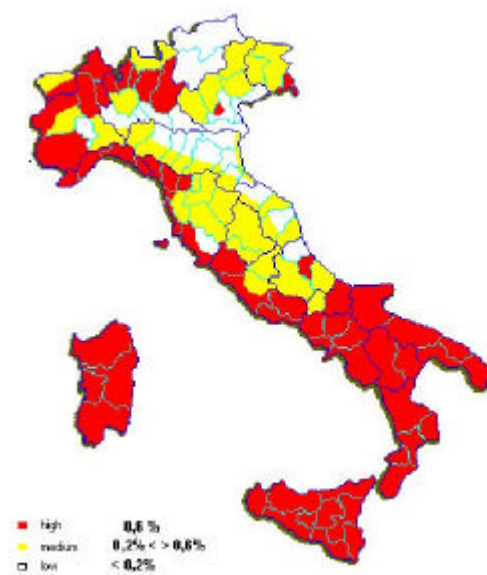


2002



Forest Fires in Italy





The 2002 was characterised by a remarkable concentration of fires in the winter period, between January and March.

A total of 2.146 fires took place in this period, which corresponds to 46% of the total number of fires. They affected an area of 40.768 ha of which 20.199 ha correspond to wooded land.

Mild average weather condition during summer limited the number of fires in this period.

There was drought and frost from January to March extending the danger occurred during December 2001. Prolonged lack of rain next to warm and the strong winds resulted in high range even in the south of the country.

The rain was present in most of the summer period. The region that suffered the highest damage was Sardinia with 8782 ha burned, followed by Calabria and Lombardia with 7985 and 4905 burned hectares, respectively. The highest number of fires occurred in Calabria (983), Sardinia (565) Piemonte (490) and Liguria (411).

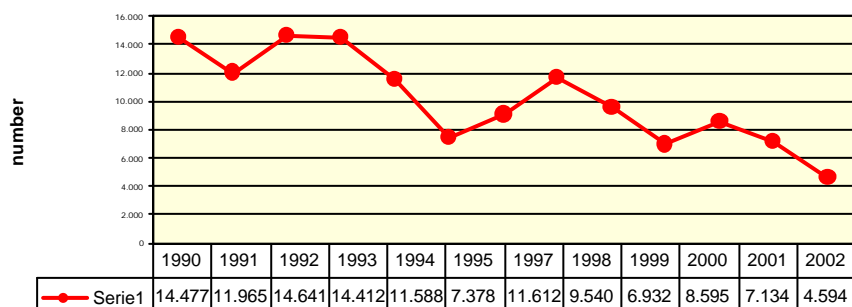
2002 – Forest fires in Italy

	Number of fires	area burned			average (ha/fires)
		wooded (ha)	non wooded (ha)	total (ha)	
Valle D'Aosta	16	43	73	116	7,3
Piemonte	490	1.620	1.925	3.545	7,2
Lombardy	368	1.902	3.017	4.919	13,4
Trentino A.A.	100	442	207	649	6,5
Veneto	65	545	461	1.006	15,5
Friuli V. Giulia	122	457	275	732	6,0
Liguria	411	1.344	1.723	3.067	7,5
Emilia Romagna	98	152	100	252	2,6
Tuscany	308	852	425	1.277	4,1
Umbria	41	113	68	181	4,4
Marche	40	56	45	101	2,5
Lazio	178	638	601	1.239	7,0
Abruzzo	31	177	107	284	9,2
Molise	29	27	74	101	3,5
Campania	341	810	491	1.301	3,8
Puglia	189	927	892	1.819	9,6
Basilicata	138	486	626	1.112	8,1
Calabria	893	4.929	3.056	7.985	8,9
Sicily	178	1.285	1.041	2.326	13,1
Sardinia	565	3.414	5.368	8.782	15,5
TOTALE	4.601	20.219	20.575	40.794	8,9

