



## **Minimizing forest fire Risks for TOurists**

# **FINAL PROJECT REPORT**

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**AMBIENTEITALIA**

**institute for tourism**



Provincia di Livorno



PREFECTURE OF MAGNESIA





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## FINAL PROJECT REPORT

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## Executive summary

The MI.R.TO. (Minimizing forest fire Risks for Tourists) project was developed between November 2009 and April 2011 by a Consortium of 7 public and private entities of four European countries (France, Croatia, Greece and Italy), all facing the Mediterranean Sea. The project addresses the forest fire issue and, more in detail, the need for targeted awareness raising and preparedness campaigns in order to reduce the number of fires but also injuries to people, damages to properties and to the environment.

The project, co-financed by the European Commission, DG Environment, through the Civil Protection Financial Instrument, has developed a specific strategy to increase awareness on forest fires among tourists travelling to Mediterranean islands, areas particularly affected by fire events.

Video spots and printed material were developed according to some innovative considerations: the campaign planned and carried out in the summer 2010 was based on a multilingual approach considering the intense tourist fluxes which take place in the Mediterranean area during the summer. Tourists were firstly contacted by the campaign messages by video spots broadcasted on the ferries travelling to the different islands. Afterwards tourists were again contacted when reaching their final holiday destinations: summer camps, holiday houses and, partly, hotels.

According to the project aims and the particular character of the area where the campaign was implemented, a specific logo and a slogan for the campaign was defined: enjoy, respect, come back.

As forest fires affect regularly the Mediterranean regions without showing any decreasing trend, the campaign addressed also the issue of preparedness in case of emergency. The information provided to tourists regarding this topic is simple, clear, and expected to stimulate a rationale behaviour in case a fire is approaching a summer camp or a holiday house.

Stakeholders of the areas involved were strongly committed and cooperated intensively as forest fires represent a concrete threat for the island economies. Severe fires in the past have shown indeed to influence negatively tourist fluxes for several years.

To assess the campaign effectiveness a monitoring activity based on questionnaires and direct interviews was carried out. Results show that tourists have a positive attitude for being informed of fire risks (contrary to what the tourism industry sometimes fears) and how to behave in case of emergency. The results of the monitoring activity show that the printed material were well noticed by the tourists. Furthermore, brochures were well received by the target populations as an appropriate mean for delivering the fire safe message. Contrary to expectations using video spots on ferries was the most challenging part of the campaign, as the screening was fully under control of ferry companies and their crews and cooperation was not always easy. Several problems were encountered with ferry companies and it appears that for the screening on ferries to be successful needs a more effective involvement of stakeholders in the project. Videos however had the lowest captive audience and opinions on the MI.R.TO. videos being appropriate in promoting fire-safe behaviour were strongly polarized.



Differences among the participating countries were also observed, and were apparently related to the presence of foreign tourists. A higher rate of recall is reported which might be due to the fact that foreign tourists are more concerned about their safety than domestic ones. General rules regarding forest fires appear to be known in rather large proportion.

It is difficult to say with any degree of certainty to what extent the MI.R.TO. campaign was successful as there are no base line figures to compare it with. For some aspect the results appear to be more positive if compared to what is generally expected for the commercial sector.

Furthermore, the project represented a fruitful occasion for a information exchange, discussing similarities and differences among the different prevention strategies in the countries involved and brought to the definition of some simple indications which may support public or private bodies which are interested in planning new awareness raising and preparedness campaigns. The material developed (videos, brochures, handbooks and posters) is freely available for this aim.



# 1. Project Overview

The MI.R.TO. project was contracted in November 13<sup>th</sup>, October 2009 by the European Commission, DG Environment, Civil Protection Unit, to conduct a cooperative action to enhance awareness on the forest fire issue and preparedness among tourists. The financial support to the project derives from the Civil Protection financial instrument for cooperation projects on prevention and preparedness.

The EU support for prevention actions on forest fires is motivated by the number of fire events and the extension of the burnt area which annually affect the EU countries and the associated environmental and socio-economic consequences.

The average annual burnt area at EU level varies between 300 000 and 600 000 ha and is due to an average of 50 000 fire events occurring between June and October. In fact forest fires represent the major threat for forests with relevant consequences on different economic activities. The most affected countries have been Portugal, Greece, Italy and Spain. Forest fires result also in a number of environmental impacts:

- climate change due to greenhouse gas emissions,
- air pollution,
- decline of biodiversity,
- destruction of habitat;
- modification of landscape,
- increased soil erosion
- increased water run-off.

Forest fires are an inherently difficult phenomenon to tackle and although resources for fire fighting and fire preventing activities have increased relevantly in the last two decades ( ) the number of fires and the mean annual burnt area do not suggest a satisfying effectiveness of the measures taken.

The incidence of fires varies from year to year, and largely depends on meteorological conditions, socioeconomic changes, forestry policy and human negligence. Member States estimate that most fires are caused by human negligence or arson. Socio-economic issues play a role, primarily through rural depopulation, reduced prices of agricultural products and land abandonment with a consequent increase of biomass availability.

The economic effects of fires may be considered limited if the burnt biomass only is considered. If indirect costs are analyzed the economic consequences of severe fires may be extremely high. Forest fires occur in fire prone areas which correspond often to very attractive tourist destinations. The breakout of fires may cause in these regions an immediate decrease of the residents' income which eventually may last for several years. In addition properties and infrastructures may be destroyed or damaged by fire.

Tourists are sometimes causes for involuntary fires, more often they are victims of the fire with people injured, properties lost, need for assistance.

In the framework of a general strategy for fire prevention, specific actions regarding the tourist sector should be considered and planned. The project MI.R.TO. addresses this issue and has been thought to provide a useful experience to plan, carry out and monitor an awareness and preparedness campaign,



If compared to other social groups which may be involved in forest fires (residents, farmers, etc.) tourists generally

- are psychologically unprepared to face an emergency,
- come generally from areas where forest fires are unknown or rare,
- ignore local fire danger conditions and underestimate risks,
- have little knowledge of the region they are visiting,
- do not speak the local language and have poor access to local information sources.

The project is based on the idea that some groups of summer tourists travelling to Mediterranean islands can be easily contacted during their journey to their holiday destination. Mediterranean islands are fire prone areas with a high fire danger during the summer period. In addition, these areas are important tourist destinations, mostly reached by ferry, although flight connections and aerial fluxes are increasing. At the Elba island alone, the Italian pilot area in the MI.R.TO. project, a tourist flux of more than 330 000 domestic visitors and 110 000 foreign visitors was recorded in 2008. Thus an awareness raising campaign carried out on the major Mediterranean islands (Sicily, Sardinia, Corsica) might produce relevant positive effects if compared to the generic campaigns carried out at national and regional level.

The countries considered and participating to the project are heavily affected by forest fires, according to the most recent report from the European Forest Fire Information System (EFFIS, 2010). Summary figures regarding forest fires recorded in 2009 are reported in Table 1.

	Country area (in ha)	Burnt area 2009 (in ha)	Number of fires
Croatia	5 659 400	2 208	4 800 (1)
France	67 541 700	17 000	4 800
Greece	13 199 000	35 342	1 063
Italy	30 133 800	73 355	5 422
Spain	50 403 000	110 783	15 391
Portugal	9 209 000	87 416	26 119

Table 1. Forest fires in some South European countries in 2009 (source EFFIS, 2010). (1) Data reported is the mean of the period 2000-2007

For several aspects the MI.R.TO. project can be considered an innovative project:

- it addresses both awareness raising and preparedness issues: it refers to the prevention of fires and the correct behaviour to adopt in case of emergency,
- it is clearly targeted: it addresses a well definite (temporary) social group - the tourists,
- it focuses on fire prone areas: the campaign foreseen is devoted to specific areas, highly affected by forest fires,
- it adopts a multilingual approach: all project products were developed in the different languages used by tourists in the different pilot areas,
- it is a cooperative project between countries facing an identical problem but used to adopt different prevention strategies,



f) methods and achievements can be easily adopted for new awareness campaigns.

In addition several points here listed correspond to the priorities identified by the participants of the recent Assessment of Forest Fire Risks and Innovative Strategies for Fire Prevention, held in Rhodes in May 2010.

## 1.1 Consortium Partners

The MI.R.TO. consortium is composed of seven partners, five public administrations or public bodies, one University, one private company, as indicated below.

- coordinating beneficiary (CO): Ambiente Italia Srl (IT),
- associated beneficiary (AB1): Province of Livorno (IT),
- associated beneficiary (AB2): National Park of the Tuscan Archipelago (IT),
- associated beneficiary (AB3): CEREN - Interdepartmental Organisation for the Protection of the Forest and the Environment from Fire (FR),
- associated beneficiary (AB4): Prefecture of Magnesia (GR), finally substituted by the Region of Thessaly
- associated beneficiary (AB5): University of Thessaly (GR),
- associated beneficiary (AB6): Institute of Tourism (HR).

The coordinator **Ambiente Italia** is a private company engaged in environmental research and consulting. Ambiente Italia operates in the fields of environmental analysis, planning and design; It conducts training courses and also manage communication campaigns. Public Administrations consult Ambiente Italia for defining their communication strategies regarding environmental issues.

Ambiente Italia is also a leading partner in many European networks. That's why in the 20 years since its foundation, Ambiente Italia has completed more than 1,100 assignments for a number of local administrations, EU institutions, Italian Public Administrations and Agencies, research institutes, Italian and worldwide Universities, as well as for many private businesses.

The **Province of Livorno (IT)** or Leghorn is a province in the Tuscany region of Italy. It includes several islands of the Tuscan Archipelago, including Elba and Capraia. Its capital is the city of Livorno. The Elba Island is the third largest island of Italy and one of the most appreciated summer holiday location of the region; with approximately 450000 tourists visiting the island every year. The Island environments vary from Mediterranean woods, to cultivated fields (olive tree cultivations and vineyards), to barren lands where aloe and cactus reign. The Province of Livorno is strongly committed in forest fire prevention and coordinates the fire fighting activities on the mainland and on the seven islands forming the Tuscan Archipelago.





The **National Park of the Tuscan Archipelago** is a public institute established in 1996 and is active in the field of environmental protection and management; its territory of competence includes the islands of the Tuscan Archipelago with marine and terrestrial protected areas.

The objective of the Authority are defined by the national regulations; among its duties the protection of all islands which are part of the Natura 2000 network. The Authority has carried out different projects for the protection of biodiversity: control and protection of important local mammals, and eradication of invasive animals, monitoring of protected bird species, monitoring of priority habitats, study of migration flows, study of regionally rare amphibious and mammals species. Moreover the Park is in charge of accessibility and maintenance of paths to guarantee sustainable use of the protected areas.

Another priority of the Park is the communication of environmental values through the opening of information points.

**CEREN** is the Test and Research Centre of the Entente Interdépartementale, a government organization for the protection of the forest and the environment against fires. This organization groups French departments the most affected by forest fires: 13 departments of the South of France covering 4 regions: Provence Alpes Cote Azur, Languedoc-Roussillon, Corsica and Rhone-Alpes.

The centre was officially created in 1979 from the Ministry of the Interior in Valabre. The CEREN is in charge of all the required tests related to forest fire-fighting resources, fire related research activities, international co-operation within fire prevention programs. CEREN is active in the field of environmental protection with special emphasis on forest fires. Its activity include public information campaigns and fire prevention projects.

The **Prefecture of Magnesia** is a 2<sup>nd</sup> Level Local Public Authority responsible for subjects that concern Health, Providence, Civil Protection, Education, Employment, Transport, Industry, Trade, Urban Planning and Environmental Issues. The status of the partner provides it with the capacity to influence directly local policies in its area. The partner is responsible for 4 year planning of all necessary interventions that need to take place in the area in several issues, among which the issues of civil protection hold a significant, as prefectures in Greece are the main responsible authorities for civil protection.

The Prefecture of Magnesia has mainly a national experience in civil protection issues. However, it holds an extensive and long-standing experience in transnational cooperation projects in the framework of the Programmes INTERACT, Interreg IIIC, Interreg IIIB CADSES, Interreg IIIB ARCHIMED, Interreg IIIB MEDOCC, ESF Article 6 and FP6. According to the recent Greek administrative reform the functions of the Prefecture of Magnesia has been taken by the Region of Thessaly.

Since

The **University of Thessaly** was founded in 1984. Its administrative and academic centre is in the city of Volos. The main mission of the University of Thessaly is the transfer of critical knowledge through teaching, the promotion of scientific knowledge through research and the contribution to the cultural and economic development of the local community and wider society.

The Systems Optimization Laboratory was initially established as "Scientific Computing Laboratory" in 1998 and took its current name in 2005. The Laboratory's mission is to facilitate high quality original research

on optimization related problems for complex industrial, production, service, logistic and transportation systems. Some of the activities include fundamental research on all aspects of optimization (linear/nonlinear/integer/dynamic programming, multicriteria decision making, etc.) and efficient implementations for planning, scheduling, design, operation and control of diverse systems, such as transportation networks, supply chains, production lines and communication networks. In addition, the laboratory offers consulting and development services (systems modelling, problems solving, performance analyses, etc.) to industries, companies, organizations, businesses and government agencies. Recent research results have been efficiently implemented in numerous practical applications such as handicapped people transportation, emergency response management, production lines' scheduling, vehicle routing and portfolio optimization.

## 1.2 Geographical location

The partners of the Consortium belong to countries facing the Mediterranean Sea and with several islands belonging to their territory. The consortium present a relevant degree of complementarity between the different types of organizations, and all together the different partners cover the very diverse sectors which may be involved in fire prevention activities. The project was implemented in island regions of 4 countries: Croatia, France, Greece and Italy.



Figure 2. Area covered by the countries represented in the project consortium.

Although no Spanish institution was involved in the project the countries represented in the MI.R.TO. consortium form a large part of the Mediterranean coastal and insular regions, thus results and achievements of the projects can be considered transferable to other similar areas.

The areas involved in the project host important environmental habitats and fragile ecosystems. According to the International Union for Conservation of Nature (IUCN) the Mediterranean, due to its outstanding biodiversity features, has been identified as one of the most important regions in the world for species conservation. As a matter of fact the Mediterranean sea is the region with the highest percentage of endemic species.

In addition the area can be considered one of the cradles of civilisation with an extremely rich cultural heritage. Many areas of archaeological and cultural interest have been treasured and tended for very long periods of time and are often close to forest regions. This exposes them to a particular risk of being

damaged by fire events. Similarly to the environmentally most attractive areas these sites have a special relevance for the tourism industry.

The Mediterranean region is indeed the leading tourist destination in the world. Tourism is mainly concentrated in the coastal and insular areas, which receive 30% of the international tourist arrivals. The most widely adopted tourism model refers to seaside summer holidays. In 2000 tourist arrivals exceeded 220 million people with a 30 year long uninterrupted increase. In the last decade growth has shown some slowing but projections highlight that the mentioned figure could reach 350 million around 2025 (Amico & Lo Giudice, 2007). The Mediterranean receives a high percentage of its income from international tourism and this sector provides a clear economic benefit to the region. The close positive relation between tourism development and Gross Domestic Product (GDP) in the Mediterranean countries has been recently confirmed by several studies (Dritsakis, 2004; Cortez-Jimenez, 2008), although this may not consider several negative impacts the growth of tourist fluxes may imply. A direction of tourism towards a cleaner, “greener”, and more sustainable growth should be established by all countries.

The relationships between the Mediterranean area and tourism fluxes are complex but often not sufficiently considered by policy-makers. Large part of the area and especially the most attractive sites are already under threat due to the high entropic pressure. The main threats related to the increase of mass tourism are modification to the landscape, soil erosion, difficulties for water availability, increase of waste and pollution of air and water, decrease of natural areas and species richness.

One of the main threats for the coastal and insular Mediterranean areas, however, is represented by forest fires. The issue has been analyzed in depth by several studies, mainly promoted or co-financed by the European Union. Financial support has been granted by several legal instruments (e.g. the Regulation 2152/2003 Forest focus, the Life and Life Plus programs). Figures of fire number and burnt area extension, however, do not show a clear or homogeneous decreasing trend due to the increased resources for fire fighting. These two indicators, and especially the yearly burnt area, appears to be still strongly influenced by the meteorological conditions with hot and dry summers having a predominant influence (e.g. 2003).

