

## **Contents**

1. Legislation on prevention
2. Better Sensitization and Population Awareness
3. Supportive actions on infrastructure
4. Organization of the fire fighting network
5. Financial means of support
6. general conclusions of the Conference

--Presentation of the Organization of Civil Protection on the Municipality of Veroia

--Guidelines for Forest Fireprevention Development of Action Plans, Professor Dimitrios Papanikolaou, Assistant Professor Ioannis Papanikolaou MSc Georgios Deligiannakis

--Presentation of FireWatch System

--The lesson learnt from forest fires in Croatia

--Assessments of forest fire in Bulgaria

--Presentations on the dangers of PV Systems (Gefahr durch die Sonne)

### **1. Legislation on prevention**

Since in some countries there is no relative legislation on forest fire fighting or it is incomplete, its immediate establishment is recommended.

Every country should take into account its basic needs and correspondingly establish the basic conditions on legislation on forest fire prevention. The legal framework and the obligations prescribed by the legislation are essential for prevention and effectiveness. The legislation supports the actions of suppression forces as well as forest restoration upon fire while legal proceedings, civil actions and penalties is another important factor for forest fire prevention (arsons). It is a fact that the relative legislation, having this triple role, contributes to the prevention, suppression and restoration of the damages.

The law has to be precise, radical and possibly quite innovative and essential while the penalties should be strict.

The law has to inhibit any kind of fire in forest during April-November period every year and include a special regulation on protection from energy transfer networks.

It would be good to create legal departments on fire brigade services that would be responsible for the investigation of fires. Also the fire brigade should have the role of police.

### **IDEAS FOR GENERAL INHIBITIONS**

In forests and forest areas, in grasslands and agricultural areas it is forbidden:

1. To light and maintain a fire for any reason in the countryside.
2. To light and maintain for any reason a fire inside a house, hotel, workshop, huts, sheep farms, tents, yards or fenced uncovered areas, that are within the forest and the forest areas and in a distance up to 300 meters.
3. To place, keep or abandon easily burnt material or waste in the forest or forest areas in a distance up to 300 meters.
4. The creation of waste spaces and the combustion of waste in the forest or forest areas.
5. The usage in the forest or in forest areas in a distance up to 500 meters of carbon furnaces as well as the installation of a workshop or technical plants that will operate on combustible material.
6. The hunting with weapons that have plug from material that fire can easily be transferred.
7. The smoking of bees.
8. Burning agricultural areas and grasslands.
9. The disposal of lit cigarettes - matches and other materials.

### **Usefull Ideas**

1. An investigating legal department on forest fires should be formed and be a service of the fire brigade and also should have the right to arrest.
2. The operations in the forests which are concerned dangerous should be carried out in cooperation with the fire brigade service and upon license.
3. Grass cutting and cleaning combustible materials should be made obligatory in properties inside forests and outside forest areas in a distance up to 300 meters.
4. Reforestation of the burnt areas should be mandatory and the use of this area for another purpose should be forbidden.

### **2. Better Sensitization and Population Awareness**

The role of the state of course should not be restricted only in law establishment, duties appointment and creation of new services and cooperation frameworks, but also include other activities (such as printed material for the audience which is addressed, lectures-speeches in schools, institutes, bodies and so on, television or radio spots, press campaigns and internet).

### **IDEAS AND SUGGESTIONS**

Awareness should begin from childhood.

The establishment of Fire Brigade Youth Body that would receive training and practice on fire fighting from the age of 6-16 years is recommended.

In the age of 13-16 the young people should start training on forest fire fighting because at this age the cost is lower and there is better correspondence.

It was observed in all countries that awareness is succeeded to a greater extent in young age.

Sensitization places are kindergartens, schools, universities, work places, worship places

Sensitization means are mainly printed material, adapted to every age, television-radio spots, campaigns in newspapers or on the internet as well as any other mean such as placards and warning signs.

An indirect way of awareness is also to provide information for forest protection in the staff of a business when this is receiving training on usage of fire fighting means.

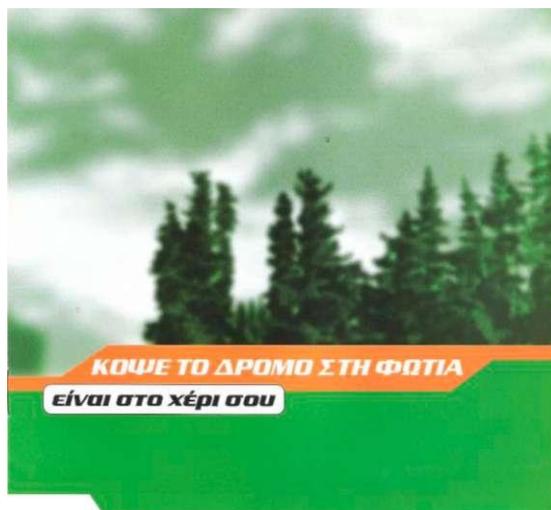
Children competitions on forest protection, special summer youth camps on forest protection and forest fire fighting are good practices.

