

Wildland fires: Mediterranean

Gavriil Xanthopoulos reports about the recent developments in the Mediterranean region and the ever increasing problems of wildland-urban interface



FOREST FIRES ARE A WORLDWIDE natural phenomenon, occurring in most ecosystems, although their characteristics and role vary tremendously from one ecosystem to another. In the Mediterranean ecosystems, where long term written records exist, they have occurred since antiquity. Their proliferation in the countries around the Mediterranean sea is down to the characteristic Mediterranean type climate these countries share.

In the last part of the 20th Century wildfires started becoming more noticeable and a source of concern. In the 1970s and 80s the number of fires that became memorable, reaching very large sizes and causing serious damage, increased. Most Mediterranean countries in Europe experienced exceptional fire seasons every few years which, in the first place, made them start strengthening their firefighting infrastructures. At the time they were among the first to invest in expensive amphibian water bombers and specialised fire trucks. However, by the late 1980s it was quite

evident that the situation was getting worse.

In response to this, most countries deemed serious organisational changes as necessary. In many cases, wildland firefighting responsibility was moved from the land management agencies to the professional urban firefighting agencies. Through the 1990s, firefighting resources became more numerous, the use of helicopters in firefighting became widespread and the number of firefighters kept increasing. The European Union also started showing increased interest on the subject and invested generously in forest fire research and knowledge transfer to the operational organisations. Unfortunately, the problem persisted.

The first decade of the 21st Century saw things getting even worse. While the strength of the firefighting mechanisms kept the average yearly burned area at about the same levels as previously, in difficult fire seasons with extreme weather conditions, attributed by many to climate change, wildfires became much more damaging in spite of the huge

The fire of mount Penteli hitting the suburbs of Athens, August 16, 2007

GFMC

NETWORKING IN THE MEDITERRANEAN REGION

Networking in the Mediterranean has a long tradition within the Silva Mediterranea group of the Food and Agriculture Organisation of the United Nations (FAO) under the leadership of Spain. The Workshop 'Multilateral Assistance Against Forest Fires in the Mediterranean Basin', held in Zaragoza, Spain, in 2003, paved the way to enhanced and more efficient co-operation of countries bordering the Mediterranean Basin and Portugal. Eastern Mediterranean countries participated at the 'ECE/FAO International Conference on Management of Forest Fire Emergencies and International Co-operation in the Eastern Mediterranean, Balkans and adjoining Regions of the Near East and Central Asia' (Turkey, 2004). The conference released the 'Antalya Declaration on Co-operation in Wildland Fire Management in the Balkans, Eastern Mediterranean, Near East and Central Asia'. Spain hosted the 4th International Wildland Fire Conference (<http://www.fire.uni-freiburg.de/sevilla-2007.html>). A regional workshop was hosted by Italy (Circeo, May 2008). The workshop reflected the co-operative approach between Mediterranean countries, the FAO and the European Commission.

fleet of aerial resources and the technology used. Nowadays, ever more frequently fires become fire-storms that are beyond the control capabilities of any firefighting organisation. They run wild, until weather or fuel conditions change, causing severe damage and quite often loss of lives. The term 'mega-fires' was coined for this type of fire in the USA and has been readily adopted in the Mediterranean region, in Australia and in other parts of the world. A serious effort by the European Union to address the problem through Civil Protection co-ordination measures, such as monitoring the progression of the fire seasons, predicting fire danger for all Europe, increasing co-operation between countries, etc, has not been able to avert the undesirable evolution of the problem.

Obviously, the effort devoted to improving fire suppression capacity in southern Europe, to this point, has not been successful. Following the same direction, things are likely to get worse. A good understanding of the causes of the problem is needed if measures are to be taken in the correct direction.

It is interesting that there is no lack of understanding of the fire issue in Mediterranean Europe, at least between prominent scientists. The causes of the problem have been identified as being rooted, either directly or indirectly, to the socioeconomic changes which have been taking place. Many among these scientists have clearly explained the problem quite early and have predicted the evolution it could have. For example, Spain's leading fire expert Ricardo Velez clearly stated in 1993: "Forest fires are not an autonomous phenomenon, but a symptom of socioeconomic problems." The Portuguese fire scientist Francisco Rego demonstrated in 1992 that in regard to Mediterranean vegetation, the percentage of the total forest area that burns annually is inversely related to the percentage of the biomass production that is utilised by man (wood fuel) and animals (grazing). In 1992 Johann G Goldammer, Global Fire Monitoring Center (GFMC), was among those who identified the problem of the development of wildland-urban interface areas that was starting to worsen at the time and the socioeconomic parameters involved.

Referring to the reduced rates of biomass utilisation and the changing fire regimes, he concluded that: "Because of the increasing socio-cultural, ecological, economical and even aesthetic demands on our landscapes, fires become less tolerable. The fire problem is not anymore a phenomenon or a problem to be addressed by a single agency with its particular philosophy." In short, as Velez summarised a decade later: "The current situation in the



The site of the fire near Olympia, 2007

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European Mediterranean countries may be characterised by the following events:

- Depopulation of rural areas through greater incentives in urban areas;
- Relinquishing traditional uses in rural environments as a result of depopulation;

These initiatives are not enough as long as policies do not address depopulation of rural areas, weakening of forest management agencies, the declining management of forests and the continuing development of wildland-urban interface areas

- Tendency for forest use to disappear as a raw material producer, or at least to be reduced noticeably;
- Tendency for traditional uses (grazing and firewood) to be relinquished;
- Tendency for recreational uses to increase both hiking, hunting and river fishing; and
- Continuous growth of the forest-urban land interface"

Unfortunately, all this knowledge took quite a long time before it reached the ears of the politicians. At country level, measures were sometimes moving in exactly the opposite

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direction. In Greece, for example, a policy change in 1998 transferred responsibility for firefighting from the Forest Service, a land management agency, to the Greek Fire Corps, a military structured Civil Protection agency. Responsibility for fire prevention remained with the Forest Service but funding diminished, while the firefighting budget more than tripled. In 1998, this author warned about an impending disaster under such a scenario in ten years time. In spite of repeated warnings that were published between 2004 and 2007, the message was not received. Thus, the unprecedented disaster in 2007, with a burned area well above anything experienced before, more than 3,000 homes burned and 78 people died, had been predicted.

UNDERSTANDING

At the European level, although understanding about forest fires is not easy for officers originating in Northern European countries; fire research through the 1990s, various consultations with fire experts as well as many conferences and workshops, highlighted the issue in considerable depth and led to some programmes that provided support for forest fire prevention. This includes operational programmes (eg Forest Focus) as well as research efforts aiming to (re) introduce in Europe techniques and practices that had helped manage fires in the past (eg the Fire Paradox research project).

Even more recently, the European Commission in a communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, described a pro-active: "Community approach on the prevention of natural and man-made disasters."

Unfortunately, these initiatives are not enough to provide solutions as long as policies in the southern European countries do not address the depopulation of rural areas, the weakening of forest management agencies, the declining management of forests and the continuing development of wildland-urban interface areas. The huge disasters of 2007 in Greece and those in Victoria, Australia, February 2009, should serve as a wake-up call for all Mediterranean Europe, prompting governments to listen to the scientists and take appropriate measures, making a holistic approach on wise forest landscapes management a priority and organising their fire protection in a balanced, science-based and objectively planned way. **CRJ**

■ See the FAO website for information on the regional workshop 'Forest Fires in the Mediterranean Region': <ftp://ftp.fao.org/docrep/fao/010/k2891e/k2891e00.pdf>