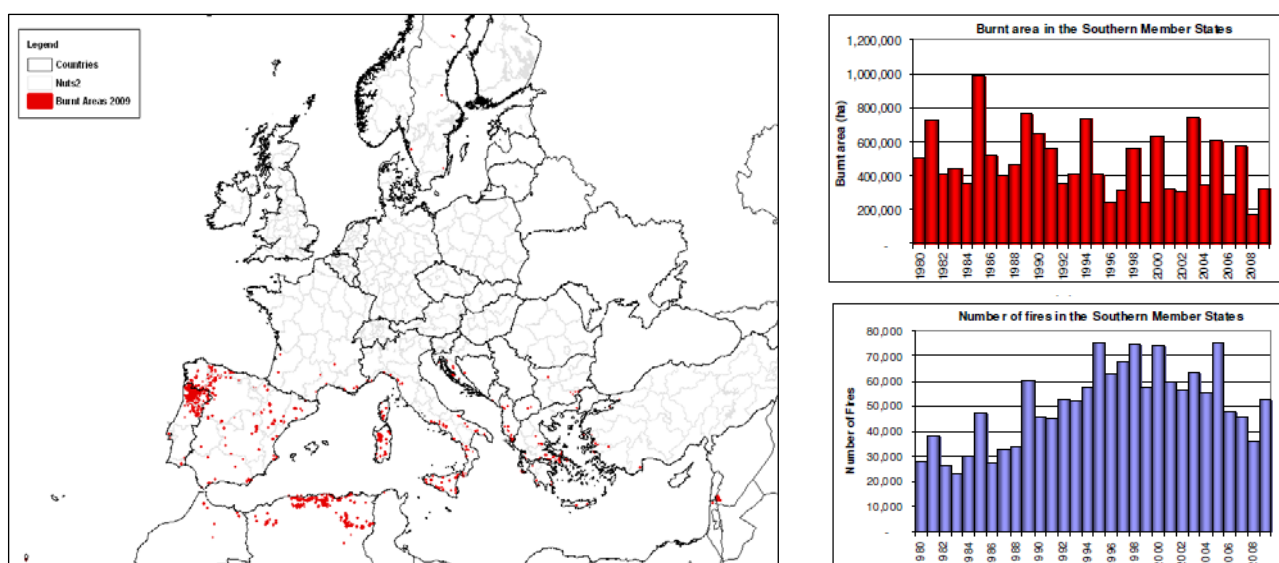


Figure 3. Forest fires in Europe in 2009 and long term trend of forest fires and burnt area in some South European countries. (Source EFFIS, 2010)



Forest fires represent one of the most important concern for forest managers in a large part of the European Union and especially in the Mediterranean area. In Southern Europe roughly 25 to 30% of the total land area is covered by forests (Eurostat, 2011) and every year 300 000 to 600 000 ha of EU forest land are destroyed by fire, especially in the Southern EU Member States. This represents about 1.5% of total Mediterranean forests. The causes of fire are complex and constantly investigated as directly or indirectly human induced fires have been proved disastrous in many areas. According to the UN's Food and Agriculture Organization (FAO) estimates in the Mediterranean area of human induced fires indicate that they may represent over 95% of forest fires (in WWF, 2003). National estimates vary from 50 to 90%. Lost of lives, injuries, damages to the environment and to properties are well known effects of fires (EFI, 2009).

The effects of forest fires are both on the short and long term. Apart from the direct involvement of people, damages to properties, infrastructures or to the attractiveness of the landscape, fire effects may relevantly influence the future income of local communities. Damages in Greece alone in 2007 were estimated at € 3 billions, or about 0.7% of the country's GDP (Davidson, 2007). Clearly, forest fires are a phenomenon of great impact and the financial aspect of forest fires should not be underestimated (Dogandjjeva, 2008).

The impact of forest fires and the consequences of these events on tourism are widely recognized by the scientific community, policymakers and tourism industry as having large and prolonged negative effects. Yet there is still a general lack of knowledge regarding how tourism industries are affected by this kind of disasters (no specific statistics are available) and how they could respond to this specific threat.

The tourism industry in general is not well prepared for fire events if it has not experienced disasters in its recent past. Apparently there is the need to educate business owners about the benefits of disaster prevention planning, and to contribute to specific management strategies that can be easily incorporated into all sizes and types of businesses. This implies that tourism managers should be directed towards increasing the awareness of disaster management plans within their community. The harmonization of national rules regarding prevention activities towards more detailed and cogent rules is also reported as an urgent need.

Forest fires may cause significant downturns in tourism levels. Nonetheless the tourist industry often fear that forest fire prevention campaigns may give a picture of unsafety to their region. On the contrary, participation of local authorities, tourist operators, local inhabitants may rise significantly the effectiveness of prevention campaigns and result in an increase of public awareness

Different studies have provided evidence of the susceptibility of the tourism industry to a forest fire disaster (Faulkner, 2001; Cioccio & Michael, 2007; Hystad & Keller, 2008). Smaller businesses as summer camps, holiday villages agro-tourisms, and, more in general, the accommodations sector were identified as the businesses that were impacted the most. Studies on specific events have shown that in case of fire it is very important that businesses respond to the disaster and let tourists know that they are still open and that they are reacting.

The growing human pressure but also climate change are expected to contribute significantly to an increase of favourable conditions for fire events and thus fire incidence (EFI, 2009). Indeed an increase in peak temperatures may cause a higher fire danger. Fire occurrence, length of the fire season, and annual area burned are all likely to increase further in most regions (Stocks et al., 1998). Warmer and drier summer conditions represent a relevant challenge for local administrative structures for providing water availability to residents and tourists. An increase of the frequency, duration and intensity of fires, due to greater amounts

of fuel associated with forested areas may need additional financial resources. The issue is complex and it has been recently addressed by the European FP7 project FUME (Forest fire under climate, social and economic changes). A summarizing Causal Loop Diagram prepared by G. Maheras (2002) is reported in Figure 4. Climatic and statistical data indicate that the most severe portion of the fire season may shift to later in the summer (Anderson et al., 2000) and burnt area is expected to increase relevantly in the next decades years under projected climate warming (ACIA, 2004). Potential forest fire behaviour is also expected to change in a drier and warmer climate.

According to many fire managers these facts highlight the urgent need for devoting increasing resources to fire prevention which is considered one the basic pillar of the fire issue. Indeed, there is a general and increasing agreement that an effective forest fire prevention is a pre-requisite for human safety, environmental protection and economic development of fire prone areas. It involves a complex implementation of different measures at various scales and levels. The availability of adequate skills to implement these measures, however, is questionable.

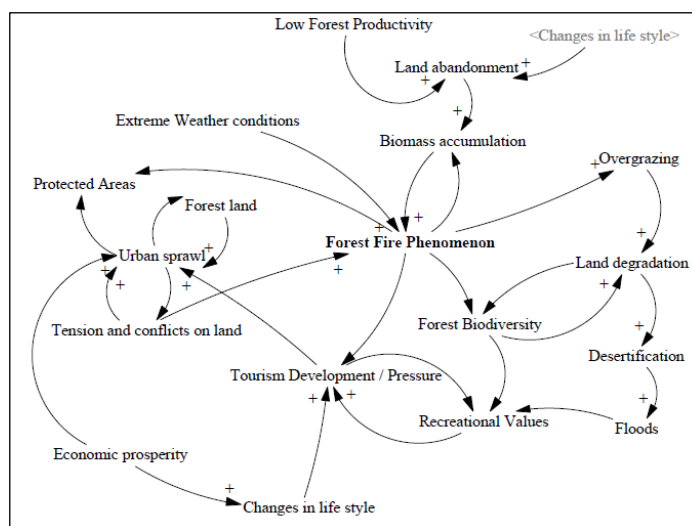


Figure 4. Causal Loop Diagram on Forest fires (from G. Maheras, 2002)

EU countries approach to the fire prevention issue is based on different methodological schemes, priorities, and expectations, Organizational, institutional and legal frameworks may vary from country to country. The need for information exchange, harmonization and a closer co-operation is, however, more and more emphasized in international meetings and progressively supported by local stakeholders. Fire prevention actions depends often on the economic resources available in their annual budgets and no constant financial support is often granted in many South European countries. It is especially during periods of economic downturn, however, that collective strategies and peripheral collaboration between Mediterranean countries will be useful in order to overcome these periods and maintain awareness raising and preparedness initiatives active and visible to the public.

It should be noticed that fire prevention integrates a large number of activities ranging from land and forest management, along with public awareness raising, environmental education and training of personnel. Additionally, fire prevention in a large sense, implies preparedness and coordination among the different institutions involved.



The complexity of the issue requires the existence of a clear strategy which, at the moment, is often poorly developed in many EU fire prone regions while no guidelines for prevention of forest fires exist today at EU level. In recent years, however, the attention of local, national and European authorities at different levels has progressively moved from fire fighting to fire prevention activities (e.g. EU Forest Action Plan 2007-2013) although in terms of financial commitment the latter is still a small percentage of the whole budget regarding the forest fire issue.

Awareness raising, as mentioned, is part of the fire prevention issue (Prestemon et al., 2010). If compared to the US Western States or Australia, the level of financial commitment in awareness raising activities still appears limited. Nonetheless a number of cooperative projects at EU level has increased the attention at local, national and European level for new and more effective measures. The role of prevention has been recently highlighted in the Position paper prepared by EFIMED – the Mediterranean Regional office of the European Forest institute which reaffirms that "prevention is the most effective way for minimizing the negative impact of unwanted wildfires". These statements are today supported by scientifically based analysis. According to Prestemon et al. (2010), just to mention one recent paper, prevention and awareness raising efforts have statistically significant and negative effects on the numbers of wildfires ignited by debris burning, campfire escapes, smoking, and children. According to the Authors education plans from current levels showed that marginal benefits exceed marginal costs in Florida by an average of 35-fold.

In Mediterranean regions the fire season starts generally in May-June and ends in October, with fires occurring in very different areas: in forests and bush areas, plantations, parks etc. Substantially the presence of flammable vegetation together with hot and dry climate represent the main causes for a high fire danger condition dominating the summer months. This alone of course would not be sufficient to produce a condition of fire risk. As natural ignition causes (lighting, self-ignition, etc) are negligible the presence of human beings is essential to determine the risk of fire. A relevant density of people with high fire danger, as it is the case in many tourist areas, determines indisputably a high fire risk condition.

The target group of the project – tourists travelling to Mediterranean islands – is composed of several millions of people who are exposed during their holidays to the mentioned fire danger risks. Thus the project and its activities might have a potentially great impact on the involved regions,

Referring to holiday houses it has to be noticed that mass tourism development with related secondary homes' boom in the Mediterranean countries has caused an increased seasonal presence of visitors to forest lands. These visitors typically have little knowledge of the forest environment and sometimes provoke accidental small fires (from smoking, cooking, etc.) which can easily turn into a large fire if not treated properly. An occurrence further aggravated by the easy access to remote areas as a consequence of widespread road construction, subsequently making it difficult for forest managers to monitor and be aware of the location of people in the forest land and to intervene when necessary.





## 1.3 Main Achievements

The project explored the possibility to develop a joint approach among partners of different countries facing the Mediterranean and affected by forest fires and to test its effectiveness by carrying out an information campaign in the summer 2010 focusing on awareness raising on forest fires and preparedness of tourists travelling to Mediterranean islands. In the framework of the project seven partners of four different European countries defined a clear and realistic way to achieve a higher level of awareness and preparedness in order to reduce fire events, people injured, loss of properties, negative consequences on the environment.

Main outputs are

- videos for awareness raising campaigns,
- brochures regarding awareness raising and preparedness,
- newsletters regarding the project progress,
- seminars focussing on the project objectives,
- articles, presentations and posters at meetings and seminars,
- project websites,
- project posters,
- a monitoring report,
- a methodology report.

## 1.4 Deliverables

The project, as mentioned, has the aim of defining a general framework for cooperation between countries facing the issue of forest fires and its effects on the tourism sector and its needs to improve the level of awareness and preparedness of tourists. The partners participating to the project, thanks to a close cooperation, developed different products to be tested in an informative campaign which took place during the summer 2010.

### 1.4.1 Video spots

As the one of the segment of the target population were people aged between 17 and 25 years, video messages and, as a special attention catching strategy, a format of the iPhone software application “Holiday” was designed to be witty and short was used. Five video spots (in English, Italian, French, Greek, Croatian and German) were produced on the following topics:

- when hiking (take GPS, maps and tell someone of the route),
- when camping (do not throw cigarette butts, do not leave rubbish behind, call 112 in case of fire or smoke),
- safe cooking (open air fire is completely forbidden),
- safety in house (call 112 in case of smoke/fire, remove flammable objects, staying in the house is safest),



- safety messages (what to do in case of fire or smoke, what number to call, what to do if someone is lighting an open fire).

### **1.4.2 Brochures**

Brochures used to target tourists in camp sites and private houses with content organized around priority messages: what to do to prevent fires in general (what not to do, how to behave safely), and specific messages on safe behaviour to visitors in camp sites (ask for safety instruction, follow rules when cooking), private house (maintain accessibility to the house, closing doors/shutters when not in the house) and when hiking (follow weather and fire danger forecast, inform someone of the route, have map and phone with you). Then, instructions were given on what to do in case of fire in general (call 112, stay calm) and in a specific situation – if camping, if in private houses/apartments or when hiking. The total fire ban during the fire season is recalled. Brochures were available in English, French, Greek, Italian, Croatian and German.

Brochures in the different languages were exposed in a specific dispenser and set available to the visitors.

### **1.4.3 Posters**

The posters, initially not planned, were developed in A3 format and were exposed near the brochures to draw more attention. Posters were also exposed at the ferry stations (waiting rooms, ticket counters, etc.). Short awareness messages and the project slogan (Enjoy, Respect, Come back) are reported in English, French, Greek, Italian, Croatian and German. The total fire ban during the fire season is recalled,

### **1.4.4 Handbook for holiday house owners**

According to the project program a manual for holiday house owners was prepared and translated in 5 languages (Croatian, French, Italian, Greek and English). According to the proposal of the French partner, coordinator of this specific action, the manual was prepared in the form of a self – evaluation test, a form which appeared to all partners extremely attractive and effective.

The booklet is available on the webpage or can be sent to interested persons by email or standard mail. It has been presented and distributed at the project closing meeting in Florence and at the World Wildfire Conference 2011 held in South Africa.

### **1.4.5 Monitoring methodology**

The report prepared by the Croatian partner “Institute for tourism”, describes the monitoring methodology adopted to evaluate the effectiveness of the awareness raising campaign in the different countries and the contribution given by the different project products (videos, posters, brochures).

The reports describes both the monitoring methods and the evaluation approach of the collected data. The report represents a stand-alone deliverable.

### **1.4.6 Joint methodology**

The report describes the general features of the approach adopted to implement the joint awareness raising campaign and highlights the potential and limits of the information materials





developed. It gives indications about the ways and means to communicate the need of a greater awareness to reduce the number of fires and their impact. The topic is discussed in a separate stand-alone deliverable.

### 1.4.7 Newsletters

Three newsletters were prepared and distributed to relevant entities involved in prevention activities in the partners' countries. The newsletters, prepared by the Province of Livorno, coordinator of the task regarding the dissemination of the project results, were distributed at the beginning of the project, after the summer campaign and at the end of the project.

### 1.4.8 Websites

The project website ([www.eu-mirto.net](http://www.eu-mirto.net)) has been worked out and developed by the Province of Livorno, coordinator of the task regarding the dissemination of the project results, and provides information about the project, its objectives, the work progress and its results and outputs.

In agreement with the whole project team subpages for every partner have been set up on the main website, too. Additionally some partners used their institutional websites to spread the project results. All relevant documents and results developed by the project are available on the website.

Deliverables and general information on the project are reported also on a new website devoted to awareness and preparedness ([www.apf-info.eu](http://www.apf-info.eu)) dedicated to awareness on forest fires and preparedness, a website which the project coordinator is developing and which will host results of other projects related to the fire prevention issues.

## 2. Project objectives

The following description of the objectives of M.I.R.T.O. project has been taken from the Technical Annex of the project proposal.

