



## **INTERREG IVC Program**

# **Prevention – Fire Plans**

## **Synthesis of good practices**

### **Partner No. 11**



**Frederikssund-Halsnæs Fire & Rescue Service**

**Denmark**



### **Leader:**

- Frederikssund-Halsnæs Fire & Rescue Service

### **Donor partners :**

- ONF (local and provincial fire plans / feedback to improve fire plans)
- Frederikssund (local fire plan : example of a forest used for leisure and tourism and of a military shooting area)
- Northumberland (EWWF / Northumberland fire group / local plans)
- Netherlands (national wildfire program)
- Castilla y Leon (plan42)
- Toscana (regional fire plan)
- FRI, poland (forest district fire plan)
- PADA (Agia Varvara municipality fire plan)
- EPIRUS

### **Recipient Partners:**

- Pada
- AGASP
- Northumberland
- CESEFOR
- TESSALIA
- EPIRUS

### **What was written in the document « definition of good practices » :**

*For the "prevention" aspect, an interesting point to focus on is multi-agency working to share the competencies of different partner organizations involved in prevention. This multi-agency working is often required when developing fire plans. These plans are often written by the forest authorities, with fire & rescue service and other organizations providing guidance and assistance. Once plans are completed they will be made available to firefighters if they are called to respond to an incident within a particular area. The working group will have to specify the contents of these plans and define their use.*

*The good practice to mutualize might be the use of fire plans (with common contents and use) developed through multi-agency working.*



## **Definition of the problem and objective of the solution**

A lot of forest in Europe and the rest of the world is destroyed by fire each year. These forest fires produce more carbon monoxide than the overall automobile traffic. Monitoring of the potential risk areas and an early detection of fire can significantly shorten the reaction time and also reduce the potential damage as well as the cost of fire fighting. But also prevention by using prevention fire plans can give the Fire & Rescue services and landowners good opportunities to react and cooperate if and when a forest fire occurs. Well prepared fire plans reduce potential damage as well as the cost of fire fighting and carbon monoxide.

## **Workshop Prevention – Fire Plans**

This topic was the subject of a workshop in Frederikssund-Halsnæs (Denmark) from 19 to 23 September 2011. During the workshop, the nine donor partners presented their practices in the meeting room, while a day of field visits in Asserbo and Tisvilde forest and the shooting area in Jægerspris enabled the attendees to see how fire plans were applied in different contexts.

Discussions between partners enabled them to compare the processes and measures that had been adapted to their specific contexts. This revealed many similarities which could be described in a general framework, identifying areas requiring consideration, priorities for action and a series of measures to be selected depending on the context. This is the common framework sought by the partners in the original definition.

The first section of this document provides a brief description of the information presented by the donor partners, highlighting the main elements, followed by the second section which summarises the general framework that can be used in any context. The conclusion highlights the key points and presents the information that was transferred to the recipient partners.



## Knowledge's and experience of the EUFOFINET project doner partners

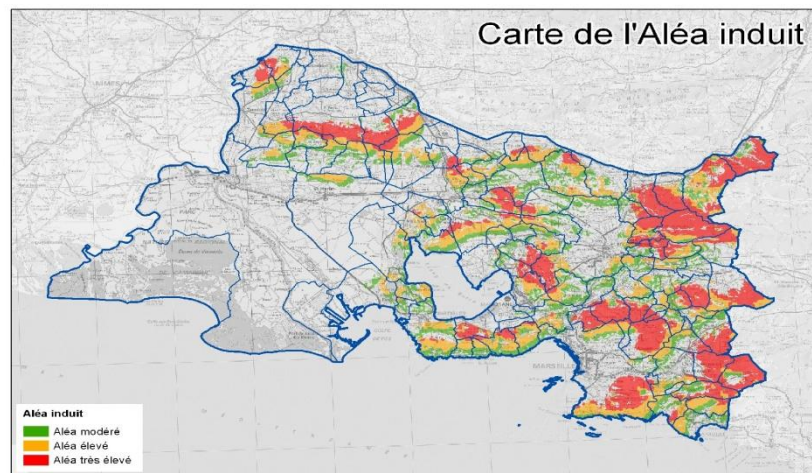
### ONF - France

ONF focuses on the development and implementation of multi-year plans (5-7 years) of protection against forest fires, by a multi-stakeholder working.

Two scales are considered: departmental plans and local plans (note that in France there are also “plans for risk prevention”, developed by the state at the scale of a township, with an impact mainly on urban planning.

This practice is carried by the state at its various levels: central, departmental and inter-regional. It is based on regulatory and technical frameworks.

Fire Plans exist in 32 county departments in which the law makes them mandatory. These plans were approved between 2002 and 2009 and the older come into revision. Some departments not covered by law (eg Iserre, Savoie, Réunion) have also made plans. In more than a half of these departments, local plans have been made.



### Frederikssund-Halsnæs Fire & Rescue Service – Denmark

Fire Plans are an important tool used by Frederikssund-Halsnæs Fire and Rescue Service (FHFRS) for planning, preparing and responding to wildfires within the municipalities in Frederikssund and Halsnæs. Fire Plans contain key information about an area of land (usually an estate or farm) which can be used to assist wildfire suppression operations. The Plans are voluntarily completed by landowners in corporation with FHFRS and are made available to FHFRS Incident Commanders responding to wildfires.

Many landowners in Frederikssund and Halsnæs are currently participating in the Fire Plan Programme. Fire Plans currently cover 8,000 hectares of land.



FHFRS plays a key role in the completion and maintenance of Fire Plans.

FHFRS began the Fire Plans in 2005. FHFRS are currently reviewing the existing Fire Plans to identify any areas of improvement and to review the content of existing plans to ensure all details correct.