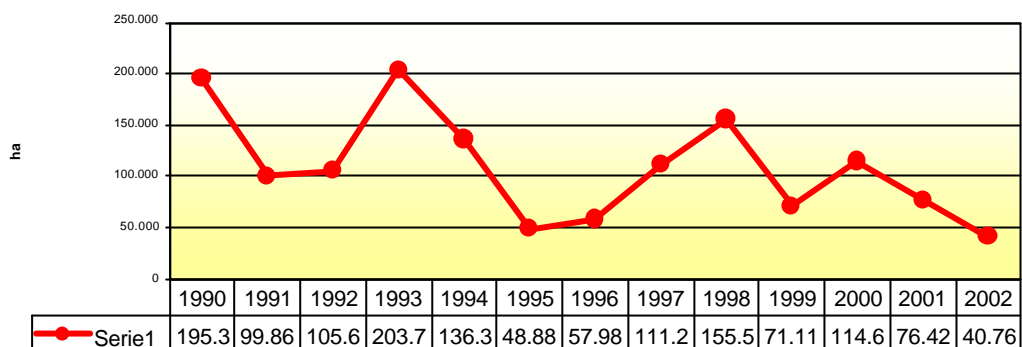
The forest fires from 1980 to 2002

year	number of Fires	wooded (ha)	non wooded (ha)	total (ha)	average (ha7fires)
1980	11.963	45.838	98.081	143.919	12,0
1981	14.503	74.287	155.563	229.850	15,8
1982	9.557	48.832	81.624	130.456	13,7
1983	7.956	78.938	133.740	212.678	26,7
1984	8.482	31.077	44.195	75.272	8,9
1985	18.664	76.548	114.092	190.640	10,2
1986	9.398	26.795	59.625	86.420	9,2
1987	11.972	46.040	74.657	120.697	10,1
1988	13.588	60.109	126.296	186.405	13,7
1989	9.669	45.933	49.228	95.161	9,8
Total	115.752	534.397	937.101	1.471.498	12,7
Average 80/89	11.575	53.440	93.710	147.150	12,7
1990	14.477	98.410	96.909	195.319	13,5
1991	11.965	30.172	69.688	99.860	8,3
1992	14.641	44.522	61.170	105.692	7,2
1993	14.412	116.378	87.371	203.749	14,1
1994	11.588	47.099	89.235	136.334	11,8
1995	7.378	20.995	27.889	48.884	6,6
1996	9.093	20.329	37.659	57.988	6,4
1997	11.612	62.775	48.455	111.230	9,6
1998	9.540	73.017	82.536	155.553	16,3
1999	6.932	39.362	31.755	71.117	10,3
Total	111.638	553.059	632.667	1.185.726	10,6
average 90/99	11.164	55.306	63.267	118.573	10,6
2000	8.595	58.234	56.414	114.648	13,3
2001	7.134	38.186	38.241	76.427	10,7
2002	4.601	20.219	20.575	40.794	8,9