Considering the increase of tourist flows to fire-prone areas, tourists' relative unpreparedness due to various reasons (unaware because coming from non fire-prone areas, difficult to reach because of language, often moving around etc.), their behaviour which sometimes makes them the cause or the victims of fires;

furthermore considering the increase of forest fire occurrence in Southern European tourism regions and the fact that Mediterranean islands form a major part of the affected area, the project sets itself the following objectives:

- improve preparedness of tourists in fire-prone areas,
- improve effectiveness of forest fire information campaigns which address tourists,
- reduce human victims, economic and environmental damages from forest fires in tourism areas,
- raise public awareness of forest fire risks and adequate behaviour without damaging tourism economy,
- develop innovative cooperation and communication methodologies to this effect,



- cooperation between public and private operators with different roles and functions (civil protection – tourism promotion),
- cooperation between tourists' countries facing similar issues,
- test this methodology on Mediterranean islands,
- identify and propose communication strategies and effective information materials to be adopted in larger campaigns.

During the project some minor changes to the project plan were discussed among the MI.R.TO. team and submitted to the EU Commission. The final updated project program is reported in the Annex 1.



### 3. Project methodologies

The purpose of this section is to summarize the developments that took place within the MI.R.TO. project and put them in a larger and communication context.

#### 3.1 Definitions

Before describing the approach adopted in the MI.R.TO. project a clarification regarding some terms often used by policy makers, technicians and the public at large regarding the forest fire issue is probably needed as they may have different meanings depending from the context they are used.

**Fire prevention:** the issue represents, together with fire fighting activities, one of the pillars of the forest fire topic. Fire prevention includes all activities which can contribute to avoid the outbreak and spreading of forest fires. Among the several very diverse forest fire prevention activities, awareness raising plays a relevant role as it is focussed on avoiding dangerous or inappropriate behaviours, but also guiding the choice of building materials, garden maintenance, etc. According to a more general definition (e.g. the FAO definition of forest fire prevention) the term includes also all actions which are able to minimize the effects of fire on people, properties and the environment once the fire event has begun. According to this definition preparedness raising should be considered a prevention action.

**Awareness raising:** generally speaking awareness raising is a process connected with informing the public or a group on an issue, with the intention of influencing them positively in the achievement of a defined purpose or goal.

According to Sayers (2006) “awareness raising is “a process which opens opportunities for information exchange in order to improve mutual understanding and to develop competencies and skills necessary to enable changes in social attitude and behaviour. To be effective, the process of awareness-raising must meet and maintain the mutual needs and interests of the actors involved”.

This definition appears more indicated for community initiatives (e.g. Firewise) than general fire prevention campaigns; it highlights, however, some basic elements of the issue. Regarding forest fires, awareness raising generally focuses on behaviours to avoid (things not to do) or behaviours to adopt (things to do). “Regulatory” approaches, however have shown, in some circumstances, to be scarcely effective.

**Preparedness:** the term refers to the process of ensuring that an organization or people are in a state of readiness to react to a condition of emergency and to contain the effects of a potentially dangerous event, to minimize injuries to people and damages to property.

#### **Awareness campaign**

An awareness-raising campaign is a broadly organised effort to change attitudes or behaviours based on the ability to communicate the same message to a variety of audiences using a range of approaches (Sayers, 2006).



### 3.2 Analyzing the issue

To develop a joint approach to a public initiative for enhancing awareness on an hazard and for implementing it in different countries an analysis of the different aspects of the issue needs to be carried out, identifying similarities and differences in order to adapt the campaign strategy consequently.

The forest fire issue involves many regions of South European countries, most of them facing the Mediterranean. The fire season generally begins in May and ends in October. There are, however, exceptions: in some years very severe fires have been recorded in October and are related to favourable meteorological conditions lasting more than normally expected. In some regions (e.g. the Alps) forest fires occur during the winter, generally after prolonged periods of drought. In some regions, however, severe fires are recorded both during the summer and in the winter (e.g. Liguria in Italy and the French Cote Azur). These simple observations highlight the need to differentiate the period when a fire prevention campaign has to be carried out.

In some regions fires are strictly connected with agro-silvo-pastoral activities and depend on social tensions connected with economic aspects or traditional practices. In some cases the number of forest fires has shown to be related to specific economic indicators (Dogandjieva, 2008). In other areas the pressure for building activities may be one of the driving forces. Although the identification of fire causes is still somehow uncertain in most countries, where reliable indications exists prevention campaigns should consider them carefully to precisely identify targets to be addressed.

Referring to the people involved, fires may occur near or in residential areas (Wildlife – urban interface fires) or in remote, scarcely populated regions or in densely crowded tourist areas. In coastal tourist sites, for example, the prevailing visitors may be represented by young people who are often reluctant to adopt careful behaviours or to consider local fire danger. On the contrary hikers visiting mountainous areas are generally very careful to the danger conditions. In many areas, however, it is difficult to find proper information in the desired language. These differences, just to mention a few, should be carefully considered and the campaign strategy accordingly planned.

In the framework of the project MI.R.TO. this analysis was partly carried out before the project started and partly during the project meetings. This work highlighted a number of simple but important similarities and differences among the countries involved in the project. The approach considered these aspects and the general strategy was accordingly adapted. The key elements the project are the following:

- the campaign is planned for the summer period,
- the main target group are tourists travelling to Mediterranean islands,
- the campaign is implemented in 4 pilot areas, one for each county involved,
- the general approach is multilingual: languages of the material produced must consider the different places of origin of the tourists,
- three subgroups are identified and addressed during the campaign: young people (17 -25 years), tourists in summer camps, hikers, tourists spending the holidays in private houses,
- a multichannel approach is adopted: different communication media will be considered,
- involvement of stakeholders: the support of local stakeholders is of utmost importance,
- involvement of other relevant players is also considered (e.g. schools),
- monitoring of tourists' response to the different media and messages is planned.



## 4. Project implementation process

### 4.1 Collection and critical assessment of content and effectiveness of existing information campaigns

Responsible for the **Action B.1 “Critical assessment of collected forest fire data and existing information campaigns”** was the University of Thessaly. An in-depth discussion of the aims of this task was carried out at the first Steering Committee of the project held in Livorno (IT), December 17<sup>th</sup>, 2009. Following the conclusions drawn, an analysis regarding the relationships between emergency forest fire situations and tourist protection was carried out by collecting materials developed in the framework of several forest fire prevention campaigns. The project proposal already contained indications of the media which would be taken into consideration by the MI.R.TO. project. Videos, handbooks, posters and brochures were all considered potential means to be adopted for the MI.R.TO. information campaign.

The research into previous information campaigns was broadened in time (concentrated on recent years but including also videos as far back as the seventies), as well as geographically (including videos from participating countries but also from other European countries as well as US, Canada, Japan). Over 60 different videos regarding fire prevention campaigns were collected and examined. Examples are reported in the website [www.apf-info.eu](http://www.apf-info.eu). Posters, brochures, information material, handbooks, manuals and other kind of printed items were also collected. The material from the US represents the large majority due to the high relevance of the fire issue in that country and the long experience gathered in over 70 years of fire prevention campaigns. The first video which could be found was indeed shot in the '40ties in the USA in the framework of a prevention campaign promoted by the US Forest Service and was played by the known actor Rod Serling. Videos shot in the '80s and '90s can be easily found on the web. No institution, as far it was known, has organized collections of the forest fire prevention material developed in the past.

Interestingly, it showed, for general as well as tourist audiences, a tendency away from scaremongering and shocking images to more creative approaches and a focus on establishing a cooperative relationship with the audience, asking for their responsible behaviour. It appears this is not only a necessary approach for the project to ensure the cooperation of the tourism industry in the distribution of campaign materials but also an approach which is currently considered effective.

The analysis considered different aspects of the campaign approach. Referring to the video the attention was focuses on the kind of message, on the related audience, the length of the video, the place (the environment) it was shot, the general impact which could be expected and the emotions stimulated (fear, cooperation, responsibility, involvement, etc.)

The critical assessment of information needs was implemented by means of a questionnaire prepared by Task Coordinator University of Thessaly and the Prefecture of Magnesia. Messages deriving from previous campaigns were collected and the project partners were asked to assign marks to each message, eventually involving communication or civil protection experts. The document was finalised in agreement with all project beneficiaries in January 2009 and included a marking system which rated the importance of each element of information and communication.

The results of the questionnaires completed by all beneficiaries were circulated and a list of priority messages which were to be part of the project video and manuals were defined.



Table 2 and 3 report the messages collected and the average marks assigned by the MI.R.TO. team.

Two approaches were considered:

- a general approach (Table 2): introductory issues per category and vacations' mode,
- an analytical approach (Table 3): specific issues per category "prevention"/ "preparedness" and vacations' mode.

Three marks were requested to all partners to assess a) the relevance of the topic for the videos (Mark A), b) if the video is the appropriate means to address the topic (Mark B) and c) spatial (geographical) importance of the topic (Mark C). Indications for assigning the marks were the following:

Mark A: please assign a mark which reflects how much you consider important that the video (one of its episodes) addresses the specific topic (importance)

- 0 no importance
- 1 scarcely important
- 2 very important
- 3 extremely important

Mark B: please assign a mark which reflects, according to your opinion, if the video may be regarded as appropriate means to address the specific topic (effectiveness)

- 0 not effective
- 1 scarcely effective
- 2 effective
- 3 very effective

Mark C: please assign a mark which reflects your opinion if the topic is of general importance or if it is restricted to particular conditions/environments

- 0 local importance for few countries
- 1 local importance to several countries
- 2 regional/national importance
- 3 overall importance

Crossed messages reported in the tables were considered as inappropriate, ambiguous or dangerous examples.



	GENERAL	important topic for the video	video is appropriate means to address the topic	spatial importance of the topic
1	Fire Prevention			
1.01	Summer Camp Visitors			
1.01.01	Arriving at the destination island ask fire related material from tourists information points and make sure to give all your contact details	2,83	3,00	2,83
1.01.02	Arriving at your summer camp, ask to be informed for emergency meeting points, exits, evacuation paths and places from where to be evacuated, both for fires from inside and outside camp. Study all available material (e.g. emergency plans, contact lists...)	3,00	2,83	3,00
1.01.03	Before leaving your camping for any destination ask for weather forecasts	2,17	2,00	2,50
1.01.04	Before leaving your camping for any destination ask for fire risk forecasts	2,67	2,50	2,83
1.01.05	Do not light fire in the open - it is forbidden during the summer time	2,83	2,00	3,00
1.01.06	If you start a fire, you will be fined	1,67	1,00	3,00
1.01.07	If the fire you start gets out of control, you will be prosecuted	1,67	1,00	3,00
1.02	Hikers/ Back-Packers			
1.02.01	Arriving at the destination island ask fire related material from tourists information points and make sure to give all your contact details	2,83	3,00	2,83
1.02.02	Before leaving your home/ hotel/ camping ask for weather forecasts	2,50	2,33	2,83
1.02.03	Before leaving your home/ hotel/ camping ask for fire risk forecasts	2,83	2,67	3,00
1.02.04	Do not light fire in the open - it is forbidden during the summer time	2,67	2,17	3,00
1.02.05	If you start a fire, you will be fined	1,67	1,17	3,00
1.02.06	If the fire you start gets out of control, you will be prosecuted	1,67	1,17	3,00
1.03	Cottage Owners or Visitors			
1.03.01	Arriving at the destination island ask fire related material from tourists information points and make sure to give all your contact details	2,67	2,83	2,83
1.03.02	When leaving the house, close hermetically all windows, doors of the house and the car; roll in the tents of balconies and windows and the sun umbrellas	1,17	0,83	1,67
1.03.03	Before leaving the house ask for weather forecasts	2,17	2,17	2,67
1.03.04	Before leaving the house ask for fire risk forecasts	2,50	2,50	2,83
1.03.05	Do not light fire in the open - it is forbidden during the summer time	2,50	2,00	3,00
1.03.06	If you start a fire, you will be fined	1,50	1,00	3,00
1.03.07	If the fire you start gets out of control, you will be prosecuted	1,50	1,00	3,00
2	Fire Preparedness			
2.01	Summer Camp Visitors			
2.01.01	Inform camp staff directly in case of fire or smoke or ashes or incandescent particles	2,00	1,83	2,00
2.01.02	Leave all your personal belongings and go directly to emergency meeting points	3,00	3,00	3,00
2.01.03	In case of fire, If you do not find any camp staff to guide you, go directly to the nearest beach	2,50	2,00	2,17
2.01.04	Avoid using your car if no specific orders by officials exist	2,00	1,67	2,00
2.01.05	If you see fire, call emergency number	2,50	2,00	3,00
2.02	Hikers/ Back-Packers			
2.02.01	In case of fire: do not panic! Stop, breath, think and decide	2,67	2,33	2,83
2.02.02	If you feel unsafe, especially in the forest, search for any open space, water reserve (river, lake) or safe building which can host you	1,67	1,83	2,33
2.02.03	If you see fire, call emergency number	3,00	3,00	3,00
2.03	Cottage Owners or Visitors			
2.03.01	In case of fire: do not panic! Stop, breath, think and decide	2,67	2,33	2,83
2.03.02	Contact immediately authorities. Give precise position, situation and estimation of danger	1,83	1,33	2,00
2.03.03	If you see fire, call emergency number	3,00	3,00	3,00

Table 2. Fire awareness and preparedness messages for tourists – General approach



	DETAILED	important topic for the video	video is appropriate means to address the topic	spatial importance of the topic
1	Fire Prevention			
1.01	Summer Camp Visitors			
1.01.01	Arriving at your summer camp, look at safety instructions and check local regulations	3,00	2,71	3,00
1.01.02	Arriving at your summer camp, look at emergency meeting points and exits and evacuation plans	2,86	2,29	3,00
1.01.03	Do not throw burning cigarettes and matches on the ground	2,86	2,86	3,00
1.01.04	Do not light camp fires when and where not permitted	2,86	2,43	3,00
1.01.05	If camp fires are permitted, mind to light them away from flammable natural or synthetic objects and do not forget to clean-up the area first	1,43	1,71	2,29
1.01.06	If camp fires are allowed, light a fire only in special areas dedicated to barbecues, and water it before leaving	1,86	1,71	2,43
1.01.07	Pay attention to safe cooking procedures	1,57	1,43	2,43
1.01.08	Do not light any kind of fire inside your tent	1,86	1,71	2,57
1.01.09	Do not use firecrackers and fireworks	1,86	1,43	2,43
1.01.10	Pay attention to your children not to play with lighters, matches, cooking equipment, etc	2,00	1,43	2,14
1.01.11	Avoid to use lamps with gas	1,43	1,43	2,43
1.01.12	Mind to throw your garbage regularly to the bins and do not leave them under the sun	1,14	1,14	2,00
1.01.13	Do not leave gas refills under the sun	1,57	1,43	2,29
1.01.14	Always park your car in dedicated areas, outside the camp	1,43	1,29	2,00
1.02	Hikers/ Back-Packers			
1.02.01	Give the preference to light colored clothing, avoid green or black clothes	1,71	1,43	2,29
1.02.02	Before leaving your home/ hotel/ camping ask or inform yourself for weather forecasts	2,29	2,57	2,86
1.02.03	Before leaving your home/ hotel/ camping ask or inform yourself for fire danger forecasts	2,71	2,86	3,00
1.02.04	Always inform your hotel/ camping/ relatives where you are directed to and never modify the route you have planned	2,57	2,57	2,57
1.02.05	Always carry a mobile phone with you with a sun charger (it may be useful that it also works as FM radio and/or GPS) and mind to carry with you local emergency numbers	1,43	1,29	2,29
1.02.06	Always carry a map or GPS with you	2,57	2,00	2,29
1.02.07	Do not throw burning cigarettes on the ground, extinguish the cigarette butts and take them with you	1,86	1,86	2,57
1.02.08	Do not light fires or barbecues if you free camp	1,86	1,71	2,57
1.02.09	Pay attention to safe cooking procedures and prefer auto-heating meal	1,00	0,71	1,86
1.02.10	Do not leave gas refills under the sun	1,43	1,29	2,43
1.02.11	Avoid to use lamps with gas	1,57	1,57	2,43
1.02.12	Mind to collect your garbage and carry them with you until you find a trash can to place them	1,71	1,57	2,57
1.02.13	Stand up if someone is doing something dangerous for him/her and the environment	2,57	2,29	2,86
1.03	Cottage Owners or Visitors			
1.03.01	Do not burn garbage or other flammable materials	2,00	1,29	2,71
1.03.02	Avoid to light up open space barbecues close to the woods or flammable materials	2,29	2,14	2,43
1.03.03	Mind to avoid open space works that are dangerous of creating sparks or starting a fire such as chainsawing, vegetation clearing, welding	1,71	1,29	2,29
1.03.04	Do not throw burning cigarettes on the ground	2,14	1,71	2,57
1.03.05	Mind to throw your garbage regularly to the bins and do not leave them under the sun	1,57	1,14	2,29
1.03.06	Develop a non-burning zone around the house by transferring all flammable material to a distance more than 10 meters	1,86	2,00	2,29
1.03.07	If a gas bottle is necessary for the house, store it in a safe place with noncombustible walls	1,14	0,86	2,57