While Danish Fire and Rescue Services have sole responsibility for wildfire in the eyes of the

law, there are numerous organisations with a vested interest in wildfire, both in terms of protecting economic interests and protecting life, property and environment. It is clearly apparent that Fire and Rescue Services cannot effectively tackle all wildfire issues on their own. However, they can and should work with other stakeholders on wildfire issues. It is under this context that the Frederikssund-Halsnæs Fire & Rescue Service was formed to foster partnership working at a local level within Frederikssund and Halsnæs. It should be noted here that, while there is no legal requirement to complete an Fire Plan for an area of land, it is a national legal requirement for those completing prescribed burning to complete a prescribed burning plan for any land to be burned.



While landowners are not legally required to complete and submit Fire Plans, there are some significant financial incentives in doing so. If a landowner submits a Fire Plan, FHFRS has instant access to important information about their land. In the event of a wildfire, FHFRS Incident Commanders have instant access to the Fire Plan. The rapid availability of key information about the land improves the decision-making process so that Incident Commanders can make informed tactical decisions more quickly. Previously, FHFRS Incident Commanders arriving at the scene of a wildfire would need to contact the landowner to request information about potential water supplies and equipment that might be present. This might take a significant period of time, and windows of opportunity to bring the fire under control might have been missed.

In addition to the aforementioned financial incentive, it may also be a prerequisite for landowners to have a submitted a Fire Plan in order to be eligible to apply for some types of grant funding.

All Fire Plans adopt a standard format for ease of use and reference. While most landowners will be able to complete a large proportion of the Fire Plans without any guidance or assistance, FHFRS does need to provide some technical input concerning the practicalities of fire fighting operations. Officers from FHFRS will arrange to visit landowners to provide technical assistance for the completion of their Fire Plan. This site visit will also involve the recording of grid references to locate and record key landscape features on a map which will be included within the Fire Plan. If Fire Plans are to be



produced and used to improve wildfire suppression, then the data they contain must be detailed validated.

### **Northumberland Fire And rescue Service / Northumberland fire group**

The *England and Wales Wildfire Forum (EWWF)* is a voluntary strategic body, independent of government, which has been created to expand knowledge and understanding of wildfire in England and Wales. The purpose of the Forum is to create a focus for joint working between all interested organisations within England and Wales which will lead to the development of strategic initiatives for improved management of wildfire risk and their communication to government, stakeholders and the wider community. The central premise of the EWWF is that the best way to provide strategic direction for wildfire at the national level is to develop strong partnership working between multiple stakeholders within the public and private sectors.



The UK essentially began with a bottom-up, localised approach to the issue of wildfire. During the 2000s, a small number of organisations (including NFRS) recognised that wildfire represented a serious issue within their localities. A number of Local Wildfire Groups were subsequently established to address some of the problems and shortcomings that had been identified at a local level. For example, the Northumberland Fire Group was created in 2006 to address a number of problems concerning wildfire in the County of Northumberland.

Local concern regarding the problem of wildfire has now been followed by the establishment of a strategic body for wildfire at the national level, the EWWF. Wildfire is already an important element of local policy in some areas of the UK and, through the work of the EWWF, it is now becoming a much more prominent issue at a national level. The next step is for wildfire to be considered an important issue at the regional level.

The EWWF was originally formed in 2008. During its early years, the EWWF was simply a collection of interested parties that had no clear direction or structure. Members knew there were a number of problems concerning wildfire which required a more strategic approach at the national level, but the EWWF was unable to establish exactly how these problems could be addressed. This has now changed. In February 2010, NFRS was given leadership of the forum for three years. NFRS has already implemented a number of positive changes to improve the degree to which the EWWF will achieve its aim and objectives (further information later in this document). One key change has been the production of a Business Plan which highlights the aims and objectives for the EWWF over the coming few years. This document provides an important point of reference for members and provides the means for the EWWF to measure and monitor performance.

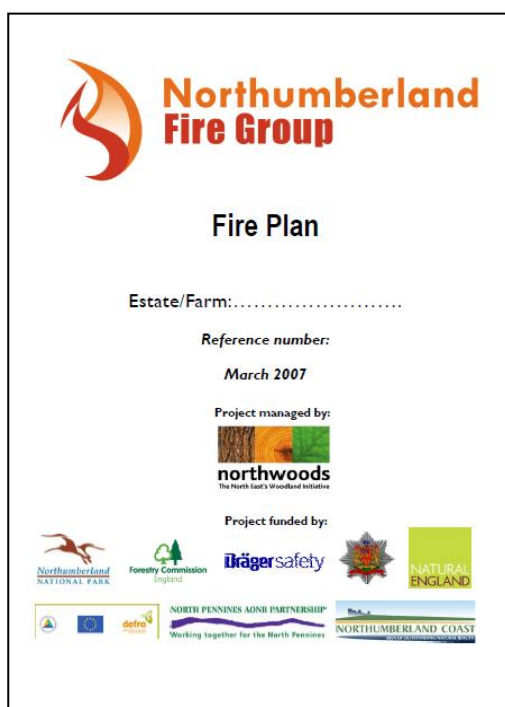


The Northumberland Fire Group (NFG) is a multi-agency public-private sector partnership established to tackle the increasing threat of wildfires in Northumberland. The NFG works to protect the rural environment, economies and communities of the County. The NFG aims to achieve this by minimising the risk of wildfire occurrence through the delivery of wildfire prevention activities and by facilitating an effective response to wildfire incidents through delivery of preparedness.