A successful example from special leaflets:

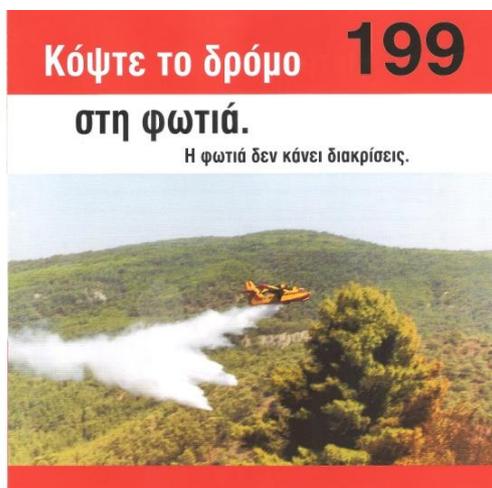
For children:



For young people:



For adults:



### **3. Supportive actions in infrastructure.**

Development and restoration of the forest road network.

Timber cutting.

Forest cleaning.

Firebreaks.

Fire out-posts.

Construction of concrete tanks, placement of metal or closed elastic tanks in particular spots in the forest.

Installation of hydrant network.

Creation of detailed maps in local level.

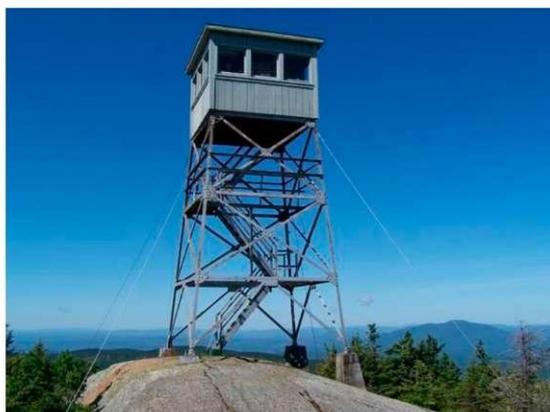
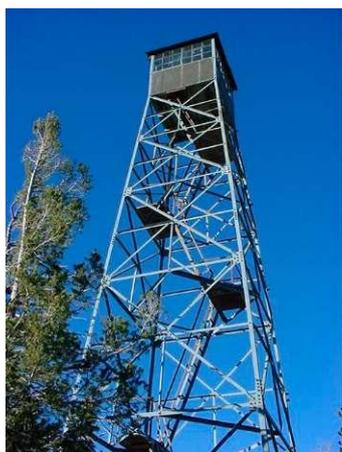
Performance of exercises.

Patrols.

#### **In particular for fire out-posts:**

The supplementation of out-posts' network, the maintenance of the existent ones and their equipment is a very significant factor in forest protection.

An out-post system with immediate intervention vehicles that it is worth mentioning, operates in Northern Italy with volunteers of "La Raketta" Association, under the supervision of academic institutes and may be the ideal solution.





An important transport mean that these posts have, is the vehicle with the ability to move off the road and transfer 300-500 liter of water with high pressure pump. The manpower required for its operation is 4 persons in every shift.

### **In particular for special maps:**

The local fire fighting stations, either volunteer or professional, should make sure to have precise maps of the regions and of course update them regularly.

All the above, however, cannot replace the knowledge of the wider area by the bodies that act within its limits.

The professional and volunteer fire stations and all those involved in a fire, within the perimeter of their responsibility, have to be ready to move, at first level, with safety and at second level to be fast. In order to achieve this, one of the first steps is the precise mapping of the area, the continuous updating of the maps and the systematic control of the field for possible changes so that one can manage effectively a crisis e.g. a forest fire in his region, but also to be in position to inform external forces coming for support.