Table 3 (continued). Fire awareness and preparedness messages for tourists – Detailed approach





	DETAILED	important topic for the video	video is appropriate means to address the topic	spatial importance of the topic
1.03.08	Cut the branches of your trees up to a height of 3m, depending on their age and the condition of their branches	1,14	0,86	1,43
1.03.09	Take away all branches from trees and bushes around the house	1,29	1,14	1,43
1.03.10	Do not leave tree branches touching the walls, the roof and the balconies and cut them so that they are 5 meters away	1,29	1,00	1,57
1.03.11	Lop around your house the trees and bushes so that the branches of each tree are 3 meters away from the other and there is nowhere thick plantation	1,43	1,14	1,29
1.03.12	Do not place plastic water pumps on the external walls of your house	1,29	0,86	1,29
1.03.13	Owners must refer to regulation and prepare their house according to it - Visitors have to consult it and see the renting agency in case of its non-respect	2,43	1,86	2,43
1.03.14	Protect externally the windows and glass doors, placing window covers made of non-flammable materials	1,14	0,71	1,00
1.03.15	Cover the chimneys and air pumps with non flammable materials to avoid sparkles to enter the internal parts of the house	0,86	0,71	1,14
1.03.16	Sweep chimneys annually	1,29	1,14	1,57
1.03.17	Regularly clean the roof and drainpipes from all combustible materials (pine needle)	1,86	1,57	2,14
1.03.18	Regularly clean the dry vegetables in the garden, especially near a vegetal hedge	1,86	1,43	2,29
1.03.19	Maintain the vegetal hedge cleaned and green	1,86	1,43	2,14
1.03.20	If the house is equipped with a swimming pool, maintain the access to it for fire trucks	1,86	1,57	1,71
1.03.21	Prefer less combustible species (e.g. oak to pine); plant combustible species at a safe distance from the house	1,71	1,29	1,86
1.03.22	Do not place flammable objects close to the house	2,00	1,71	2,43
1.03.23	Avoid to leave gas tanks uncovered near your house	2,00	1,57	2,57
1.03.24	Place fire-wood in closed and protected spaces	1,86	1,57	2,43
1.03.25	Supply the house with fire-extinguishers and mind for their conservation	1,71	1,57	2,43
1.03.26	Supply the house with water pumps with a length equal to the area that you want to protect in case of forest fire	1,43	1,14	2,00
1.03.27	A water tank and a simple water pump operating without electricity can protect you from a fire	1,43	1,14	2,00
1.03.28	Make sure your family knows emergency phone numbers and your kids know how to place a call for help	2,00	1,86	2,00
1.03.29	Write each emergency phone number clearly so that it will be easy for everybody to read	2,71	2,71	2,71
1.03.30	Complete the MI.R.TO. self hazard assessment form and assign yourself the points indicated for each area (house, garden, etc.)	2,00	1,43	2,57
1.03.31	Become acquainted with your neighbours, ask for advice!	1,86	1,86	2,43
1.03.32	Always put emergency numbers near the phone	2,86	2,86	3,00
1.03.33	When leaving the house, close hermetically all windows, doors of the house and the car; roll in the tents of balconies and windows, the sun umbrellas	2,14	1,71	2,29
1.03.34	Always store garden furniture at a safe distance from the house	1,86	1,29	2,29
2	Fire Preparedness			
2.01	Summer Camp Visitors			
2.01.01	Inform camp staff directly in case of fire or smoke or ashes or incandescent particles	2,86	2,71	2,86
2.01.02	Smell of smoke and flying ash particles are the first signs of fire - their intensity is the indication of the size of the fire and its proximity	1,57	1,43	2,57
2.01.03	Leave all your personal belongings and go directly to emergency meeting points or exits	3,00	2,57	2,57
2.01.04	As far as possible, do not stay in swimming suite, put cotton clothes	1,29	1,14	1,43
2.01.05	Stay calm, do not panic	2,86	2,71	3,00
2.01.06	Check that all your family/ friends/ travelmates are with you, stay together and follow the instructions of the camp staff	3,00	3,00	2,71
2.01.07	Help people that need support but try not to separate travel groups	2,14	1,71	2,71

Table 3 (continued). Fire awareness and preparedness messages for tourists – Detailed approach



	DETAILED	important topic for the video	video is appropriate means to address the topic	spatial importance of the topic
2.01.08	Do not question the indications/ orders of the camp staff and evacuate immediately when you are told to	1,71	1,71	2,57
2.01.09	Immediately report to the camp staff if you have noticed people needing help and you could not help them for any reason	2,71	2,43	2,57
2.01.10	Do not try to go to the parking area to find your car and do not enter your car if it is close to your area - Move by foot only	1,57	1,57	2,29
2.01.11	If you do not find any camp staff to guide you, go directly to the nearest beach	1,71	1,86	2,14
2.01.12	If smoke is very abundant, mind to cover your face with a wet cloth	2,00	2,00	3,00
2.01.13	Avoid trying to extinguish the fire or to take part in other operations if you are not trained or not asked to by the camp staff or authorities	2,00	1,86	2,43
2.02	Hikers/ Back-Packers			
2.02.01	Smell of smoke and flying ash particles are the first signs of fire - their intensity is the indication of the size of the fire and its proximity	2,00	1,86	2,29
2.02.02	Call emergency directly in case of fire or smoke, even if you think or have heard that someone has already called	3,00	3,00	3,00
2.02.03	When you call emergency, inform the operator exactly where you are, what you see and if possible give clear reference points	2,86	2,86	3,00
2.02.04	When you call emergency, inform the operator how many people are with you and if you need help, don't question the operator's judgement or ignore his/ her instructions and do not hang up til the operator do not ask you to do it	2,57	2,57	2,57
2.02.05	If you feel unsafe, especially in the forest, search for any open space, water reserve (river, lake) or safe building constructed with uncombustible materials which can host you	2,00	1,71	2,29
2.02.06	Give priority to broader mapped trails, with less dense vegetation	2,14	2,14	2,29
2.02.07	Mind to go away from the forest fire, do not try to extinguish it, remember that the fire travels faster as quicker is the wind towards the direction of the wind, and also that it travels faster uphill than downhill	2,29	2,43	2,57
2.02.08	Go away from the fire in a direction perpendicular to the fire propagation	2,14	1,86	2,43
2.02.09	Attach or keep your pets on a leach	1,57	1,29	1,86
2.02.10	Do not hide in holes, caves or grottos above the elevation of the fire as you might me intoxicated by the smoke	1,57	1,29	2,29
2.02.11	If you are driving do not stop, avoid hindering the fire brigade and look for a safe parking space	1,86	1,86	2,14
2.02.12	In case you have started a fire, although forbidden, and your fire has got out of control, use a piece of clothing or towel to put out the fire	1,43	1,29	2,43
2.02.13	In case you have started a fire, although forbidden, and your fire has got out of control, do not try to put the fire out using water unless you have big buckets of water close by try to put the fire out using water	1,43	1,57	2,00
2.02.14	In any case: do not panic! Stop, breath, think and decide	2,43	2,14	2,43
2.03	Cottage Owners or Visitors			
2.03.01	Call immediately the emergency and give specific information on the area and your location, as well as the area and location that you see fire	2,57	2,57	2,57
2.03.02	When you speak with the emergency, describe the kind of plantation burning, specify the direction of the fire and do not hang up the phone before you give all necessary info and before you are asked to	2,29	2,29	2,29
2.03.03	Keep calm and do not panic!	2,43	2,00	2,57
2.03.04	Take directly away all flammable material from the periphery of your building and the swimming pool and transfer them to closed and safe spaces	1,43	1,00	1,71
2.03.05	Close all entrances (chimneys, windows, doors, etc) to avoid sparkles enter the internal of your house	2,14	1,29	2,00
2.03.06	Turn off all natural and liquid gas switches inside and outside the building	1,71	1,14	2,29
2.03.07	Roll in the tents in the balconies and windows of the building	1,57	1,00	2,14
2.03.08	Open the garden's door to ease the entrance of the fire-brigade's vehicles	1,71	1,14	2,00
2.03.09	Place a ladder in the external wall of your building facing opposite from the coming fire so that someone can climb directly on its roof	0,43	0,43	0,57
2.03.10	Connect irrigation pumps with the taps in the external part of your house and place the pumps on the ground in a way that all the perimeter of the house can be covered	1,57	1,14	1,71

Table 3 (continued). Fire awareness and preparedness messages for tourists – Detailed approach



	DETAILED	important topic for the video	video is appropriate means to address the topic	spatial importance of the topic
2.03.11	If visibility is decreased, turn on the internal and external lights of the building so that it can be easily seen through smoke	1,57	1,43	2,00
2.03.12	If fire is outside your house, do not attempt to abandon it, <del>except if your exit is absolutely secure</del> except if the house is wooden	2,14	1,71	2,43
2.03.13	If fire is outside your house, do not attempt to enter your car and drive through the road	2,14	2,29	2,43
2.03.14	Your possibility to survive in a house made of non flammable material is big, though small in a car that falls in flames and smoke	1,86	1,14	2,00
2.03.15	Enter your house with all the family and pets	2,14	1,43	2,00
2.03.16	Close the doors, windows and shutters firmly and put wet cloths in all short openings to avoid smoke come inside the building	2,00	1,57	2,00
2.03.17	Take away curtains from the windows	1,57	1,00	1,86
2.03.18	Take furniture away from the windows and external doors	1,57	1,00	1,71
2.03.19	As far as possible, water the house, more particularly the wooden parts (wood beams) and the roof	2,29	1,71	2,29
2.03.20	Park the car in the garage, or far from the house in the direction to leave	1,71	1,57	2,14
2.03.21	Close all internal doors to slow down the spread of the fire inside the building from one room to another	1,14	1,00	1,71
2.03.22	Fill in the shower tube, tins and tubes with water	1,86	1,57	2,00
2.03.23	Gather all together in one room	2,14	1,86	2,29
2.03.24	Mind to have a light and spare batteries near you in case the electricity goes off	2,00	1,43	2,29
2.03.25	If your house is made of wood, try to find a shelter in the nearest house from concrete material	1,57	1,14	1,71

Table 3. Fire awareness and preparedness messages for tourists – Detailed approach

According to the marks assigned and the results of the discussion held among the partners a final set of messages were defined for the videos, for the brochures and the handbooks (see chp.4.3). The messages considered relevant for the video (Table 4) were forwarded to the film school.

Type of action	CAMP	HIKERS	HOUSE VISITORS
To be informed	Ask for safety instructions Safe cooking instructions	Ask for weather/fire danger forecasts Inform someone GPS Safe cooking instructions	
Not to do	Do not light fire on open – it is forbidden Do not throw cigarettes, matches... or fire can be caused by firecrackers Garbage		
Should do	Emergency numbers Neighbours Stand up if someone is doing something wrong		When living the house close doors and windows Swimming pool access Flammable objects remove Fire wood keep safe
Should not	No need for heroes		
Should do	Don't stop the car Do not panic- Stay calm In case of fire or smoke call emergency numbers Follow instructions of authorities Remember the beach is the safest place to be in case of fire	Stick on main trails	If surrounded by fire or smoke the safest place is in the house Stay in the house, close the doors and windows, call 112 Don't stop the car

Table 4 . Messages to be included in the 5 videos planned



The messages to be included in the brochures are reported in Table 5.

Type of action		PREVENTING A FIRE
Not to do		Don't light open fires: it's forbidden
Behave responsibly		<ul style="list-style-type: none"> <li>Don't play with matches, fireworks or firecrackers</li> <li>Don't throw your cigarette butt on the ground</li> <li>Always throw your garbage in bins</li> <li>Avoid parking your car on dry grass the engine is hot</li> </ul>
Stay on the safe side	When you stay in a private house	<ul style="list-style-type: none"> <li>Always maintain a free and clean access to the house</li> <li>When leaving the house, close all windows, shutters and doors</li> </ul>
	When you stay in a camp site	<ul style="list-style-type: none"> <li>ask for the safety instructions as soon as you arrive</li> <li>Ask for safe cooking instructions &amp; camp functioning</li> </ul>
When you are walking or hiking		<ul style="list-style-type: none"> <li>always ask for weather and fire danger forecasts</li> <li>inform someone of your route</li> <li>don't forget to carry a map and your phone with you</li> </ul>
Type of action		IN CASE OF FIRE
If you see smoke or fire		<ul style="list-style-type: none"> <li>Stay calm, don't panic</li> <li>Call emergency, giving clear information</li> <li>Follow the instructions of authorities</li> </ul>
If you are in a house		<ul style="list-style-type: none"> <li>Your house is the safest place to be</li> <li>Open the yard's gate &amp; let the house's access free for firemen</li> <li>Gather inside the house</li> <li>Close all windows, shutters and doors</li> </ul>
If you are in a camp site		<ul style="list-style-type: none"> <li>Gather to the nearest emergency meeting point</li> <li>Follow the instructions of authorities</li> </ul>
If you are walking or hiking		<ul style="list-style-type: none"> <li>Stay together on main trails</li> <li>Move away from fire or smoke</li> </ul>

Table 5. Messages to be included in the brochures

Due to its high importance and very detailed execution the task took a time longer than the one planned. Responsible for the **Action B.2: International workshop for comparison of current situations and information needs** was the University of Thessaly. This action was developed as planned. The issue was discussed and finalized in a video conference held on February 26<sup>th</sup>, 2009. The final discussion took place at the Milano (March 2010) meeting while the meeting to be held in Greece was postponed to the end of the summer.

## 4.2 MI.R.TO. logo and slogan

The Prefecture of Magnesia suggested as first decision to take after the kick-off meeting the choice of an attractive and easy to remember logo. Sketches were submitted to partners who, generally preferred simple, joyful and coloured proposals with slight reference to forest fires.

Similarly a slogan to report on each project product had to be identified. A slogan is a catch phrase or small group of words that are combined in a special way to identify a product, a company or a specific



initiative. In social communication slogans are particularly effective when capable to communicate a new project especially if it is addressed to a target group one can easily identify him/herself.

Safety and forest fire awareness are crucial topics and a huge number of slogans have been created through the years to attract people on campaign messages. The MI.R.TO. team analyzed a large number of possible slogans. The one which met the unanimous appreciation of the partners is:

**ENJOY, RESPECT, COME BACK**

## 4.3 Production of video

According to the project proposal Italian film academies were contacted to involve them in the production of the video to be broadcasted on ferries. Ambiente Italia, responsible for coordinating this action, invited at the beginning of 2010 three film schools operating in Italy:

- the Italian National Film School (<http://www.snc.it>) with offices and studios both in Rome and Milan, (Rome, via Tuscolana 1524), one of the oldest and most experienced school of this kind operating in Italy,
- the Libera Accademia Cinematografica ([www.liberaccademiacinematografica.com](http://www.liberaccademiacinematografica.com)) a relatively young film school located in Macerata, Central Italy,
- the Accademia del cinema ([www.accademiadelcinema.it](http://www.accademiadelcinema.it)) located in Bologna.

All the schools were invited to the kick-off meeting. Discussions with the teaching staff of these film schools took place shortly after the meeting. Initially the Libera Accademia Cinematografica of Macerata (present at the Kick-off meeting in Livorno) was chosen for the interesting proposals of the teaching staff and their enthusiasm in participating in the MI.R.TO. project. Unfortunately, due to internal reorganisation the academy declared itself unable to proceed. The other schools highlighted the need for longer time for preparing the videos or requested more money than available.

Due to these difficulties the planned contest among film schools was not carried out. Ambiente Italia contacted other film schools in Milano, active in different field of communication development, and finally the film school Mohole (<http://scuola.mohole.it/>) was chosen. Mohole, which accepted to cooperate adopting the approach defined by the MI.R.TO. team (direct and strong involvement of the students, development of several proposals, definite movie length) is a private company directed by Cosimo Lupo, a film and theatre director and himself an actor.

