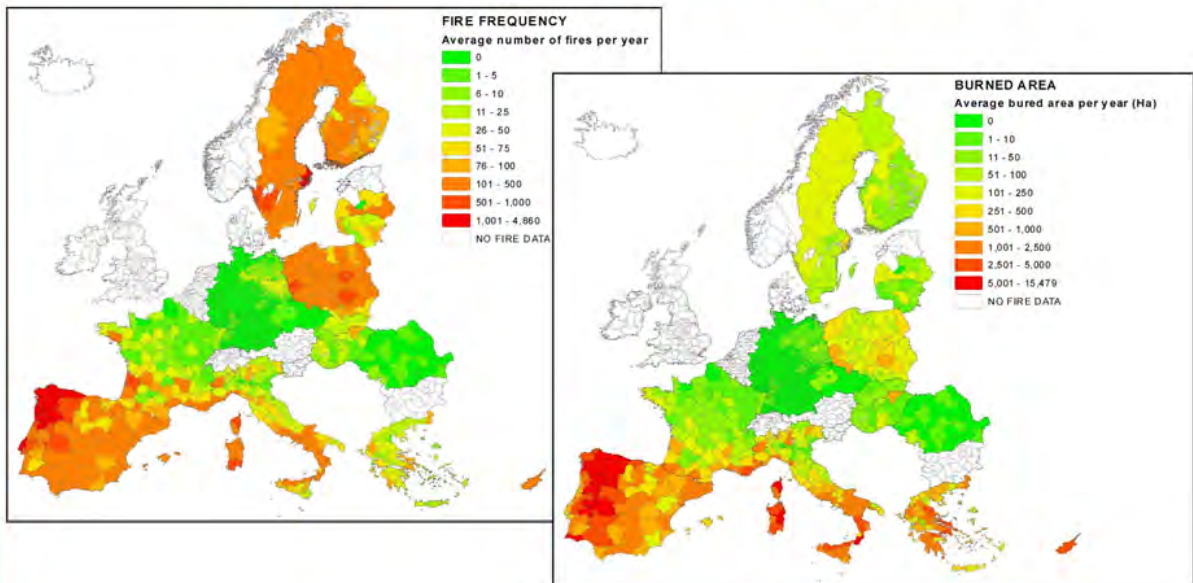
Number of fires	PORTUGAL	SPAIN	FRANCE	ITALY	GREECE	TOTAL
2009	26 119	15 391	4 800	5 422	1 063	52 795
% of total in 2009	49%	29%	9%	10%	2%	100%
Average 1980-1989	7 381	9 515	4 910	11 575	1 264	34 645
Average 1990-1999	22 250	18 152	5 538	11 164	1 748	58 851
Average 2000-2009	24 949	18 337	4 406	7 259	1 569	56 645
Average 1980-2009	18 194	15 335	4 951	9 999	1 569	50 047
TOTAL (1980-2009)	545 805	452 848	148 531	299 977	47 058	1 501 409

Burnt areas (ha)	PORTUGAL	SPAIN	FRANCE	ITALY	GREECE	TOTAL
2009	87 416	110 783	17 000	73 355	35 342	323 896
% of total in 2009	27%	34%	5%	23%	11%	100%
Average 1980-1989	73 484	244 788	39 157	147 150	52 417	556 995
Average 1990-1999	102 203	161 319	22 735	118 573	44 108	448 938
Average 2000-2009	150 101	125 239	22 342	83 878	49 238	430 798
Average 1980-2009	108 956	177 115	28 078	116 534	48 587	478 910
TOTAL (1980-2009)	3 257 886	5 313 457	842 332	3 496 005	1 457 624	14 367 304

Sources: EFFIS (European Forest Fire Information System)

## About 65,000 wildfires & 500,000 ha per year in EU



Sources: EFFIS (European Forest Fire Information System)

## Percentages of burnt forested area in Mediterranean countries



Sources: FAO



Hot countries, as Mediterranean countries, are naturally vulnerable to fires, but there is much we can do to prevent them. The simple fact is that most of these fires have human origin. The EU is requested to make society aware of the value of our forests and their resources and the benefits of their conservation.

Less hot countries are to a lesser extent exposed to forest fires, but the effects may also be disastrous.



The EU Commission is currently examining in the depth the issue of forest fires and forest protection in a wider context. But EU Commission has a limited influence on forest fire management at Member State's level because adequate provision are missing in the Treaty.



In 1997 the EU Commission set up a research group to work specifically on the development and implementation of advanced methods for evaluation of forest fire risk and for estimation of burnt areas in European Union.