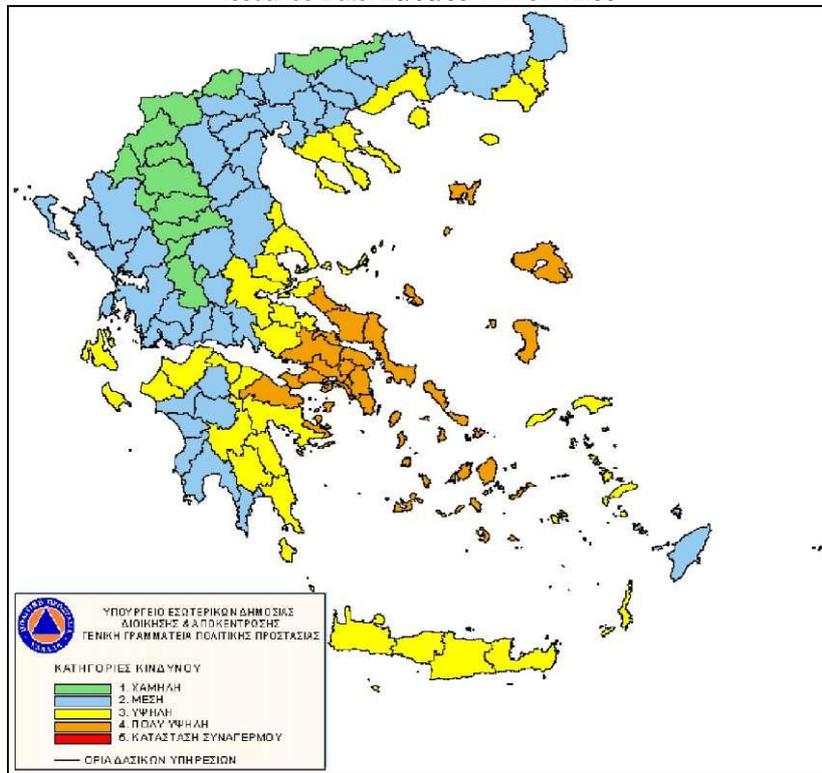
Red spots turning points of the vehicles. Blue parallelogram: water supply networks

So, with careful walking of the region we have to register the pathways, new or old, sources, lakes, water tanks, or locations where water probably. Also places with alternations on vegetation, as well as spots where heavy fire brigade vehicles can make a maneuver, park or get some water from side installations.

### **Forest Maps for forest fire prevention**

It is considered one of the most necessary and important tools in forest fire prevention and disasters decrease.

Map of risk prevention of forest fires. 30/08/05  
Issuance Date: 29/08/05 Time: 12:30



The history of past fires is significant source for the development and the course in case this fire is repeated after many years.

#### **4. Organization of the fire fighting network**

Especially for foot troops, the selection according to the physical condition of the fire fighter is strictly recommend.

The use of special vehicles is recommended that could transfer all the equipment, food and drinking water for one week. Also these vehicles should provide water for filling the fire extinguishers of the sacs.

#### **5. Financial means of support**

##### **Financial analysis cost-yield of prevention in forest fire fighting.**

Upon exhaustive discussion and research of such studies, the finding of scientific data and proof was not possible. A financial model should be created that would show at least the percentage of disposing financial means for prevention from the total cost for Prevention, Management and Restoration aiming at the maximum financial benefit and result.

##### **Means of funding on prevention**

The financial means should come from general financial means given for the totality of Prevention, Management and Restoration. The financial means in various countries are taken exclusively or partially from the insurance contracts of the properties, vehicles, electricity companies, fines from mistaken calls at the fire brigade services, from mobile telephony companies as well as from the governmental budget.

## **6. General conclusions of the Conference.**

1. Population sensitization and awareness play primary role in prevention for forest fires.
2. Climate change. It seems that in a few years the Northern countries will have temperature and humidity conditions similar to the Southern countries, while the Southern countries will have even higher temperatures. It is a fact that Northern countries have to prepare to deal with forest fires that it is sure that will happen. We consider that is necessary to use the existent know-how of the South and take advantage of their great experience and by this way the Northern Countries will avoid losing human lives and having large-scale disasters.
3. Studies should be carried out regarding cost of prevention, management and restorations from specialized bodies and Universities in order to make a more rational use of the financial means.
4. Greater emphasis should be given through fire fighting services to new means and technologies.
5. The Fire Fighting Committee suggests solutions in pages of the meeting minutes, while in the end in the minutes there are also some interesting presentations such as a new danger on use of PV (solar panel) systems in parks or houses that are build in the forests and other places.
6. The European Commission Directorat-General Humanitarian Aid and Civil Protection – ECHO should be informed about the results of the workshop and meeting, and suggest to DG ECHO to call the attention of member states for the higher risk of forest fires and coordinate not only the firefighting, but the prevention measures in forests.
7. The effort to find financial resources through European or other programs, and the World's Bank, is consider to be necessary, in order to reinforce the Prevention and the Firefighting of forest fires, not only in the level of studies, but in the level of obtaining vehicles and materials. For this reason it is suggested to CTIF to address the relevant organizations.