The NFG is a local group established to tackle the threat of wildfire within the County of Northumberland. The NFG was the first local multi-agency partnership established in the UK to deal with wildfire and has become a national model of good practice. Northumberland and Cumbria, the two most northerly counties of England, now both have a wildfire group and there is dialogue and discussion between the two groups. This means that local wildfire groups like the NFG are beginning to play a role in regional policy as well as local policy. In addition, the local wildfire groups are now contributing to the work of the England and Wales Wildfire Forum, a national strategic body for wildfire in the UK.

The key achievement of the NFG is that there is better communication and interaction between wildfire stakeholders in Northumberland. The NFG has managed to bring together a wide variety of organisations working in the public and private sectors and has established common ground and a strong platform. More specifically, the NFG has achieved a number of goals and objectives.

The NFG has more than 40 members, including, Northumberland Fire and Rescue Service, Northumberland National Park Authority, public and private landowners and land managers, gamekeepers, local and national associations, farmers and other organisations and individuals with an interest in wildfires.



The NFG has been fully funded and fully operational since August 2007. The NFG is considered national good practice and the model has been used to inform and guide the creation of other local wildfire groups around the UK.



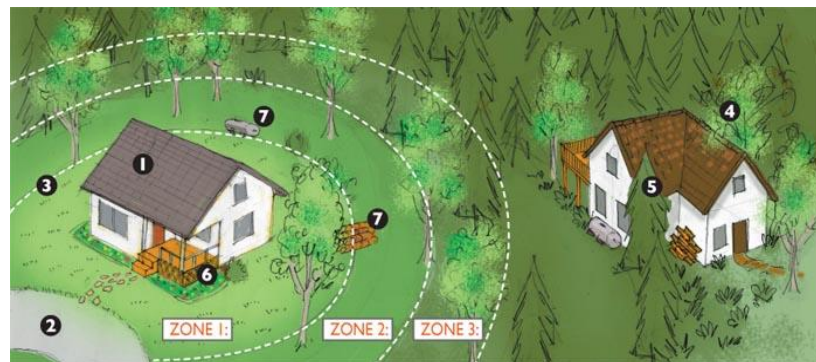
## Netherlands (national wildfire program)

The main goals of the national wildfire programme in netherland are to strengthen intergovernmental cooperation between government and private partners, to clarify the division of responsibilities between them and to develop a Dutch Wildfire Interagency Action Programme.

The Wildfire Interagency Collaboration Project in the Netherlands, is a national project commissioned by the Ministry of Security and Justice. The project is coordinated by the Public Safety Regions Noord- en Oost Gelderland (VNOG) and Gelderland-Midden (VGGM), the Dutch expert regions in wildfire & disaster management. Members of the project team are very well connected with wildfire specialists across the world.

The Dutch project aimed at national programme development and interagency collaboration in the field of wildfire risk and disaster management is a good example of how public and private stakeholders can be brought together to work on solutions in wildfire prevention and disaster management on local, regional and national level based on shared risk awareness, mutual respect and commitment. The protection of the environment cannot be effective without national and international fire management for natural, semi-natural and cultural landscapes and ecosystems for they constitute an essential part of the habitable land and the functioning of the global system. As fires do not respect national borders, the fight against fire requires a close cooperation with the national, regional and local authorities.

The long term goal of this programme is to bring and hold wildfire risks in the Netherlands at a public safety level which is socially acceptable, including the protection of vital infrastructure. The initiative is



commissioned by the Minister of Security and Justice who has called upon the different stakeholders to formulate a joint Action programme. The objective of the Dutch Wildfire Interagency Action Programme 2012-2015 in the next years is to ensure permanent public and private collaboration between public and private stakeholders which is directed at taking the necessary measures in the phases of risk, crisis, aftercare and recovery in the safety chain wildfires.





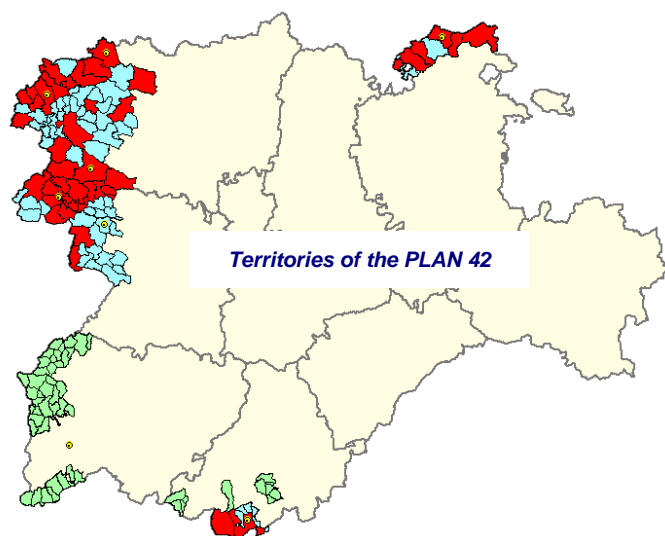
## **Castilla y León (Spain):**

The Regional Government of Castilla y León, within its competence in fire prevention, launched in 2002 the Plan 42: an intervention strategy to reduce the problem of fires in the region. The Plan 42 was approved by resolution of the Board of Castile and Leon Region in January 2002 and had a duration of seven years. Then the Plan has been extended for the present period. The problem of fires in Castilla y León is basically a social problem, as they largely have their origin in human activities. The answer, therefore, is to work with and for the people and this is the main novelty in the way of working of the Plan 42. This work goes to look for viable alternatives to the use of fire as a traditional tool of management of the forest and also to promote economic development initiatives linked to the efficient use of natural resources. While the Plan 42 focuses much of its efforts in “active prevention” and social intervention tools, also provides a range of prevention measures related to a more traditional forestry. Fire prevention goes, therefore, to intervene in the socioeconomic sphere, helping to find future solutions to enable economic use to combine with the growing demands of conservation. It is a medium and long term work, requiring intervention and assessment strategies.