The final agreement with the Mohole School was signed in spring 2010. Mohole accepted to take part to the task by organizing internally the contest among different student groups. In addition, Mohole indicated to be able to deliver the whole package (from filming to final product dubbed in 6 languages) in a relatively short time and within budget. A communication expert from Ambiente Italia (Cristina Soldati) assisting the project manager was appointed specifically for the daily follow-up with the school in order to ensure timely delivery and coherence to the technical brief. This cooperation has given excellent results (video production on schedule, ready on 30<sup>th</sup> April). Various meetings and telephone discussions took place with the school including a briefing meeting with students and director in February.

On March 18<sup>th</sup>/19<sup>th</sup>, 2010 an international meeting for the video selection by the project partnership took place in Milan in which the video proposals were presented at the MOHOLE school. The school had

divided its students into groups and several storyboard proposals were shown and verbally explained by its producers with the support of power point presentations.

The technical requirements had stated that the video should be 5 minutes long, made up of five one minute episodes (5 short stories addressing the priority messages – warnings and recommendations – to be communicated to tourists) and take place in a neutral but Mediterranean setting. The presentations were followed by a discussion among project beneficiaries which led to a common agreement on the most suitable video concept. It was agreed with the producers that the project beneficiaries would subsequently receive the screenplay so as to check that all the content is equally acceptable and appropriate to each pilot location.

The project beneficiaries further decided to trust the creativity of the MOHOLE team and not to dwell on anything more but the appropriateness of the content. The video was finished with a little delay on the schedule but still in a big advance for the information campaign. The Mohole School was strongly committed in preparing the scripts according to the M.I.R.TO. team indications, shooting the videos and performing the dubbing in the different languages on the basis of the translations provided by the project partners.

As planned the 5 videos were dubbed in 6 languages. According to the results of a in-depth discussion among the project partners all languages were represented in a composite video to be broadcasted on ferries.

The videos are available in the different languages on the attached DVD, on the website, and since recently, are visible on the YouTube channel ([www.youtube.com](http://www.youtube.com)). Tags for the videos are EU, prevention, tourists, forest, fire.



Figure 5. Screenshots of the videos produced for the information campaign.





### 4.3 Production of brochures, handbooks and posters

The Coordinator of the Task D1 “ **Elaboration of texts for the handbook for camp sites – printing of handbooks**” was the French partner CEREN. Preparatory actions were the collection of examples from previous campaigns, the drafting of the brochure and a table of tourist arrival statistics in participating countries regarding the total number of tourists, most frequent languages in pilot areas and the proportion of tourists staying in camp sites and private houses (commercial, not second homes).

The initial objective of this action was to produce a concise handbook (some 20 pages) addressing tourists on camping sites on how they can help reducing fire risks by adopting a correct behaviour, enhancing their awareness and preparedness, and to highlight the consequences of fire on people and properties.

An in-depth discussion at the meeting held in Milano in March 2009 brought to the conclusion that the booklet, initially planned, was probably too long to be carefully read by most tourists and challenging for the MI.R.TO. team considering the short time available before the summer campaign.

It was thus decided to prepare a brochure to address tourists on their way to their holiday destinations to be distributed on ferries, summer camps, tourist offices, etc. The brochure would address both the issues of awareness raising on forest fires and preparedness of tourists to face emergency situations.

The topics of the brochure refer to the issues already defined in the project proposal but were refined according to the guidelines produced in the previous project task. The graphic lay-out was elaborated by Task Coordinator CEREN (AB3, France) in an intense cooperation via email with project partners.

The final version of the brochure is reported in Figure 6. The external part reports the project name, the slogan (ENJOY, RESPECT, COME BACK), a map and pictures of the pilot areas involved in the campaign.

The general vision of the brochure according to CEREN was to highlight the potential devastating action of fire on the natural environment. Pictures on the external side underline the general message: “The forest is a paradise to protect....don’t transform it into hell”.

The brochure inner part contains most of the messages the project wishes to address to tourists. It is divided in two columns, the first regarding awareness raising and the second, on the right, preparedness of tourists. Among the awareness raising messages the fire ban during the fire season is recalled as the most important. Other message are related to the use of fireworks, smoking, garbage collection, and parking of cars.

The second row on the left part gives advice for peoples spending their holiday in private houses and in summer camps. Finally the last group of messages refer to hikers.

On the left side of the brochure the information reported indicate what to do in case of emergency. The European Emergency number 112 is highlighted together with some important advice for people hiking, spending their holidays in camp sites or in holiday houses.

The version distributed in Italy, according to a specific request of local authorities, reported also other emergency numbers, active in the area.

**ENJOY** your holidays  
on Mediterranean islands

**RESPECT** the nature & forest

The forest is a paradise to protect...



...don't transform it into hell



And you'll have the pleasure to  
**COME BACK**

**MIRTO** at a glance

**Title:** Minimizing forest fire Risk for Tourists

**Duration:** 18 months

**Start date:** 01/12/2009

**Consortium:** Mutual action of four European countries

MIRTO is a European program on forest fire prevention and preparedness designed for tourists in Mediterranean islands: Hvar, Corsica, North Sporades islands, Elba.

The purposes of this program are to increase awareness of populations to forest fire risks in fire prone areas, and improve their preparedness as well as the effectiveness of forest fire information campaigns in different islands of the Mediterranean area.

Thus, a single campaign is launched by 4 European countries during this summer, based on these brochures and videos dedicated to tourists.



Campaign co-financed by  
European Commission,  
DG Environment, Civil Protection Unit  
Grant Agreement 070401/2009/S40455/SUB/a4

More info on  
[www.eu-mirto.net](http://www.eu-mirto.net)

**ENJOY**  
**RESPECT**  
**COME BACK**

**FOREST FIRE  
PREVENTION**

**IS A  
PRIORITY**



Elba, Italy

Hvar, Croatia

Corsica, France


North Sporades, Greece

**PREVENTING A FIRE**

**4 fires out of 5 are due to carelessness**


**Play your part in fire prevention**

**What not to do**




Don't light open fires,  
it's forbidden


**Behave responsibly**




Don't play with matches,  
fireworks or firecrackers



Don't throw your cigarette butt  
on the ground



Always throw your garbage  
in bins



Avoid parking your car on dry grass  
the engine is hot

**Stay on the safe side**

**When you stay in a private house**

- Always maintain a free and clean access to the house
- When leaving the house, close all windows, shutters and doors

**When you stay in a camp site**

- Ask for the safety instructions as soon as you arrive
- Ask for safe cooking instructions & camp functioning

**When you are walking or hiking**

- Always ask for weather and fire danger forecasts
- Inform someone of your route
- Don't forget to carry a map and your phone with you

**IN CASE OF FIRE**

**If you see smoke or fire**

- Stay calm, don't panic
- Call emergency, giving clear information
- Follow the instructions of authorities

**112**

**If you are in a house**

- Your house is the safest place to be
- Open the yard's gate & let the house's access free for firemen
- Gather inside the house
- Close all windows, shutters and doors

**If you are in a camp site**

- Gather to the nearest emergency meeting point
- Follow the instructions of authorities

**If you are walking or hiking**

- Stay together on main trails
- Move away from fire or smoke

Figure 6. Final version of the brochure (English version). Versions in other languages are included in the project DVD and can be downloaded by the websites.





The brochure was developed by CEREN with the support of the other project partners and was available for the information campaign in six different languages (Croatian, English, French, German, Greek, Italian). The brochure was first presented as draft to the local stakeholders. The layout and the information reported were generally appreciated. The discussion with stakeholders was mainly focussed on the difficulties to distribute the brochure to the relevant number of summer camps and tourist structures present in the different areas considered.

At the Zagreb meeting (May, 2010) the final version of the brochures was approved by the MI.R.TO. team and adopted for the information campaign. The approved project budget foresaw the printing of small numbers of campaign brochures for the different language by each partner. The project proposal had not anticipated how much this would increase costs. Based on received quotes, the MI.R.TO. team decided to print all brochures together in a single printing contract with a single printing company. Ambiente Italia (CB) was responsible for printing. It was planned to divide payments for the printing proportionally among all partners but it was impossible because all printing companies contacted for quotes refused to accept split payments between partners and in potentially different dates. The printing contract was finally paid for by Ambiente Italia (CB). As such, the CB overused its budget provision for Task D “printing”, whereas project beneficiaries had not used their provisions.

Copies were printed in the various languages, according to the number of tourists expected from the countries considered by the project (Table 5).

Languages	Copies printed
Italian	44600
Croatian	2600
German	11800
French	15500
English	13500
Greek	12000
Total	100000

Table 5. Number of brochure printed in the different languages

The Italian pilot area received a higher number of brochures due to the availability of voluntary associations and of the National Forest Service (CFS) which supported the campaign distributing the material to the summer camps and holiday structures (250 in total).

To ensure visibility and make sure that project results were being used it was essential to provide dispensers exposing brochures in a visible and well-arranged way at distribution points. Ambiente Italia carried out the design and subcontracted the production of the dispensers (200 pieces). The dispensers were distributed according to the brochure sent to each partner: 66 to the Italian pilot area, 50 to Corsica, 60 to Greece and finally 24 for the Croatian island of Kvar. Other 200 dispenser were ordered by the Province of Livorno. The dispensers and the related instructions for mounting (Figure 7) were sent to the project partners together with the brochures.



Figure 7. Dispenser for the distribution of the brochures.

It should be highlighted, however, that the most effective way to have the brochure noticed and read, was to involve receptionists of summer camps in the campaign asking to hand it to the tourist when checking in. This was possible in a limited number of structures and the dispenser was considered by all partners a satisfying way to differentiate the brochure from the huge amount of commercial brochures generally available at tourist structure receptions.

The MI.R.TO. team focussed then its attention on the development of a posters referring to the awareness raising initiative. Posters can be indeed considered quite useful in communicating messages and thus if well designed can sometimes prove more effective than other printed warnings or instructions. Quite a lot of people retain messages longer when they are presented in visual form.

The commercial sector knows that blending text with graphics is often one of the most effective way to communicate and draw emphasis to an issue or subject. Creating warning posters to communicate quickly to the public a potentiality dangerous situation is another valid use for a poster.

In commercial communication companies have been using posters and poster slogans (pay-offs) constantly in order to promote a product or service. Successful campaign like those regarding smoking, or cancer prevention were based on very little wording, except the project slogan and some short indications.

Posters are widely used in awareness campaigns and are exposed at sites which are considered well visible to the target group (e.g. tourists). In the framework of the US fire prevention campaigns carried out in the last 80 years by the US Forest service several posters were prepared since, published and distributed all over the country. According to the South Carolina Forestry Commission, which has recently developed a program to build up an archive of the fire prevention posters used in the State, these products have been playing an important role in forest fire prevention since the 1930's.

Apparently there has been little change in the fire prevention messages, but of course the style highlights the evolving communication approach. Hundreds of different forest fire prevention posters have been produced also in Europe over the years but no complete archive exists. Communication experts however have highlighted that, similarly to what noticed in other countries (e.g. Italy), fire and flames have become in some periods more rare.



1952



1960



1961



1969



1978



1979

Figure 8. Examples of posters developed in the USA in the framework of Smokey Bear forest fire prevention advertising developed since 1944 by Albert Staehle.

Other posters, with very diverse style and approach, which were collected in the framework of the MIR.TO. project, were created and distributed by other national or regional authorities, as a tool to enhance public awareness about fire danger and fire prevention, especially during times of restriction. An interesting example is provided by the New Mexico authorities (Figure 9) which adopted in some campaigns an ironic and biting style. The effectiveness of this kind of approach, however, should be carefully evaluated.



Figure 9. Examples of posters developed in the USA in the framework of forest fire prevention advertising



A totally different model has been developed by the Canadian Société de protection contre les incendies de forêts (SOPFEU) which suggested local communities to have simple b&w posters printed in a very large number. These prevention messages should be distributed or exposed according to the current forest risk conditions.

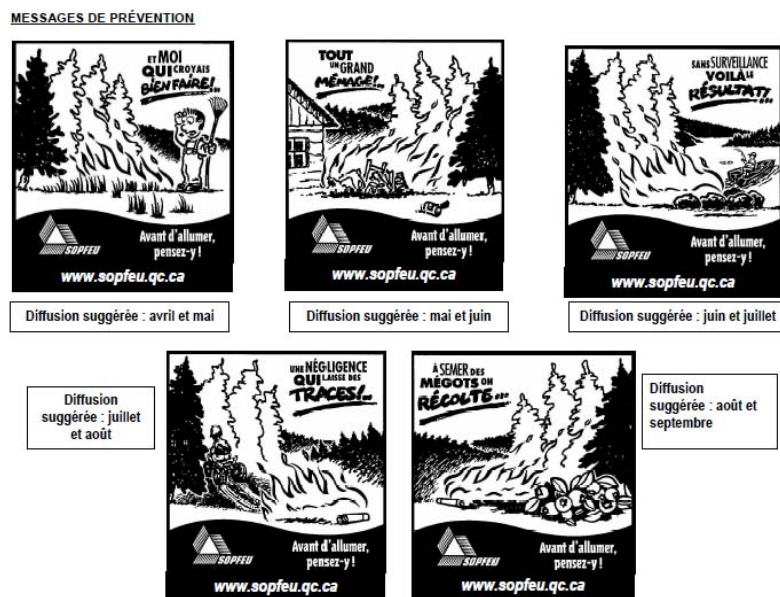


Figure 10. B&W posters, which can be produced in large numbers

Other examples of posters for awareness raising campaigns are reported in Figure 11. .



Figure 11. Examples from the many posters of prevention campaigns collected. The reported examples are from Canada, Japan, India, Italy

The MI.R.TO. team discussed in depth the structure of the poster and the need of meeting the stakeholders expectations for an reassuring approach. The final decision was to use a picture recalling the holiday period and the main points the campaign focussed on: the total fire ban, the EU support, the Consortium composition, the availability of information brochure, the support of local stakeholders.

The posters were placed near sites where the distribution of brochures took place (summer camps, tourism offices, etc.) but, according to autonomous decisions of each partner, also in other places (e.g. city halls). The development of the poster was coordinated by the French partner CEREN. The MI.R.TO. team discussed the issue of preparing a poster to distribute during the summer campaign 2010. The preparation of the poster lay-out was discussed in two meetings in Milano and in Zagreb. Main conclusions regarded the dimensions of the poster and the content. The size of poster was fixed at A3 sheet as it is small enough to be placed in many public offices or even shops and tourist offices without requiring a large space.

The poster, as already decided for the video and other printed material, should have had a rather reassuring and inviting approach. The written part of the poster is multilingual thus all tourists were expected to be attracted by it. The image reports a nice French sea site which, however, probably resemble many possible locations in the partners' countries.

Printing the brochures all together in one country logically resulted in the need to transport the printed materials to the participating countries. The CB project manager took advantage of this duty and accompanied the road transport and met the project partners and stakeholders in Croatia and France which gave him the additional benefit of observing project locations, personally discussing details of the campaign and project management issues. Savings made on having materials printed in one big order by far outweighed the additional cost of transport. Thank to this solution it was possible to print 100.000 copies of the information brochures.



Figure 12. The MI.R.TO. poster



The Task coordinator CEREN supervised the production of the handbook addressing the holiday house owners. The handbook was developed considering the previous similar experiences carried out by the French organization itself and other institutions involved in fire prevention worldwide (e.g. Firewise). The manual was prepared analyzing, as planned, several factors related to the protection of holiday houses: landscaping, vegetation clearance, topography, structure location, slope, meteorology, water supply, etc.