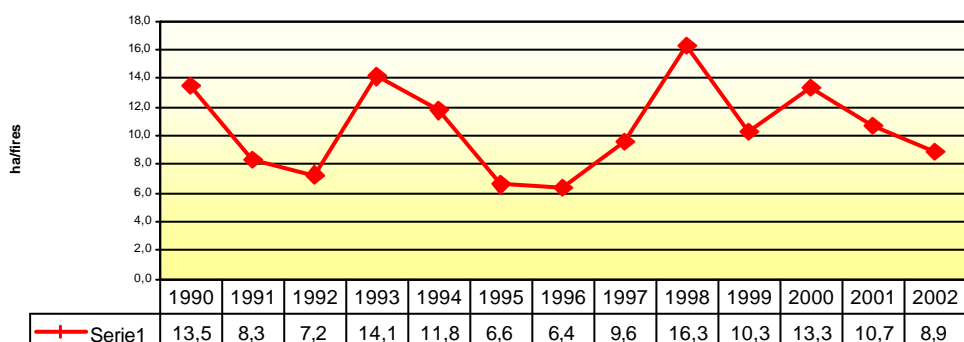
Number of forest fires - Italy



Total area burned



Average area burned

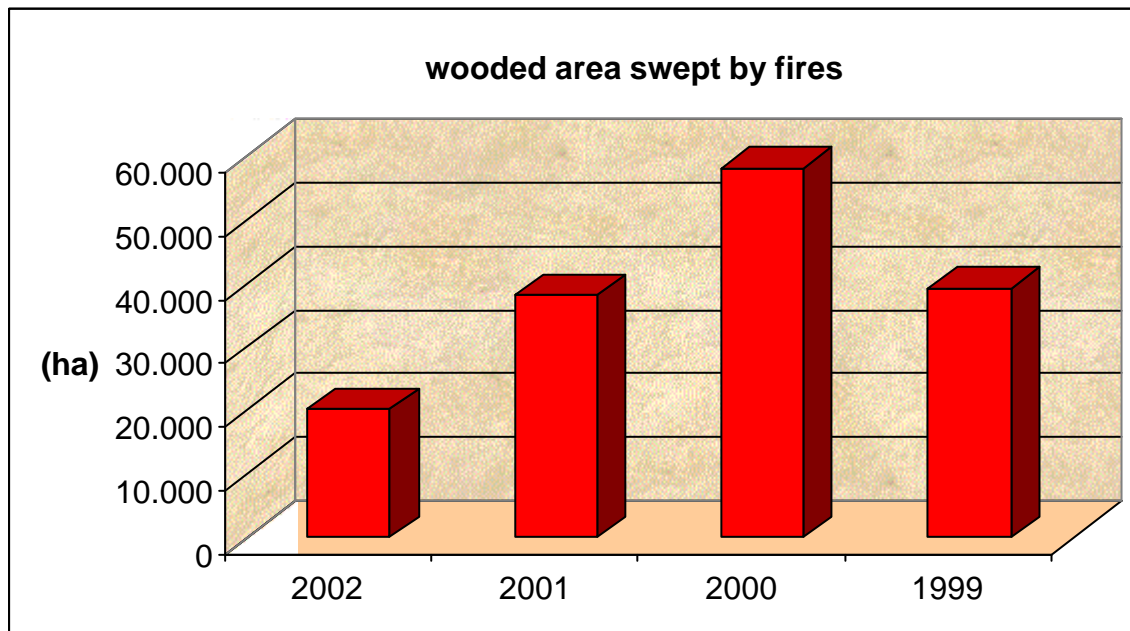


The average size of the fires was 15.5 ha in Sardinia and Veneto, 13.5 in Lombardy, and 13.0 in Sicily. These values are above the national average size (8.9 ha) of fires in the last years. March was the month that registered the highest number of incidents with a total of 1282 fires that burnt 13.282 ha. This corresponds to 27 % of the total number of fires. During this month there were, on average, 41 fires a day with an average daily burnt area of 428 ha.

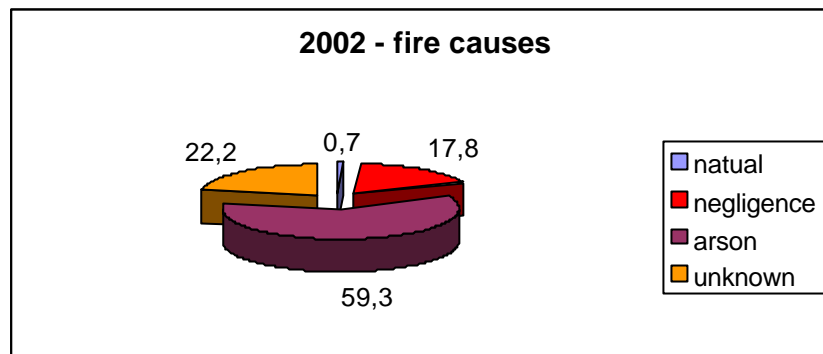
On the contrary, august was the month with the least number of fires, only 482 events. The overall figures for the number of fires on the burnt area were below the average for the last decades.