Thus, the Plan 42 objectives are as followings:

- Reduce the number of preventable fires.
- Generate a change of habits in the use of fire: as a management brush agricultural tool and livestock, regulating and promoting the use.
- Promote a forest culture, which can be updated, diversify and improve both the economic exploitation that are derived from forest lands as social representation.
- Contribute to generate projects and sustainable rural development initiatives that impact positively on the conservation and management of forests and their social value.

The human resources directly dedicated to the Plan 42 management are: 9 technicians (8 located in the most problematic landscapes and a coordinator in Valladolid), the team is further supported by a specialist in social intervention and participation of the Ministry of Environment, as well as specialized technical assistance for various ventures. This team works supporting and complementing the work of the different local sections integrated into the daily work and provide the nuance that support prevention. On the field, the team works in collaboration with all people, departments and entities that share the objectives and lines of the Plan (other





technical administrations, associations, enterprises, municipalities, schools, universities ...), so that are creating major collaborative networks to maximize synergies, avoid duplication of efforts unnecessarily, improve coordination of activities, share information and insights ... In short, create networks that amplify and settle the work. The characteristics of the Plan 42 do not have a rigid structure in its development: each district seeks and develops solutions adapted to their territorial and social reality, so different initiatives begun in each area can move forward at different pace and with different nuances. The variety of factors in fire prevention requires different working lines and methodologies, tools and approaches, although most of them can be understood in the broad field of social intervention. Thus, there are actions that seek to promote changes in social perceptions of fire and natural resource exploitation, which demand the kind of work closer to the information and communication. Others, those related to the modification of traditional uses of fire or the implementation of development initiatives that require generating tools and training to be able to demonstrate the alternatives, or even to develop financial instruments (subsidies, example) that may be useful as an incentive to modify certain practices. It is also necessary to implement participatory processes that help local people themselves to reflect and make decisions about the future of their forests and landscapes.

### **Toscana - Italy**

In Tuscany, the Regional Administration manages forest fire prevention and suppression in collaboration with several other agencies and institutions.

In order to organize and define responsibilities and activities, a careful forest fire prevention planning is carried out. To this aim, the Tuscany Region Administration, in collaboration with the other institutions involved in forest fire fighting, periodically write the Regional Operation Plan for forest fire prevention and suppression. The other institutions (Regional Parks, Province administrations, National Forest Service (CFS) and National Fire & Rescue service (VVF)) write Provincial Operating Plans and other local Plans that every year integrate the Regional Operation Plan.





The forest fire organization of Tuscany Region has achieved a good level of efficiency and effectiveness, especially as regard the suppression system. In fact, a reduction trend of the average burnt areas per fire has been observed in the last thirty years. These results were reached by an improvement of the organization of prevention and suppression activities. The Regional Operation Plan, that represents the milestone of this improvement, was introduced in Tuscany since the nineteen's.

The Regional Operation Plan represents the basic tool for forest fire prevention management. The main aim of the Plan is to improve forest fire prevention by:

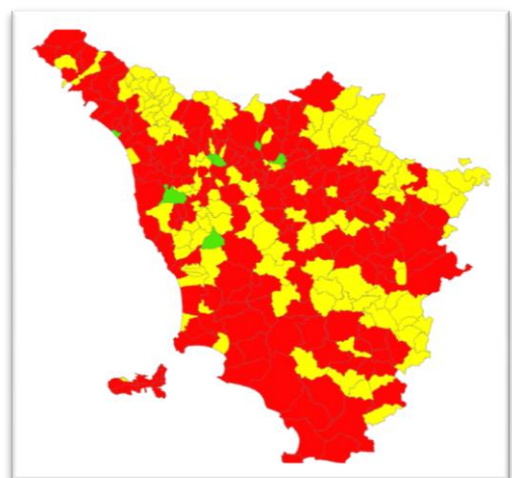
- promoting and organising the cooperation between the institutions and agencies involved in forest fire prevention and suppression (Regional forest fire-fighting office, provincial and municipal authorities, National and Regional Park institutions, National Forest Service - CFS, National Fire & Rescue Service – VVF, and volunteer forest fire-fighter organizations,
- drawing the guidelines to improve both the prevention infrastructures and activities (silviculture, communication and education activities), and the suppression organization (communication means, engines, helicopters, incident command systems, coordination centres, etc.

The stakeholders involved in the activities mentioned above are Tuscany Region, Province Administrations, Municipalities and their unions, Regional Park Institutions, Volunteer Fire-fighter Associations, National Forest Service (CFS) and National Fire & rescue Service (VFF)

The Regional Operating Plan was introduced in Tuscany since 90's, and was periodically up-to-dated. The last plan was developed for the period 2009-2011.

Promoting awareness among the population of the prevention of forest fires is a key issue for reducing the number of fires and burned areas. In recent years the Tuscan Region has carried out several information campaigns and educational activities to promote the “culture” of forests and forest fire prevention. The main aims of these activities were

- to improve knowledge of the environment, the value and functions of forests, forest fires in Tuscany, and good practice to prevent fires. These initiatives were addressed to teachers, students, and young people,
- to involve young people in prevention and suppression activities as volunteer fire-fighters. Volunteer fire-fighter associations play an important role in Tuscan forest fire prevention and suppression, but in recent years volunteer numbers have been decreasing. For this reason an information campaign was necessary. This activity was addressed to high school students.