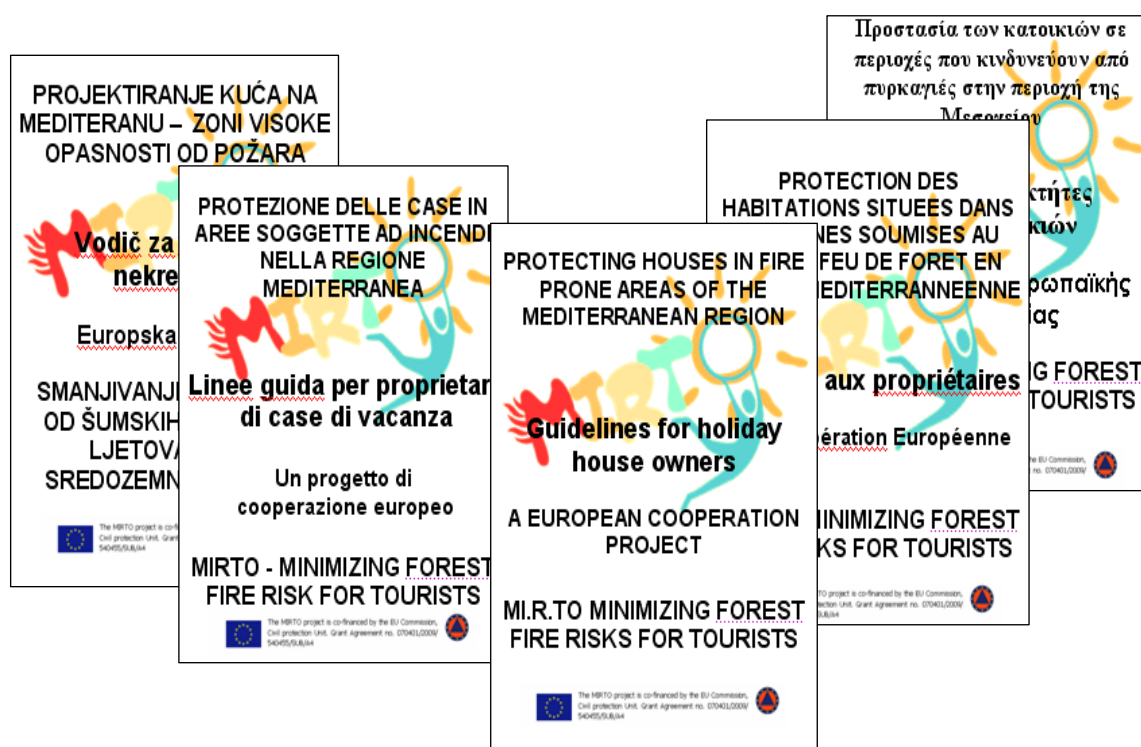
The handbook contents were thought to include both prevention of fires and correct behaviour to be adopted in case of a wildfire occurring in the proximity of the properties. Particular emphasis was given to preventive actions which can decrease fire risks and allow prompt intervention in case of fire ignition near the house.

During the meeting held in Valabre the French CB CEREN confirmed that the handbook would address the following topics:

- the characteristics of the holiday house Chp. "Your house"
- the property accessibility Chp. "Access to your house"
- topography, location characteristics Chp. "The environment around your house"
- the vegetation Chp. "The vegetation surrounding your house"
- the maintenance of the vegetation Chp. "Vegetation maintenance"

In addition the handbook reports simple guidelines to check the general safety of the holiday house. Local rules can be added by the owner to inform the visitors and guests of the holiday house. All partners agreed to have this manual in the form of a self-evaluation test, a successful approach already checked by the Task Coordinator.

The handbook is available in Croatian, English, French, Greek, Italian,







## 4.4 Implementation of the pilot Information campaign

The project was implemented in island regions of the four mentioned countries: Italy, France, Greece and Croatia.

**Croatia** - The island of Hvar (300 km<sup>2</sup>) located in the middle of the Adriatic sea and receives, during peak season (July/August) more than 130 000 tourists, of which about 50 000 (37%) stay in private houses/apartments and 15 000 (11%) in camp sites. Most of Hvar's tourists come from European countries. It is about 3 hours by ferry to Hvar from the main port of Split, with ferries operating frequently during summer.

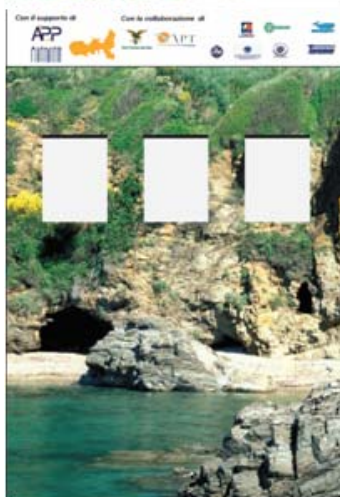
**France** - The island of Corsica in France was the largest of the islands participating in this project, with the surface area of 627 km<sup>2</sup>. Due to its size, the campaign was concentrated in the southern half (Sartenais Valinco Taravo) of the island. This area hosts some 200 000 tourists during July and August, of which 40 000 in camp sites. Most tourists are from the French mainland. The island can be reached by plane and ferry from Marseille and Nice. The ferry ride from Marseille is 10 to 12 hours and most passengers take an overnight ferry.

**Greece** - The islands Skopelos and Skyatos, part of North Sporades archipelago (207 km<sup>2</sup>), lie along the east coast of Greece in Aegean Sea. The two islands record about 70 thousand visitors during the two peak summer months. Most visitors are from Europe. The island of Skyatos, with more hotel resorts, can be reached by plane and ferry, while Skopelos, with more modest and smaller accommodation capacity, only by ferry. Both islands can be reached by ferries that operate from Thessaloniki, Volos and Agios Konstantinos. Depending on the departure port, the ferry ride lasts from half an hour to four hours.

**Italy** - The island of Elba in Italy is the largest island of the Tuscan archipelago (224 km<sup>2</sup>), a popular tourist destination. It receives about 450 000 tourists during the whole year, 170 000 visitors during the peak summer months; some 46 000 (27%) of which stay in camp sites. Most visitors are from Italy. Two companies operate regular ferry lines to Elba, Moby Line and Toremar, the latter of public property. It takes about one hour to reach the island from Piombino, the most frequently used point of departure. To give the video a better visibility the AB1 (Province of Livorno) provided the ferries and ferry ticket offices with stands for the video screens. The campaign was developed involving the association of summer camp managers and hotel owners. Thus the tourist structures take part to the campaign distributing the brochures were 250.

The pilot information campaign was carried out in the different pilot areas selected by the partners in their countries. Thus this action was carried out without a coordinating partner. The implementation of an information campaign had the aim to check how the approach developed could be concretely implemented and to verify its effectiveness.

Ambiente Italia distributed the DVDs of the project video to the other project partners which then forwarded it to the ferry companies and individual ships on sea-crossings to Mediterranean islands of selected pilot territories. The broadcasting evoked a interest by tourists although the project partners had to deal with different obstacles of mainly technical nature. In spite of the technical problems we have successfully broadcasted the videos as foreseen, with only one exception.



**Italy.** Videos were broadcasted by the companies Toremar and Moby. The broadcasting was successful and received a positive acceptance from tourists who were sometimes even trying to press buttons on the screen believing the video had been interactive. The Province of Livorno had also specific structures prepared to have the TV screens placed in strategic positions. In addition at the ferry station paperboard boxes (so called totem) were placed to distribute the multilanguage brochures.

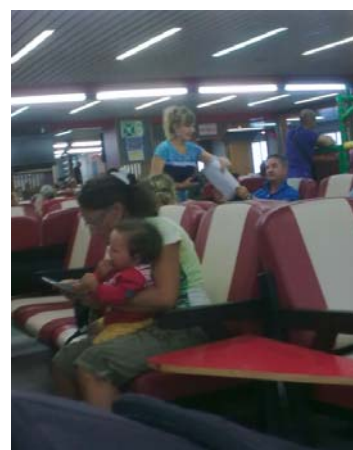
The videos were broadcasted on 9 ferries (Aethalia, Marmorica, Bellini, Ogliastra, Pianasia, Moby Ale, Moby Baby, Moby Lolly, Moby Love).

The brochures and posters were exposed at reception desks of camp sites, at tourism offices and other places frequently visited by tourists. The brochures were distributed by volunteers, forest service and at National Park of Tuscan Archipelago and visibly exposed in central and strategic positions on ships, inside ticket offices and handed over at receptions of hotels (with a minimum of 10 beds).

The brochures were visibly placed in stands or in dispensers or handed over to camp guests upon registration. The latter was the way the camp site managers were asked to adopt but this was not always possible. Almost all of the brochures have been distributed successfully to tourists who

excepted them with interest.

Interviews were carried out on ferries of the two major companies – Toremar and Moby and at the entrance of some of the biggest summer camps of the island. Tourists were interviewed while leaving the camp.





**France.** The video on this line was broadcasted on ferries of the companies SNCM and CMN during the period of July 17th – September 1st on two ferries with a good response. The journey from Marseille to



Propriano take ca 12 hours and is carried out once per day. In the first days the Project Beneficiary only had to face one problem – a part of tourists confused by the broadcasting in various languages and believing (as reported by ferry company) the video would be a message to the crew. The languages were consequently reduced to only the main ones – French and English. Brochures were distributed at 3 camp sites , 2 apartment hotels, 1 tourist information office. 1 tourist site (the Campomoro tower.

Brochure were placed at the reception desks and posters were displayed close to the brochures. Apart few exception the stakeholders welcome the brochure, the interest of the tourists can be defined moderate/mild. At Apartment Hotels a good welcome was recorded and a high interest were forest fires has been directly experienced. Tourists were noticed to show a higher interest than in camp sites.



The CB reports that the tourists' opinion regarding the brochure being too soft, not sufficiently impressive for the issue dealing with.

As observed in the Italian pilot area tourists are more interesting in reading the brochure if this is directly handed to them by the receptionist.

**Greece** - Despite initial approval by the Marketing Manager of Hellenic Seaways the video broadcasting was cancelled at the last minute due to refusal to cooperate by the ferry company claiming overworking of personnel. The fact that Hellenic Seaways was a monopoly in Volos – North Sporades Islands line did not allow any alternatives.



MI.R.TO. Brochures and questionnaires were distributed through Hellenic Seaways ships in that line very successfully, without any problem of the company. No commercial videos were broadcasted, only the video informing about safety measures during the trip.



The CBs University of Thessaly and Prefecture of Magnesia organized additional awareness raising actions by playing the movies at the ticket counters of the port of Volos and distributing the brochures to the passengers leaving Volos for the Skopelos island. The CBs prepared a video as documentation of the great effort carried out and of the interest of tourists for the initiative.

**Croatia** – The company JADROLINIJA is the local partner of the Institute for Tourism in MI.R.TO. project. All the activities concerning video screening were agreed and settled down prior to the implementation period on the meeting with local partners in Split as well as at numerous telephone contacts. Due to the fact that ferries are poorly equipped with video equipment (as stated in the meeting with local partners) it was agreed that two DVD players would be provided to JADROLINIJA by the MI.R.TO. project. Video players were provided a month prior to the beginning of the campaign. Additional two DVD players were consequently provided by the County Fire Fighters Association of Split-Dalmatia County, also prior to the beginning of the campaign. Furthermore, TV monitors on car ferry are stand alone. It was agreed that they will be connected in order to broadcast the video on all TV monitors.



Despite these facts, problems were encountered concerning the video screening. First of all, although agreed and promised to be done by the ferry company, TV monitors on car ferry were not connected together. There were two stand alone TV monitors with 2 DVD players that the video was screened on. The campaign was agreed to start on July 17th, the first Saturday of the highest season period. The ferry company expected the first big flow of tourists and they refused to start the video screening on July 17th due to personnel overloaded with their basic duties. The screening therefore started on the Monday, July 19th. During the campaign there were frequent changes in car ferry assignment to different lines (unknown prior to the campaign). Poor communication between management and the ship crew had been noticed. It was sometimes hard to get the crew to provide the broadcasting of videos. Resolving all above indicated problems in Croatia the respondents to the monitoring questionnaires had the highest recall of the safety measures from the video.



## 4.5 Monitoring and evaluation

Responsible of the **Task F Monitoring and evaluation** was the Croatian Institute of Tourism. There were two broad aims in pilot-testing the MI.R.TO. campaign – one related to the implementation of the campaign and the other related to its effectiveness. There were two types of monitoring – monitoring of the reach (extent, distribution) and the effectiveness of the brochures and the video (Table 6) .

Survey population for monitoring video spots effectiveness were tourists of 17 - 25 years traveling by ferry boats to the selected islands. Survey population for monitoring brochures' effectiveness were tourists arriving in camp sites or private houses/apartments at the selected islands. The survey period was 17<sup>th</sup> of July - 8<sup>th</sup> of August 2010.

Two questionnaires were designed: one for tourists on ferries and the second for tourists staying in camp sites or in private houses/apartments. Data were collected from the respondents by personal interview. Personal interviews were conducted by professional market research agencies/specifically trained personnel in Croatia and Italy, while in France and Greece the interviews were conducted by students). At the end the CB has elaborated a conclusions and recommendations report which is included in the project DVD and is downloadable from the projects web-site and/or members of MI.R.TO. team. The interviewers involved were well acquainted with the questionnaire and selection of the respondent prior to interviewing. Tourists on ferries were interviewed 30 minutes prior to departure. Those in camp sites were interviewed in camp sites while tourists staying in private houses/apartments were interviewed at specific areas with a high rate of tourist traffic, i.e. in front of info centers or travel agencies.

Quota sample on the country level was used for each survey. The planned sample size for each country and each survey was 200 respondents. The total sample size was 600 by each country/partner or, altogether 2400 respondents.

A thorough report on the results of monitoring as stand-alone deliverable. We can say that the results present a large difference among countries but in general the messages of the video were recalled in a percentage higher than by a common commercial spot and an important lesson learnt about the distribution of the brochures is that it was more effectively recalled where handed to the guests by the personnel of the camps, hotels etc.



PARTNER/COUNTRY: \_\_\_\_\_

M.I.R.TO. activity		
Video	Distribution	- Number of ferry boats video is screened on
		- Distribution period (if different from 17 <sup>th</sup> July to 8 <sup>th</sup> of August 2010; explanation)
		- Length of ferry boat ride (in hours)
		- Frequency of video screening (if different from the once in every half an hour)
		- Any problems encountered?
	Monitoring methods	- Estimation of number of tourists on ferry boats during the campaign period
		- Survey data collection method (if different from personal interview; agency or self organization with students; place of interviewing etc.)
		- Number of interviewers; days of interviewing etc.
		- Realized sample size (if different from 200; explanation)
		- Response rate (if known)
Brochures for camp sites	Distribution	- Number of camps brochures were distributed at
		- Distribution period (if different from 17 <sup>th</sup> July to 8 <sup>th</sup> of August 2010, explanation)
		- Type of distribution at camp sites (i.e. standing at the reception desk in stands, only; given to every party on arrival only; both)
		- Number of brochures distributed in camp sites
		- Photos of distribution points (if possible)
	Monitoring methods	- Any problems encountered?
		- Estimation of number of tourist arrivals to the selected camp sites during the campaign
		- Number of brochures taken by camp site guests*
		- Number of inquires to the camp site officials regarding fire prevention*
		- Data collection method (if different from personal interview; agency or self organization with students; place of interviewing – within camp site or else, etc.)
Brochures for private houses	Distribution	- Realized sample size (if different from 200; explanation)
		- Response rate (if known)
	Monitoring methods	- Type of distribution (i.e. to every house through tourism offices or association of private house owners only; at tourism offices, shops, post offices in stands in pilot destinations only; both; etc.)
		- Number of distribution points
		- Distribution period (if different from 17 <sup>th</sup> July to 8 <sup>th</sup> of August 2010, explanation)
		- Photos of distribution points (if possible)
		- Any problems encountered?
	Monitoring methods	- Number of brochures taken*
		- Data collection method (if different from personal interview; agency or self organization with students; place of interviewing - in private houses or at locations in destinations or while waiting for ferry departure and/or ferry boat departing the island etc.)
		- Realized sample size (if different from 200; explanation)
		- Response rate (if known)
Posters	Distribution	- Number of distribution points (on ferries, camp sites etc)
	Monitoring methods	- Not crucial to monitor as its purpose was to draw attention to the brochures

Table 6. Data collection form for the monitoring activity



Country: _____	Island: _____	Date: _____	Time: _____
Interviewer: _____		Video screened _____ times during the ride	

**QUESTIONNAIRE FOR VISITORS ON FERRIES**

*Dear visitor, welcome to the island of xxxxxxxx.  
We would like to ask you a couple of questions about your holiday. It will take only a couple of minutes. Your answers are anonymous and confidential.*

**Part 1: Screening and identification questions**

- What is your permanent place of residence?** *Circle one only!*

a. this island  
b. this country<sup>1</sup>  
c. this country  
d. some other country