2002 - Forest fires in Italy by month

	Number of fires	area burned			average (ha/fires)
		wooded (ha)	non wooded (ha)	total (ha)	
January	536	2.338	3.121	5.459	10,2
February	328	691	756	1.447	4,4
March	1.282	8.022	5.261	13.283	10,4
April	356	1.435	703	2.138	6,0
May	74	101	80	181	2,4
June	397	2.177	4.026	6.203	15,6
July	905	3.851	4.550	8.401	9,3
August	482	1.204	1.889	3.093	6,4
September	88	105	84	189	2,1
October	63	69	66	135	2,1
November	75	202	23	225	3,0
December	8	4	10	14	1,8
Total	4.594	20.199	20.569	40.768	8,9



The main cause of fires was arsons, who caused 59,3 of the fires. The rest of the fires were due to negligence (17,8 %), natural (0,7 %) or unknown causes (22,2 %).



National aviation activity on forest fires

Aerial fire fighting aircrafts were managed by the Joint Aircraft Operational Centre (JAOC) in cooperation with the regions and the State Forestry Corps distributed the airplane along the Tyrrhenian coast, from Genova to Reggio Calabria, Sicily and Sardinia. A total of 2964 hours were flown to attend 653 fires. This number of hours is below the average of the last three years, which was around 6000.

Improved performance in fire fighting in the last two years can be jointly attributed to favourable climatic condition, the strengthening of the forecasting and preventive measures, and the improvement of fire fighting interventions.

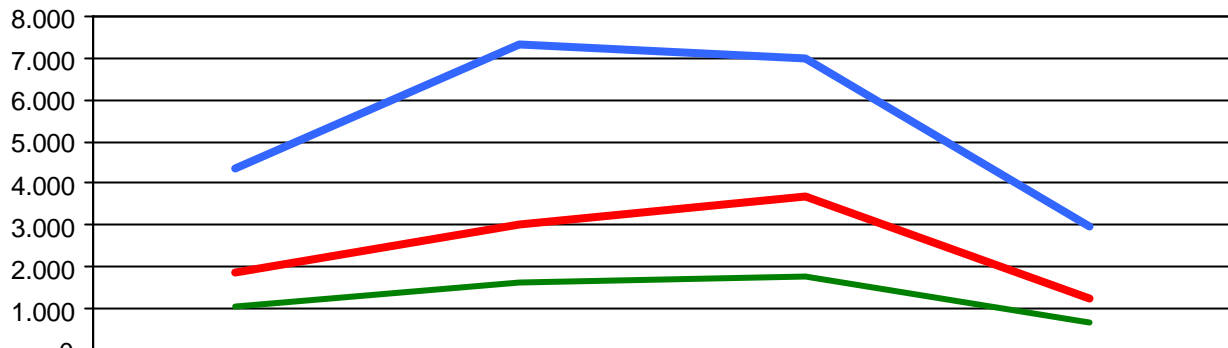
Forest fires activity in 2002 by JAOC

Aircraft type	Number of fires	Flight hours
Canadair CL 415	371	1996
S64 helicopter	170	564
CH47 Chinook Helicopter	30	92
AB-412 helicopter	31	90
AB-412 helicopter	16	47
NH-500 helicopter	35	175
TOTALI	653	2964

Year	Number of fires	Flight hours
1999	840	3781
2000	1607	7343
2001	1787	7005
2002	653	2964



Forest fires activity of Joint Aircraft Operational Centre



	1999	2000	2001	2002
obiettivi	1.040	1.607	1.787	663
missioni	1.873	3.009	3.662	1.251
ore di volo	4.344	7.343	7.005	2.964

The Italian national law established in 2000 defined clearly the roles of the different entities involved in forest fire prevention and fighting. The objective of this new law is to establish mechanism to monitor natural hazards, and environmental factors affecting the regions, and to build databases of forest fire information in order to develop programs for fire management, instead of solely fire fighting programs.