The Tuscan Region has achieved a good level of efficiency and effectiveness in forest fire prevention, especially in relation to suppression. In fact, the average size of burnt areas has been decreasing over the last thirty years. Nevertheless, the number of forest fires is still high.

In recent years the Tuscan Region has decided to change its policy. Increasing importance and resources have been earmarked for forest fire prevention. At present about 60% of the Region's annual budget used for fire prevention activities.

In this context the Tuscan region, since 2006, has been carrying out programmes to both improve the involvement of young people in volunteer fire-fighting associations as well as promote knowledge and awareness among Tuscan citizens in order to prevent accidental or involuntary fires, providing information on the correct behaviour in case of fire detection.

The main goals of the programmes are:

- to involve the population, especially young people (9-16 years old), in forest fire prevention by means of information and education initiatives on forest fire statistics, the importance and functions of forest, what to do and how in case of fire detection, and good practices to avoid involuntary fires,
- to disseminate information among teenagers (16-19 years old) on volunteer fire-fighter activities with specific training courses. Training courses are carried out in the volunteer fire-fighter bases,
- to produce multimedia supports that may be used in forest fire information and education programmes.

### **Forest Research Institute - Poland**

The Regional Directorate of the State Forests in Toruń is one of the 17 Regional Directorates of the State Forests in Poland. Forest area located in central-northern and southern part of Kujawsko-Pomorskie province is under jurisdiction of the Toruń RDST. Total area of Toruń RDSF is 456 000 ha. Additionally, private forest land area covers 55 000 ha. The Toruń RDSF is divided into 27 Forest Districts with average area of 16 800 ha. Average forest cover of the Toruń RDSF is 24 % which is less than average forest cover for Poland, which is 29 %.

The forests in Toruń RDSF are the most fire-endangered. Mostly it concerns forest areas around the big agglomeration of Bydgoszcz, Toruń and Włocławek and it's of direct relevance to the growing anthropopressure. Regardless of the high-developed Fire Fighting System of the State Forests, each year 300-400 of forest fires are registered. Unfortunately, mainly forest fires are caused by arsonists and carelessness of adults.

Forests in Poland belong to the most fire-endangered forest areas in Europe. This fires risk touches directly region of the Kujawsko-Pomorskie province. Hence maintenance of the effective fire fighting system, which includes: lookout towers network, alarm-command connection network, water supplying points, fire roads, equipment bases, airports, airstrips and other places suitable for landing, is a crucial factor. In addition, each the forest district elaborates its own "Plan against forest fires" which contains set of procedures, documents and information for the effective rescue process to be

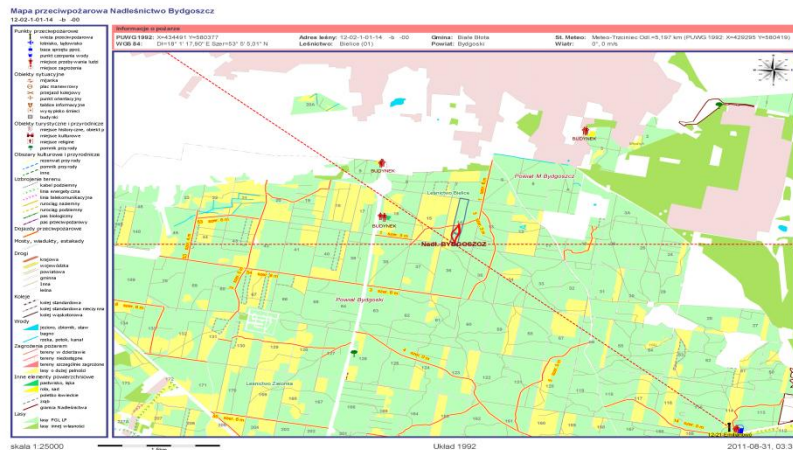


undertaken by the forest district. Over the years, systematic decrease of average burned area is directly related to activities focused on early detection and prevention of forest fires. In 2010 average burned area of the forest was on the level of 0,08 ha.

The stakeholders involved are:

- The State Forest National Forest Holding
- The State Fire Service
- Volunteer Fire Service
- Military Fire Service

The “Plan against forest fires” is elaborated for each forest district and it’s available on the Alarm-command Point (Forest Alarm Point) in form of documents and maps. The

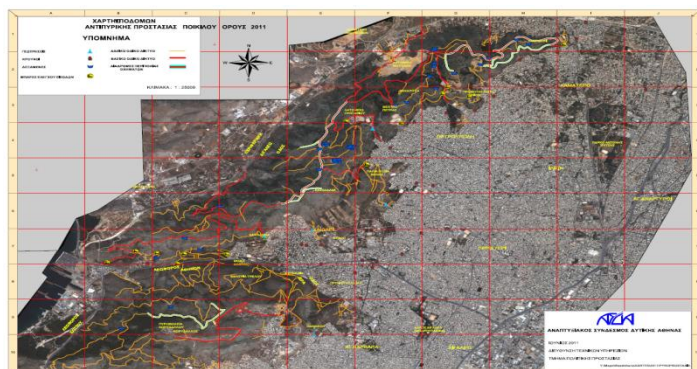


Plan is groundwork for elaboration of rescue plan for the whole administrative district, elaborated by the appropriate command of the State Fire Service, regarding to fire protection part.

The “Plan against forest fires” is constantly actualized. Every year, till 15<sup>th</sup> of March, the „Plan against forest fires” is consulted with the local department of the State Fire Service. The Forest Numerical Map for fire protection in the forest district is also constantly actualized.