EFFIS (European Forest Fire Information System) is charged to provide information for the protection of forests against fire addressing both pre-fire and post-fire conditions.

<i>Country</i>	<i>Area (Ha)</i>
Albania	7606.86
Algeria	141925.13
Bosnia	181.47
Bulgaria	1563.69
Croatia	2208.32
France	7972.32
FYROM	901.20
Greece	42759.93
Israel	45.92
Italy	54942.55
Montenegro	103.25
Morocco	2111.86
Portugal	75264.52
Spain	88886.43
Sweden	741.98
Syria	5276.05
Tunisia	128.96
Turkey	5796.93
<b>TOTAL</b>	<b>438417.35</b>



EFFIS has published a detailed analysis of the fire campaign and indicated the total burned areas (larger than 40 ha) in 2009 by fires



In the VI International Conference on Forest Fire Research, the importance of the forest protection as pool of biodiversity richness, as water retention and climate change regulators, as landscape building elements, as conservers of our cultural heritage and as product providers was pointed out by the 8 Sections and by a very large lot of publications and posters.



The discussed arguments were very numerous as it was demonstrated by the sections:

Section A: Fire prevention and management

Section B: Climate and fire meteorology

Section C: Fire behaviour

Section D: Fire effects

Section E: Fire safety and fire suppression

Section F: Socio-economic factors

Section G: Urban wild land interface

Section H: Case studies

Lab Group for a Mediterranean Platform was charged to examine all the approved Interreg and MED P.O. projects addressing natural risks over the programming periods 2000-2006 and 2007-2013. The major risks were split into 5 categories, one of them was “forest fires”

From the Lab work, three lessons can be learnt:

1. globally, projects addressing forest fires are rather numerous, even if underrepresented in relation to those of the other risks. Most of the previous projects have made significant advances toward the development of practical, useful and sometimes, novel approaches in the context of fire prevention and preparedness, but the “final results are not yet satisfactory;
2. the location of projects partners reflects the spatial relevance of the fire risks. Yet, some hazardous areas such SE Spain and E Greece are underrepresented in the Interreg and P.O. Med projects;
3. It is necessary to build synergies between existing initiatives and projects on fire risks.

## List of the selected Interreg and Med P.O. projects on the forest fire risk in the Mediterranean region



	Total budget	ERDF contribution	Partnership size
ALPF FIRS (2007-2013)	380 000	290 000	14
Forest management/fire prevention (2000-2006)	1 250 000	607 758	3
Grinformed+Medfire (2000-2006)	2 000 000	1 000 000	11
INCENDI (OCR) (2000-2006)	7 000 000	4 200 000	10
<b>MEDCYPRE (2000-2006)</b>	<b>1 480 500</b>	<b>900 000</b>	<b>16</b>
PRINCALB (2007-2013)	1 213 000	736 875	2
PRoMPt (2007-2013)	1 517 423	1 244 847	10
PROOHF (2000-2006)	630 000	385 000	8
PROTECT (2007-2013)	1 535 540	1 171 105	9
PROTERINA-C (2007-2013)	2 500 000	1 875 000	6
PYROSUDOE (2007-2013)	1 436 000	1 077 000	7
<b>CYPFIRE (2010-2013)</b>	<b>1 330 000</b>	<b>1 012 000</b>	<b>8</b>

**MEDCYPRE, CYPFIRE: cypress barriers against forest fires**

## Conclusions



Until now the control of forest fires was based on theoretical and/or traditional models, but the negative data reported by “Forest Fires in Europe” (2010) are asking for new studies and innovative approaches, as:

- identification of key explicative variables for forest fires, notably based on lessons learnt from previous disasters;
- use of specific vegetation (e.g. trees) or techniques to prevent the start and the spreading of surface fires





Why it is necessary to change or to improve the traditional fire control approaches based on the coordination of alerting processes, the adaptation or creation of joint protocols, the development of common platform, etc.?

Because something is apparently going wrong in spite of the large monetary efforts done with relatively poor results in relation with those expected



How to change the approach of defence against the start and the spreading of forest fires?

The MED P.O. “CypFire” (1.6.2010–31.5.2013) suggested a new approach and it was financed.

The proposal of CypFire was to use a multiple-rowed cypress barrier to reduce the impact of fires on the rural economy and on the beauty of landscape.

CypFire must demonstrate that this “green“ way is a feasible, economic and ecological solution of many of forest fire problems in the Mediterranean Countries.

The project CypFire will be presented to you.