*Thank respondent and terminate the interview!*

Country \_\_\_\_\_ Country code: \_\_\_\_\_
- What is your age?** *Circle one only!*

a. up to 16  
b. 17 to 25  
c. 26 and more

*Continue interviewing, otherwise thank and terminate the interview!*
- What is your gender?** *Circle one only!*

a. Female  
b. Male

*Continue interviewing, otherwise thank and terminate the interview!*
- During your holiday on this island, will you be staying in:** *Circle one only!*

a. hotel  
b. camp  
c. rented private room/apartment/house  
d. your own house/apartment  
e. friends/relatives  
f. something else: \_\_\_\_\_

*Thank respondent and terminate the interview!*

**Part 2: Recall questions**

- During the ferry ride, did you pay attention to what was screened on TV monitors?** *Circle one only!*

a. yes, most of the times  
b. yes, occasionally (from time to time)  
c. no

*Continue interviewing, otherwise thank and terminate the interview!*
- Have you noticed videos of a guy playing with his iPhone?** *Circle one only!*

a. Yes  
b. No → Go to question 11!  
c. Not sure

*Continue interviewing, otherwise thank and terminate the interview!*

<sup>1</sup> as we have different administrative units in each of the partner country, the idea is to exclude those that travel on ferries regularly

Country: _____	Island: _____	Date: _____	Time: _____
Interviewer: _____		Location: _____ Code: _____	

**QUESTIONNAIRE FOR VISITORS**

*Dear visitor, welcome to the island of xxxxxxxx.  
We would like to ask you a couple of questions about your holiday. It will take only a couple of minutes. Your answers are anonymous and confidential.*

**Part 1: Screening and identification questions**

- What is your permanent place of residence?** *Circle one only!*

a. this island  
b. this country  
c. this country  
d. some other country

*Thank respondent and terminate the interview!*

Country \_\_\_\_\_ Country code: \_\_\_\_\_
- During your holiday on this island, are you staying in:** *Circle one only!*

a. rented private room/apartment/house  
b. camp  
c. hotel  
d. your own house/apartment  
e. friends/relatives  
f. somewhere else: \_\_\_\_\_

*Thank respondent and terminate the interview!*
- What is your age?** *Circle one only!*

a. up to 14  
b. 15 to 24  
c. 25 to 49  
d. 50 to 64  
e. 65 to 79  
f. 80 and more

*Continue interviewing, otherwise thank and terminate the interview!*
- What is your gender?** *Circle one only!*

a. Female  
b. Male

*Continue interviewing, otherwise thank and terminate the interview!*

**Part 2: Recall questions**

- Have you noticed a brochure on forest fire prevention?** *Circle one only!*

a. yes  
b. no  
c. not sure/can't tell

*Go to question 12!*

Figure 13. First page of the questionnaires for ferries and camp/holiday house guests. The complete questionnaires are available on the attached DVD.





## 4.6 Joint methodology development

The implementation of the **Task G Joint methodology** was coordinated both by the AB CEREN and by Ambiente Italia. The first organized a technical meeting at the CEREN premises in Valabre where the preliminary results of the campaign implementation were discussed.

Ambiente Italia was responsible for supporting the discussion regarding the implementation of the information campaign, providing a general scheme and indications for planning and implementing an effective informative campaign regarding awareness raising on fires and preparedness.

The meeting in Valabre was particularly fruitful as it was focussed on the different results obtained in the regions involved by the project and by the difficulties met in implementing the information campaign as planned.

The discussion carried out during the meeting can be thus considered as a critical review of the approach planned and adopted for the information campaign. The collection of the detailed observation from each partner was the bases for a “fine tuning” of the Joint methodology the MI.R.TO. project intended to define.

The Joint methodology, together with the information material developed, the one of the deliverables which is thought to support administrations in planning information campaign. It provides useful and specific best practice information on how to communicate preparedness to tourists and which is applicable specifically to forest fires in Mediterranean islands, but at the same time provides a good methodological example for various territories and various emergency situations with the same target group.

The complete document is available on the attached DVD.

## 4.7 Project communication and result dissemination

Responsible for the **Task H Project communication and result dissemination** was the AB2 Province of Livorno.

### 4.7.1 Websites

According to the project proposal a descriptive Web site was developed with the domain name [www.eu-MIRTO.net](http://www.eu-MIRTO.net). The website presents the project goals, the partners and the activities carried out during the project. It enables visitors to have a general picture of the project and access the informative material available.

According to the aims of the project to increase visibility to the project outputs and guarantee easy access and downloading to the project products Ambiente Italia included the complete MI.R.TO. website in a new website [www.apf-info.eu](http://www.apf-info.eu) which will be maintained active in the next years (at least 5 years) and will include data, information and deliverable from other projects.

### 4.7.2 Newsletter

Three digital English-language newsletters were prepared distributed to to a large mailing list to inform civil protection stakeholders, forest managers, institutional and voluntary association involved in forest fire prevention, the tourism industry about the project reports and news. The newsletters were prepared to be distributed at the beginning of the project activities, after the summer information campaign and at the end of the project (Figure 14).



Figure 14. The MI.R.TO. Newsletters (first page) prepared to inform stakeholders and the public on the project's progresses. The newsletters are reported in the project websites and in the project DVD.

Two meetings open to the public with invited speakers were organized at the beginning and at the end of the project. The first, held in Milano (IT) had the aim of launching the MI.R.TO. project but also to collect indications on the state of the art, documenting in detail the actual needs in the field of fire prevention and preparedness regarding forest fires. The meeting had also the objective to prepare the first working package of the project dedicated to the needs assessment

Invitations were sent to the authorities of the partners' countries mostly engaged in fire prevention. Partners were requested to report the announcement on the institutional websites.



Il seminario intende mettere a confronto le esperienze di alcuni Paesi che si affacciano sul Mediterraneo sul tema della sensibilizzazione del pubblico verso gli incendi boschivi.

In particolare si intende esaminare la figura del turista, spesso più spesso vittima che incendi o, talora, autore involontario.

La consapevolezza del pericolo e una corretta capacità di affrontare situazioni di emergenza possono essere sviluppate con azioni mirate, fino ad oggi scarsamente approfondite.

Con questo obiettivo ogni anno la Commissione Europea finanzia proposte volte a promuovere la protezione dei cittadini dell'Unione dai rischi naturali.

Nel 2009 è stato scelto, insieme ad altri, il progetto MIRTO "Minimizing Risks for Tourists", un'iniziativa internazionale volta a sensibilizzare i turisti che si recano sulle isole del Mediterraneo.

La campagna di sensibilizzazione promossa con il progetto MIRTO si svolgerà nel 2010, coinvolgerà un grande numero di turisti e si svolgerà, in modo particolare ai giovani.

Per l'Italia l'area test prescelta è l'Arcipelago Toscano.



Provincia di Livorno,  
U.S. Pianificazione, Difesa del  
suolo e delle Coste

**Turismo estivo e rischio  
di incendio: stimolare la  
consapevolezza del  
pubblico**

**Summer tourism:  
raising public  
awareness on fire risks**

Livorno 28 dicembre 2009  
Sala Consiliare  
Amministrazione Provinciale  
Piazza del Municipio, 4

With the summer season approaching, forest fires are again becoming an issue of concern and increasing debate. In the last years fire have caused extensive damages in large parts of Southern Europe. Some regions, however, show a decreasing trend both in fire number and burnt area extension.

The general public, however, remains complacent and far from significant changes. More and more forest fires have been recorded in tourist areas involving both residents and tourists. The latter are sometimes responsible for (involuntary) fire events; many often flee and their properties are threatened by forest fires.

From different sources the need for effective and precisely targeted fire prevention campaigns has been highlighted: awareness raising campaigns and educational activities are considered for improving people's preparedness in case of emergency and to avoid behaviours which may be dangerous for people and the environment.

The Mediterranean coasts and islands represent the area mostly affected by fire in Europe. Forest fires are frequent during the summer period and in case of severe events affecting the coast regions they can lead to evacuation from tourist facilities such as camp sites. On the other hand this region is one of the most popular and successful tourist destination. As the tourist industry is very vulnerable to natural disasters awareness campaigns have to be correctly planned and managed. Fire prevention, stakeholder participation and training, raising awareness and building capacity are all issues which have to be clear relevant and potential.

The workshop to be held in Florence on April 14th represents the final meeting of the project MIRT0 - Minimizing Risk Factors for Tourists, a cooperative initiative co-financed by the European Commission which focused on the development of strategies and tools to effectively prevent fires and raise public awareness to forest fires.

In the framework of the project measures addressing diverse kind of audiences (young people, holiday house owners, hikers, etc.) were identified and suggested. During the summer 2010 a campaign took place in four regions of the Mediterranean area to raise awareness of tourists to the risk of forest fire. The initiative was developed in Italy, France, Croatia and Greece, with the participation of several public and private institutions. Results and suggestions of the project will be presented and discussed.

  
Corpo Forestale dello Stato

**Summer tourism and forest fires: raising public  
awareness on fire risks in the Mediterranean area**



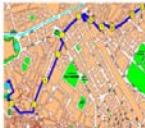
April 14th, 2011 h. 9.00

Conference room in Villa Favonita  
Piazza Edition 11  
Florence

---

Closing workshop of the project MIRT0  
Minimizing forest Risks for Tourists



PROGRAM	REGISTRATION
<p><b>9:00 Registration</b></p> <p><b>9:30 Welcome to participants</b>          Simone Ball, <i>Coordinator of the Lucca Festival</i></p>	<p>The participation to the workshops is free of charge, but prior registration by mail is warmly welcome.</p> <p><a href="mailto:info@antennasitalia.it">info@antennasitalia.it</a></p>
<p><b>9:40 Meeting Update</b>          Corpa Festival della Scala</p>	<p>Registration includes coffee breaks, buffet lunch and workshops materials</p>
<p><b>9:50 Awareness raising campaigns at regional level</b>          Toscana Regional Administration</p>	<p><b>WORKSHOP AND VENUE INFORMATION</b></p>
<p><b>10:10 National campaigns for raising awareness of the risks. The experience of the Italian Corpa Festival della Scala</b>          Daniela Moras, <i>Corpa Festival della Scala</i></p>	
<p><b>10:30 The MURTO Project: a cooperative initiative for tourists traveling in the green areas. Ideas, workshop results</b>          Armando Bultrio, <i>Armando Bultrio, Istituto di Scienze, Milano</i></p>	
<p><b>10:50 The MURTO project: monitoring tourists' response to awareness raising activities</b>          Renata Tompagnon, <i>Zinka Marulic, National Institute for Tourism, Zagreb</i></p>	
<p><b>11:15 COFFEE BREAK</b></p>	
<p><b>11:20 The role of the European Commission in the field of natural risks prevention</b>          Thomas de Lathuy, <i>European Commission, Civil Protection Unit (to be confirmed)</i></p>	
<p><b>11:30 The role of security planning of additional – urban interfaces in tourist areas</b>          Orsola de Maria, <i>Civiletti Capozzi, The "Dedict" University degli studi di Firenze</i></p>	
<p><b>11:40 To forest fire prevention in additional – urban interface areas. The role of the Italian Civil Protection Department</b>          Alessandra Biondini, <i>Dipartimento delle Protezione Civile, Roma</i></p>	
<p><b>12:15 Risk and ERM-based systems for the coordination of civil protection interventions and population warning, during forest wildfires</b>          Elio Orselli, <i>Research Advanced Computer Technology Institute, Athens</i></p>	<p>Villa Favente is connected to Florence centre by the bus no. 7 departing from Piazza San Marco (bus stop no. 3 in the map). From Florence downtown to the Central Railway station a ride by train to the Villa Favente takes 15 minutes (12 €).</p>
<p><b>12:50 Discussion and conclusions</b></p>	<p>For further information:</p>
<p><b>Workshop coordinator</b>          Massimo Taglietti, <i>Lucca Festival</i></p>	<p>Armando Bultrio          Via Roma 36, 20123 Milano          Tel. 02 2774411          Fax 02 2774422          Mail: <a href="mailto:info@antennasitalia.it">info@antennasitalia.it</a></p>
	<p><b>WORKSHOP LANGUAGES</b></p>
	<p>Workshop languages are English and Italian. Simultaneous translation will be available.</p>

## PROGRAMMA

Ore 9.00:

Benvenuti ai partecipanti

Ore 9.30 - 12.00

Saluto delle autorità  
Regione Toscana, Provincia di Livorno

Introduzione al tema

Massimo Tagliapietra  
Provincia di Livorno

Esperienze di campagne di sensibilizzazione

Cristina Zucchi, Regione Toscana  
Istituto per il Turismo, Zagabria

Ore 10.00: Vangelis Katsaros

Università della Tessalia

George P. Papatheodorou

Professore di Magnesia, Volo

Conoscenza e utilizzo di accordi: una prospettiva  
professionale

Luisa Petrucci  
Università di Bologna

Esperienze di campagne di sensibilizzazione

Regione Toscana

Francec

Protezione Civile

Catani

Il Progetto MTRTO "Biosensing risks for Tourists"

Amanda Buffon  
Ambiente Italia, Istituto di ricerche, Milano

Ore 12.15:

DISCUSSIONE

Ore 13.00:

CONFERENZE

CONFERENZE

Nota: senza garanzia il servizio di traduzione  
italiano/inglese, durante il workshop avrà, inoltre,  
presente un coffee station a buffet

il partner del progetto MTRTO

**AMBIENTEITALIA**  
Ambiente Italia - Istituto di ricerche, Milano

Ambiente Italia - Istituto di ricerche, Milano

Esperienze per la Terza Università europea, Valence (F)

Università della Tessalia  
Dipartimento di Ingegneria meccanica (GR)

Provincia di Livorno (I)

Regione Toscana - Regione Toscana

Provincia di Magnesia, Volo (GR)

Parco Nazionale Aspromonte (Toscana, Puglia) (I)

**institute for tourism**

Istituto per il Turismo, Zagabria (H)

**COME ISCRIVERSI  
AL WORKSHOP**

L'iscrizione è gratuita. Si prega di confermare  
la propria partecipazione entro il 12  
dicembre, compilando la scheda di  
adesione e allegandola al modulo ad uno  
dei seguenti indirizzi mail:

[parco@promozioneturismo.it](mailto:parco@promozioneturismo.it)

[parco@promozioneturismo.it](mailto:parco@promozioneturismo.it)

**PER INFORMAZIONI**

Provincia di Livorno, U.S. Provinciale,

Difesa del suolo e delle Colle,

Via Sant'Anna 5, 57100 Livorno

Tel. 0586 253701/253705

Fax: 0586 284296

Mail: [parco@promozioneturismo.it](mailto:parco@promozioneturismo.it)

[parco@promozioneturismo.it](mailto:parco@promozioneturismo.it)

Ambiente Italia srl,

Via Piero 29, 20129 Milano

Fax 02 277441

Fax 02 27744222

Mail: [info@ambienteitalia.it](mailto:info@ambienteitalia.it)

Il seminario è il progetto MTRTO sono cofinanziati  
dalla Commissione Europea, Direzione generale per  
l'Ambiente, Unità per la Protezione civile.



Figure 15. Brochures of the Livorno meeting (December 18<sup>th</sup>, 2009) and of the Florence meeting (April 14<sup>th</sup>, 2010)



Figure 16. The press release of the National Forest Service reporting on the meeting in Florence and examples of the information given by Italian media regarding the final meeting.

Technical meetings and Steering Committee meetings were planned and took place regularly with minor changes according to the project.

Technical meetings:

- |                    |  |                                       |
|--------------------|--|---------------------------------------|
| • Livorno          | December, 17 <sup>th</sup> , 2009                  | Kick-off meeting and Opening Workshop |
| • Videoconference, | February 26 <sup>th</sup> , 2009                   |                                       |
| • Valabre (F),     | February 3 <sup>rd</sup> , 2010                    |                                       |
| • Milano (IT)      | March 18 <sup>th</sup> and 19 <sup>th</sup> , 2010 |                                       |
| • Zagreb (KR)      | May 6 <sup>th</sup> and 7 <sup>th</sup> , 2010     |                                       |
| • Athens, (GR)     | May, 16-17 <sup>th</sup> , 2010                    |                                       |
| • Skopelos (GR),   | September, 15 <sup>th</sup> -17 <sup>th</sup> 2010 |                                       |
| • Valabre (F),     | December, 15 – 16 2010                             |                                       |
| • Florence (IT)    | April 14 <sup>th</sup> , 2010                      | Closing Conference                    |

The meetings in Valabre (February 3<sup>rd</sup>, 2010) and Athens (May, 16-17<sup>th</sup>, 2010), were promoted by Ambiente Italia (CB) to discuss urgent issues with partners who could not be present at the previous meetings.