### PADA – Greece

The forest of Agia Varvara resides in a 50.000 acres mountain of “Poikilon-Egaleo”. This mountain separates the Attica plain from the Eleusis plain. Irrigation, preventive and active firefighting are axioms ought to be strategically put forth for maintaining a restored forest, neighboring to the Municipality of Agia Varvara. A complete Strategic Plan coupled with Action and Monitoring Plans implemented near to perfection with the assistance of a rather obsolete in terms of to date technologies, yet efficient and working smoothly technological equipment has proven its potential over the years.





Fire fighting services are exercised by the Greek Fire Service. All other tasks relating to the well being of forests neighbouring to urban fabric as is “prevention” has to be done in consultation with the Forestry Services. The lack of a blueprint depicting the relationship between forest services and municipal authorities produce a rather perplexed situation.

Thanks to successful political management these issues are resolved in the case of the forest of Agia Varvara.

The goals and achievements are:

- To preserving the forest. The forest is an outcome of an extended reforestation plan. Today little reforestation initiatives are taking place.
- To keep a direct control of the forest (i.e forest works, human activities, first response to a fire incident). Municipal Authorities are either supervising or executing works in the forest. Vice mayor of Civil Protection makes all the decisions regarding the execution of fire plan.
- To bringing out the forest and combine its existence and continuity to the citizens' recreational activities “Pantheon”, a recreational block which comprises of a cafeteria and a summer cinema is the heart of achieving this goal
- To ensure that usual human traffic to the forest will be directed to specific entry/exit points. Procured and executed by ASDA (an affiliated municipal entity) and supervised by the Municipal Authorities, two entrances, of them one is restricted to vehicles. To maintaining fire protection zones all around the forest’s perimeter neighboring to the urban network Road network neighboring the forest has gravel sideways.
- To ensure the unimpeded functioning of the “horizontal” inter-departmental project and execution team during the fire season (1st of May thru 31st of October). All leave of absence are widely dispersed during the season.
- To balancing the dynamics of the involved parties (as the legislation imposes) on political level Political relationships are unobstructed.
- To secure adequate funding either through municipal budget, regional budget, central government budget, partners’ budget or even sponsorships. Indifferently of stakeholders' responsibility to claim and manage relevant budget, municipal political personnel is pushing hard the relevant funding sources.

The stakeholders involved are:

- Municipality of Agia Varvara which is a member of PADA.
- PESYDAP which is a Environmental Federation of 18 Municipalities of Athens – Piraeus, all members of PADA.
- ASDA which is a Federation of eight (8) Municipalities situated in the Western Zone of Attica region, all members of PADA. Practically every member of ASDA has neighbouring lines with the Mountain “Poikilon-Aigaleo”.



- Greek Fire Service (Fire Local Service dedicated to mountain Egaleo
- Forestry Service (Central Service governed by the Ministry of Rural areas and Food, Regional Service governed by Decentralised Administration, Service governed by the Regional Authorities, Service governed by the Municipal Authorities).
- General Secretariat for Civil Protection (service of the Ministry of Citizen Protection)

## **EPIRUS – Grece**

Forests are a natural wealth humans must protect. One of the most traditional ways, people used to practice till recently has to do with what we call ‘tree tapping’. This process lasts 2 months and begins on the 1<sup>st</sup> of July and ends the last day of August. People who used to apply that process, have been in general not professionals working for a service relevant to forest protection matters. They used to collect and keep the resin for their own use (sell, etc), implementing in parallel a forest protection measure.

The greatest advantage stemming from that practice has to do with the reduction of the bio mass. In order for the ‘resin workers, to approach the tree, he performs an understory and light pruning cleaning of the area, in which he circulates. It is estimated that each resin worker cleans approximately 20% of the whole area in which he circulates in order to collect the resin.

The above activities create a human mobility in the forest areas, which has in many cases intervened and prevented the expansion of forthcoming fires.

The practice of ‘tree tapping’, has a wide social effect as well. It has made people and their social surroundings, approach forests and their natural wealth, inspiring their awareness in the forest protection matter.

‘Tree Taping’ as a fire prevention measure, has been applied in the past in many forest areas of Greece. The application of that practice can be met at the pinewoods and the wider surroundings of Vasilika (Pireo Forest), which is an area of about 22 hectares.

The Forest Administration of the county of Lesbos, works on, approves and implements several management project plans concerning the forest fire prevention. In the framework of its practices, focusing on that goal, it has planned to support and promote the traditional ‘tree tapping’, by creating a ‘Forestry Cooperative Workmanship’. The establishment of such a ‘cooperation’ gives the perspective of a wide environmental sensitization of everyday people, through their closing up with the natural wealth of forests. It also opens a new financial perspective that has to do with the trade of resin and provides the cooperation and people working on its activities, with an extra financial benefit.



The goals and achievements are:

- Cultivation and management of ecosystem
- Reduction of the biomass and simultaneously of the risk of forest fires
- Products production
- Development of nature awareness spirit and ecological sensitization, by making people and their social surroundings, approach the natural wealth of forests
- Improvement of human accessibility to forest areas and promotion of the benefits that nature has to offer to humanity.

The stakeholders involved are:

- The Forest Administration of the county of Lesvos
- The Ministry of Environment and Climate Changes.
- Forest owners (public and private)
- Forestry Cooperative Workmanship
- Fire Prevention Volunteer associations
- TEFNA





## Summary

### Multi-stakeholder working and involvement of local specialists

It is important to take into consideration the need and benefit of involving local specialists in the development of higher level strategies regarding wildfire prevention. There are strong benefits to adopting a bottom-up approach whereby local knowledge and experience of prevention is fed directly into regional and national strategic decision-making.

It is essential to involve all stakeholders in prevention work to be able to pool skills and resources. Most of the good practice presented described the involvement of land management, fire and rescue, civil defence and other organisations in some shape or form. While different partners have different administrative structures, and the powers and responsibilities afforded to individual organizations varies considerably, the common factor from all of the good practices presented was that success in wildfire prevention has been achieved through strong cooperation and the sharing of skills between stakeholder organisations.

#### 4 important steps :

- **Analysis of current situation** : hazard (knowledge of the phenomena, history, statistics, physical description, maps), issues (natural, human and economic) and existing means (actions already implemented, ground equipment, surveillance and control).
- **Definition of a strategy adapted to the technical and political context** (appropriate response to the hazard levels and issues identified in the previous step).  
There may be a general strategy which sits alongside more specific local strategies.

We can distinguish intervention strategy and land use or equipment strategy, but they must be consistent.

- **Actions and equipments** to be implemented :
  - Sensibilisation/communication/information (films, posters, articles, brochures, advertising, signs on the ground ...)
  - Education
  - Training/Exercices
  - Regulations
  - Elaboration of specific intervention provisions : directories, reflex files, access points, meeting points, evacuation areas, logistical anticipation, inter-service predefined procedures (operational orders)
  - Organization and equipment of operational centres.



- Operational mapping
- Transmissions : alert, operational exchanges
- Monitoring / detection
- Animation / reflection
- Prediction of daily risk (weather and/or vegetation)
- Data collection, databases, statistics, feedback
- Search for causes
- Facilities : trails, ditches, bridges, marking, water points, fuel brakes, lookouts, equipment related to aircrafts...
- Materials : vehicles, machinery, aerial means, radio, specialized computing, special equipment for measurement and data acquisition...
- Forestry measures : reduction of biomass, break in continuity, treatment of slash ...
- Rural Development measures : maintaining farming practices or traditional practices,
- Measures of self-protection (constructions or special issues) : clearing, vegetation management, constructive provisions, urban planning measures...
- Reduction of known causes: additional support and guidance for potentially risky practices (land management burning, incineration, military exercises, recreational fires ...), improvement of vulnerable infrastructure.

This list attempts to be comprehensive of all important elements that were presented. None of the good practices presented incorporated all of the above measures within a single plan. However, the good practices did incorporate an appropriate selection of measures, as tailored to individual circumstances and requirements.

- **Evaluation of efficiency** (feedback is one of the useful methods for evaluating the effectiveness of actions and equipment, and improving the knowledge of phenomena)

Need to take into account the prospective aspect :

The possible development of risk (climate change, socio-economic factors) and other related issues should be included in the medium and long term measures outlined in fire plans. For example, presentations from countries in northern Europe showed a growing consideration of wildfire-related phenomena.



### Aspects to be treated in the plans (goals):

- Limit the occurrence of fires : reduction of known causes, awareness, dissuasive regulation...
- Detection and intervention when fires occur : surveillance, alert, first response ...
- Limit the development and consequences : forest and land management (incl. infrastructure and self-protection measures), modes of action of control means, management of issues...
- Limitation of accidents and rehabilitation after fires occur.

### Coverage of plans :

Different administrative scales and/or competences may be relevant to treat these aspects. This may require the need to develop plans at different administrative levels and/or jurisdiction with certain specializations on a given theme or a particular competency (this explains and is reflected in the heterogeneity of the practices presented).

The important finding here is not the number, the specialization or the administrative level at which fire plans have been developed but that there is a need to cover all of the aspects mentioned above in either a single plan or multiple plans. There is also a need for consistency and complementarity between fire plans at different administrative levels (local, regional, inter-regional and national).

## A Comparison of Prevention Arrangements within the EUFOFINET Countries and Regions

Questions	United Kingdom	Denmark	France	Greece	Italy	Poland	Slovak Republic	Spain
<p><b><u>National Strategy</u></b></p> <p>Is there a body/organisation with responsibility for developing a national strategy for wildfire?</p>	<p>England and Wales Wildfire Forum (EWWF)<sup>i</sup>.</p> <p>The group is composed of public and private sector stakeholders with strategic responsibility for wildfire. It is an advisory body with the ability to develop strategic guidance but it does not have the authority to create laws or impose a national strategy.</p>	<p>Ministry of Environment is responsible for developing a national strategy. This national strategy is then implemented by Danish Forest and Nature Agency.</p>	<p>The development of a general strategy for all stakeholders (Fire Service, Civil Security) at all levels is the responsibility of the Ministry of Interior. A national strategy is also devised by the Ministry of Agriculture for implementation by Forest Rangers and ONF.</p>	<p>The Ministry of Agriculture is responsible for developing a national strategy for prevention. This strategy is then implemented by the Forest Service in Greece. The Ministry of Interior also has responsibility for developing a national strategy with regards to the Fire Service.</p>	<p>There is no national strategy.</p> <p>However, there are national guidelines from the Dept for Civil Protection.</p> <p>There is also a National Forest Service<sup>ii</sup> which is involved in data collection.</p>	<p>There are two national bodies that have responsibility for developing national strategies The Ministry of the Environment develops a national strategy which the State Forest Service is responsible for implementing. The Ministry of Internal Affairs develops a national strategy which the State Fire Service is responsible for implementing.</p>	<p>The Ministry of Interior has responsibility for developing a national strategy. This strategy is then passed to the Fire Service to implement.</p>	<p>The Ministry of Environment develops a national strategy regarding forestry policies. However, despite there being some policies and some guidance at a national level, prevention strategies are very much developed and implemented on a regional basis.</p>