To ensure visibility and make sure project results hard copies of information materials (Handbooks for holiday house owners) were printed and distributed in the different partners' countries. Copies of the

handbooks were distributed at the Internal Conference Wildfire 2011 held in South Africa. Other dissemination initiatives are planned (participation to workshops and conferences, papers on technical and scientific journals) and will present the results now available..

In addition informative posters for public events were prepared and exposed and the final project meeting. These posters describe by images the different tasks carried out during the project and will be used by the partners in other dissemination events.

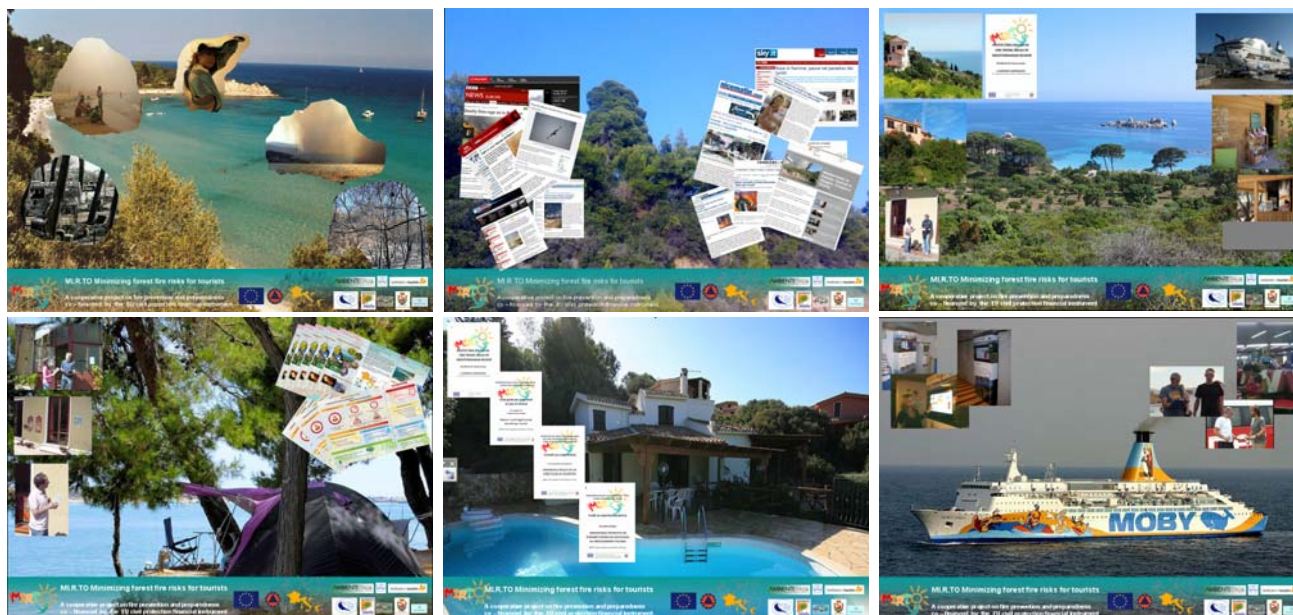


Figure 17. Posters prepared for the closing conference will be used by the project partners for other dissemination activities.

A poster describing the activities carried out and the results of the M.I.R.T.O. project was submitted and accepted for the 2011 Conference Wildfire 2011- the 5th International Wildland Fire Conference held in South Africa 9-13 May 2011. Title of the poster is: “Supporting fire prevention and preparedness raising among tourists – The M.I.R.T.O. project in South European regions”

Authors of the posters are: Buffoni Armando, Chiavacci Carlo, Giroud Frédérique, Katsaros Vangelis, Marušić Zrinka, Papadellis George, Pouschat Priscilla, Tomljenović Renata, Tognotti Massimo, Giannini Francesca

#### Abstract

The South European regions represent one of the leading tourist destinations in the world but are heavily affected by forest fires during the summer season. Forest fires may decrease the number of tourist arrivals. Nonetheless the tourist industry often fears that forest fire prevention campaigns may create an image of unsafe destination. On the contrary participation of local authorities, tourist operators, local inhabitants may rise significantly the effectiveness of prevention campaigns and result in an increase of public awareness. M.I.R.T.O., acronym of the cooperative project MInimizing forest fire Risks for TOurists is





developed in four different European countries by seven private and public entities and is aimed to improve preparedness of tourists traveling to fire-prone areas and raise public awareness of forest fire risks. It suggests innovative communication strategies and the adoption of a joint approach among different European countries. The project is financially supported by the European Commission.

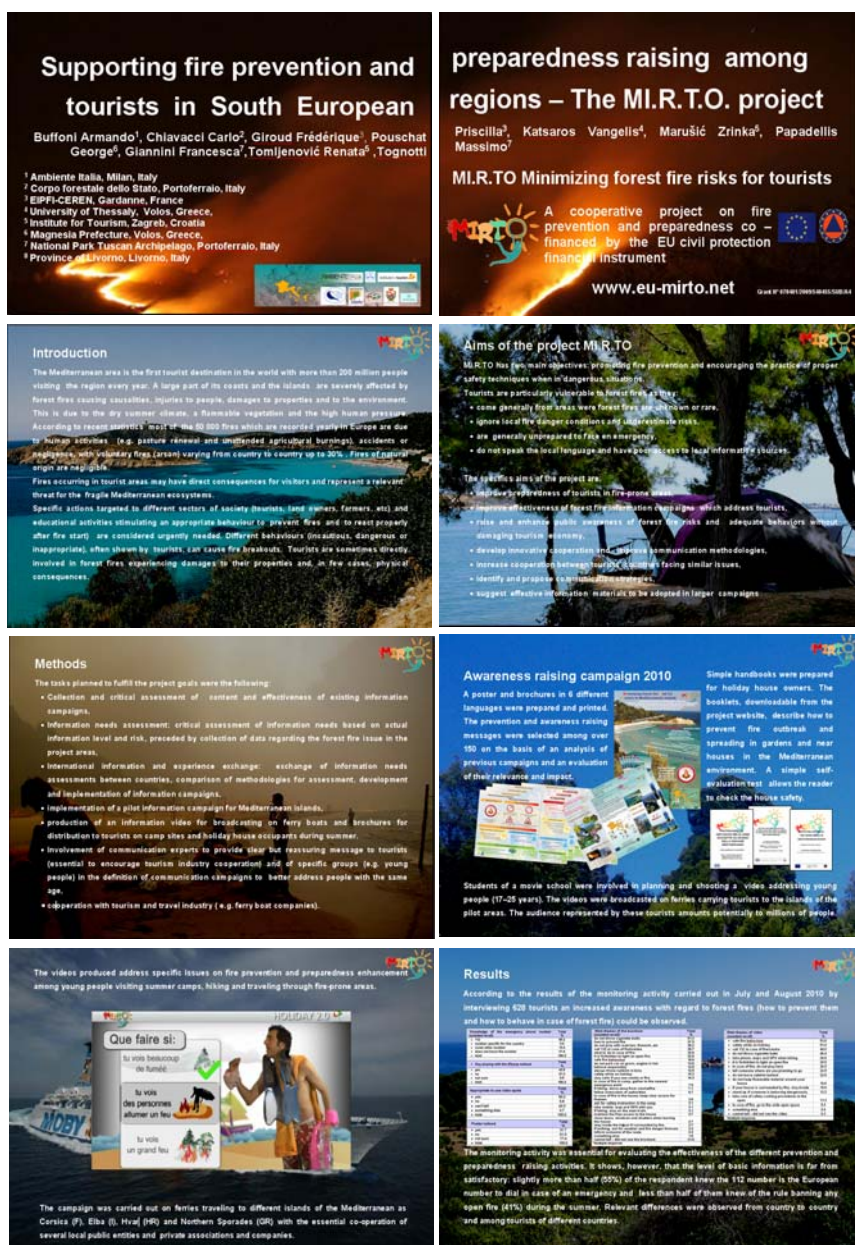


Figure 18. The poster presented at the Wildfire 2011 Conference. The last piece on the left included a small monitor where the videos of the M.I.R.T.O. campaign was displayed.



## 4. Outlook

The project partners have expressed their interest to use and exploit these results and achievements of the project. The project partners are aware to have gained a valuable experience which they intend to further develop.

To ensure the persistence of the Web page after the project has finished the coordinating beneficiary intends to express the commitment of maintaining and developing it in the next years. In this way, it will be ensured that in the future the MI.R.TO. project may play a crucial role for the connection and exchange of information between stakeholders (institutional, scientific, and private).

The results reported were particularly important for local stakeholders who felt themselves responsible for the success of a cooperation project at EU level and in many cases were proud to be mentioned as part of a larger community sharing the same objectives of protecting people, properties and the environment from forest fires. These feelings represent a valuable aspect which will facilitate future awareness raising initiatives at any level.

## 5. Conclusions

The project MI.R.TO. was a unique cooperation between countries, using the same communication materials to raise awareness on forest fires among tourists and to enhance their preparedness to face emergency conditions. The project products were all developed with consideration of the various legislations and are therefore transferable among the participating countries.

Another uniqueness regards the exact definition of a target group for the information campaign and of the necessary messages. The main messages communicated were not single spots but a coherent group of messages. The close cooperation with the tourism industry, although not always easy, was made possible thanks to specific attention to the sensitive target group (tourists), i.e. by communicating the risk message in an effective but reassuring and positive way.

Finally the information campaign included a monitoring activity carried out by personal interviews and questionnaires which appears to be another rarity in such campaigns.

The project did anyway encounter some problems but most of them have been successfully resolved. The cooperation with ferry companies, notwithstanding the discussions and verbal agreements made before project start, was not always easy and efficient and some unexpected events slowed down the implementation of the tasks and caused delays in the production of some deliverables.

In Italy the project influenced positively the activating of the emergency number 112. The CB foresees a wide follow up of the project. It will maintain the web site [www.apf-info.eu](http://www.apf-info.eu), reporting the project achievements for the next five years and has already started to present the project at conferences



worldwide. The Province of Livorno is planning a new campaign in 2011 using the material produced during the MI.R.TO. project. The Administrations of the Regions of Sardinia and Liguria presented interest on the projects follow up.

With all the accumulated effort invested in the MI.R.TO. project there are reasons to believe that all the partners have gained a relevant experience in planning an awareness raising and preparedness campaign and that this experience will be transferred to other entities or will be fruitfully exploited in other initiatives.

We summarize the progress with respect to the main objectives of the project, namely, cooperation, information exchange, effectiveness.

- cooperation: cooperation among partners of different countries was extremely useful to define a common approach to the issues addressed by the project. The meetings organized allowed to draw a clear picture of the organizational, operational and legal framework in the different countries referring to the issues of awareness raising and preparedness. An effort towards an harmonization of these approaches is needed and cooperative projects can contribute to this;
- information exchange: experiences already developed by the different partners were the basis of the discussions and of the decision taken during the project. Although differences emerged the team was able to go beyond a simple information exchange and develop common strategies;
- effectiveness: by this term we understand the increased awareness of tourists on forest fires and the preparedness level in case of an emergency. The monitoring report shows the difficulties in identifying a baseline to assess the improvements achieved. The data collected in the task should, however, be evaluated considering other achievements as the positive cooperation with local stakeholders, the interest of residents, the information requests from Administrations outside the pilot areas.



## References

- Abroms L. C., Maibach E. W., 2008. The Effectiveness of Mass Communication to Change Public Behavior  
Annual Review of Public Health 29: 219-234
- Acia, 2004. Forests, Land Management, and Agriculture. ACIA Scientific Report. Lead Author Glenn P. Juday. Arctic Climate Impact Assessment, pp. 1038
- Alexandrian D., F. Esnault and G. Calabri , 1998. Forest fires in the Mediterranean area.  
<http://www.fao.org/docrep/x1880e/x1880e07.htm>
- Amico S., Lo Giudice P., 2007. The importance of tourism in the European Mediterranean area. ERSA conference papers. Pp. [www.sre.wu-wien.ac.at/ersa/ersaconfs/ersa06/papers/474.pdf](http://www.sre.wu-wien.ac.at/ersa/ersaconfs/ersa06/papers/474.pdf)
- Dogandjieva R., 2008. Forest Fires in Southern Europe: An Econometric Investigation of the existence of Economic Incentives for Fire Arson. Honors Thesis in Department of Economics University of Richmond
- Rice R., Atkin C. (eds). 2000. Public communication Campaigns, Sage Press, Thousand Oaks, California  
Richmond, VA April 28, 2008, pp. 38.
- EFFIS, 2010. Forest Fires in Europe 2009 Report No 10, pp.88. Joint Research Centre, European Commission, Institute for Environment and Sustainability, 2010.
- Cioccio L., Michael, E. J., 2004. Hazard or disaster: Tourism management for the inevitable in Northeast Victoria. *Tourism Management* 28: 1-11
- Cortez-Jimenez, I., 2008. Tourism and economic growth at regional level: The cases of Spain and Italy, *International Journal of Tourism Research*, 10: 127-139.
- Dritsakis, N., 2004. Tourism as a long-run economic growth factor: An empirical investigation for Greece using a causality analysis, *Tourism Economics* 10::305–316.
- EFI (European Forest Institute), 2010. Mediterranean Regional Office – EFIMED, 2010. Position Paper on Prevention of Forest Fires in the Mediterranean. EFIMED \ Events \ MFW 2011 \ Tuesday 5 - Programme \ 7. Forest fires PosPaper EN.  
<http://www.efimed.efi.int/portal/events/mfw2011/portal/1737>
- EFI-European Forestry Institute, 2009 Living with wildfires. What science can tell us. Yves Birot (ed) EFI Discussion paper 2009.
- European Parliament, 2007. FOREST FIRES: causes and contributing factors in Europe. Policy Department, Economic and Scientific Policy. IP/A/ENVI/ST/2007-15 PE 401.003, pp.56.
- Eurostat, 2011. Forestry in the EU and the world. Statistical books. 2011 edition, pp.116  
[http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-31-11-137/EN/KS-31-11-137-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-31-11-137/EN/KS-31-11-137-EN.PDF)
- Faulkner B., 2001. Towards a framework for tourism disaster management *Tourism Management* 22 : 135-147
- Goldammer, J.G. 1994. Les incendies de forêt dans le sud de l'Europe. Survol des mesures prises par la CEE: Cooperation internationale en vue. *Nouvelles internationales sur les incendies de forêts*, 11 (July).
- Hystad P.W., Keller P.C., 2008. Towards a destination tourism disaster management framework: Long-term lessons from a forest fire disaster. *Tourism Management* 29: 151-162.





- Maheras G., 2002. Forests fires in Greece. The analysis of the phenomenon affecting both natural and human environment. The role of sustainable development in controlling fire effects. Lund University, Sweden, M.Sc. Thesis. [http://www.lumes.lu.se/database/alumni/00.01/theses/maheras\\_georgios.pdf](http://www.lumes.lu.se/database/alumni/00.01/theses/maheras_georgios.pdf)
- Prestemon J.P., Butry D.T., Abt K.L., 2010. Net benefits of wildfire prevention education efforts. *Forest Science* 56: 181-192.
- Vélez R., 1990. An overview of the causes, impact and control of forest fires in the Mediterranean region, with particular reference to preventive and control measures developed in Spain. *Mediterranean forest fires: A regional perspective*. *Unasylva* - No. 162 – Fire. Stephen A. Vol. 41 - 1990/3 <http://www.fao.org/docrep/t9500E/t9500e02.htm>



## **Annexes (DVD)**

1. Videos (CRO, FRA, ITA, ENG, GER, GRE)
2. Newsletters
3. Brochures (A5) (CRO, FRA, ITA, ENG, GER, GRE)
4. Poster (A3)
5. Meeting Posters (A3)
6. Monitoring report
7. Joint methodology report
8. Meetings (agenda, participants, pictures, etc.)
9. Handbooks for holiday house owners
10. Workshop presentations
11. Financial documents



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