Questions	United Kingdom	Denmark	France	Greece	Italy	Poland	Slovak Republic	Spain
<p><b><u>Regional/Local Strategy and/or Actions</u></b></p> <p>Is there a body/organisation responsible for wildfire strategy and action at a regional or local level?</p>	<p>Northumberland Fire Group<sup>iii</sup></p> <p>Membership is open to public and private sector stakeholders</p> <p>There is two-way communication between regional/local fire groups and the national strategic body (the EWWF).</p>	<p>Danish Forest and Nature Agency<sup>iv</sup> has responsibility for the development of both national and regional/local strategies with regards to prevention. The law states that Fire and Rescue Services are required to provide prevention advice to farmers and landowners, and they do this in collaboration with Danish Forest and Nature Agency.</p>	<p>Policy is organised at the departmental level and there are 20 departments throughout France. A prefect is responsible for each department and they work in collaboration with the Mayor of each municipality and the Ministry of Interior. The Fire Service then implements the decisions of the former. There will be a reform in France in the next few years which will probably alter this system.</p>	<p>The responsibility for developing regional strategies also rests with the two government ministries mention above – the Ministry of Agriculture and the Ministry of Interior.</p>	<p>The regions are responsible for writing a forest fire prevention plan.</p> <p>These are completed every 3-5 years and are updated yearly by SOUP<sup>v</sup>.</p>	<p>At the regional level there are 17 provincial fire services which develop strategies. The State Forest Service has regional directorates, which develop regional strategies, and forest districts which develop very localised plans at forest district level.</p>	<p>The Fire Service writes plans at a regional level in line with national strategy. However, the Fire Service is not very specialised with regards to wildfire prevention.</p>	<p>Spain has a quasi-federal system and within this system there are 15 regional ministries. Within this structure, either Fire Services or Foresters are responsible for developing regional prevention plans. In Castilla-y-Leon, two prevention plans are developed at province level. There is a strong forest management perspective to prevention planning in Castilla-y-Leon. Regional planning in Castilla-y-Leon is run by foresters who work in</p>



								<p>cooperation with the civil protection dept.</p> <p>In Galicia, there is a regional defence plan. There are also four provinces, each with a provincial prevention plan. Within the provinces there are 19 districts, again with their own district prevention plan. District prevention plans are updated every 4 years.</p> <p>It should be noted that the situation varies across Spain and that other regions may have different arrangements for regional prevention strategies.<sup>vi</sup></p>
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Questions	United Kingdom	Denmark	France	Greece	Italy	Poland	Slovak Republic	Spain
<p><b><u>Fire Plan Programmes</u></b></p> <p>Are there Fire Plan Programmes within your country?</p> <p>If yes, are these local, regional or national programmes?</p>	<p>Yes, these are localised programmes, although good practice is exchanged at a national level.</p> <p>Northumberland programme<sup>vii</sup> is voluntary and is administered by NFRS and a subcontractor.</p>	<p>Danish Emergency Law stipulates that wildfires must be prevented and that local Fire and Rescue Services should completed a risk assessment to determine if a local prevention plan is required. The local Fire and Rescue Service will then work with local landowners to create a suitable plan.</p>	<p>In terms of the Fire Service, the Minister of Interior provides overall direction for prevention for the whole of France. Each department then decides their strategy/plan and guidelines, based on this national direction. Each municipality then uses the departmental guidelines to decide their local plans. A document is produced for the plans at each level of this hierarchy.</p> <p>With regards to</p>	<p>Generic plans are developed for all risks related to civil protection. In addition, all municipalities must develop their own individual forest plans. They are required by law to develop an action plan and the mayor is in overall charge of this process.</p>	<p>Each region has followed national guidelines covering social/economic aspects as well as risk assessments.</p>	<p>Each forest district has a fire plan.</p> <p>There are 430 districts which are part of the municipalities.</p> <p>At this level the plans are prepared by the forest service. These plans are developed in cooperation with the general rescue plans for the regions, which are developed by the State Fire Service.</p>	<p>Each organisation has a fire plan.</p> <p>The forest owners are responsible for the plan.</p> <p>Plans are monitored by the Fire Service.</p> <p>The Ministry of Agriculture provides funds for aerial monitoring.</p>	<p>There are local fire plans in Spain but they are different across the regions. Technically speaking, each Director of Extinction should develop prevention plan. There is a possibility that there are multiple agencies developing plans in isolation for the same areas. Planning structures at the more local level are perhaps not as efficient or collaborative as they could be.</p>



			<p>forestry, regional fire plans are produced which cover all aspects related to wildfire prevention and control.</p> <p>All strategies should be linked, but they are not always done so at present. This is an area that could be improved.</p>					
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<sup>i</sup> Further information is available at <http://wildfireforum.ning.com/> and <http://www.ruraldevelopment.org.uk/england-wales-wildfire-forum>

<sup>ii</sup> Corpo Forestale dello Stato: <http://www3.corpoforestale.it>

<sup>iii</sup> Further information is available at <http://www.northwoods.org.uk/fire-group-northumberland>

<sup>iv</sup> Danish Forest and Nature Agency website: <http://www.naturstyrelsen.dk/International/English/About/>

<sup>v</sup> SOUP stands for “Sala Operativa Unificata Permanente”, which translates to “Permanent Unified Operations Room”. Each region has a SOUP and the SOUP is responsible for coordinating forest fire interventions.

<sup>vi</sup> In terms of wildfire suppression, there is a strong regional approach. The Regional Minister will provide aerial support for a major incident. Each region also has a Director of Extinction. This individual is usually a regional forester who has significant technical knowledge with regards to wildfires. He/she has significant power to assign and manage resources for major incidents. In fact, the Director of Extinction can manage resources owned by other ministries.

<sup>vii</sup> Further information is available at <http://www.northwoods.org.uk/fire-plans-0>