

# Training for self-protection against forest fires in rural areas



## Report: Forest Fire Protection Training Framework

Prepared by:



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## Executive Summary

The main impacts of the Forest Fire Protection Project (2021-1-DE02-KA220-ADU-000028430) are the preservation of the environment and the social inclusion of the rural communities through the promotion of their readiness and resilience against forest fires. For this purpose, a training module on “Fire prevention and self-protection against forest fire” will be developed and training will be offered to adult rural communities, both face-to-face and virtually (through an online platform).

The **Result 1 (R1) – FFP Training Framework** was developed throughout nine months, and comprised of the following activities: creation of an external group of experts; benchmarking on the good practices on training the rural populations on forest fire prevention and on self-protection when facing forest fires; interviews to people in rural areas; interviews to professionals on civil protection and on forest fire; definition of the preliminary module structure; round table with the external group of experts to discuss the module structure; and Report: ForestFireProtection training framework.

The methodology used by the participating partners was: firstly, a potential group of experts on civil protection, regional authorities and education were invited to give feedback in a later phase of the project; secondly, a benchmarking research on good practices implemented worldwide and covered in different Erasmus+ projects was done; thirdly, 196 interviews were conducted to people from rural areas and professionals on civil protection and forest fire; fourthly, conclusions were drawn from the previous activities that allowed to build a preliminary module structure; finally, the group of experts provided feedback on the module structure, and changes were made accordingly in order to create a final version of the module structure.

In conclusion, the activities developed and data collected during **Result 1 (R1) – FFP Training Framework** enabled the partnership to build the structure of the training module “Fire prevention and self-protection against forest fire

## Introduction

The current policy challenges identified in the report “Forest Fires - Sparking firesmart policies in the EU” of the European Commission (2018) and the booklet “Land-based wildfire prevention - Principles and experiences on managing landscapes, forests and woodlands for safety and resilience in Europe” from the European Commission (2021) both refer to the need of increasing the awareness and preparedness of the population from rural areas in case of wildfires.

Following this premise, the Forest Fire Protection project – an Erasmus project in development by 8 organisations from 7 different countries (Cyprus, Germany, Greece, Italy, Portugal, Spain and Türkiye) – aims to develop a training module on self-protection against forest fires that will transfer to the rural population’s basic skills to create simple contingency plans to optimally react against the danger of forest fires through face-to-face and online training.

Through the development of seven activities, **Result 1 (R1) – FFP Training Framework** was designed to gather data, information and feedback to help identify the needs of the rural population concerning protection against forest fires, as well as key content that should be covered in a forest fire prevention training module. The activities focused on the collection of good practices all over the world, interviews to inhabitants from rural populations, and interviews and round tables with professionals on forest fire and civil protection. All the information gathered in the scope of these activities supported the creation of a training structure for a module entitled “Forest fire prevention and self-protection against forest fire” which will be developed in a later stage of the project and is organised into three units: 1) Introduction to forest fire; 2) Forest fire prevention; and 3) Protection against forest fire.

In this sense, this report covers the aims of each activity in detail, along with the methodology adopted by the consortium to carry them out and the main findings.

The report’s last section presents the final version of the training structure with the training content, learning outcomes and timeframe.

## 1. Methodology

At the end of the first phase of the Forest Fire Protection project, a transferable and innovative training framework of the training module “Forest fire prevention and self-protection against forest fire” will be presented. The framework was built on top of preliminary findings and reports that allowed the consortium of the project to gather the necessary information for the expected result. In specific, it consisted of:

- creation of an external group of experts;
- benchmarking of good practices;
- interviews to people from rural areas;
- interviews to professionals on civil protection and forest fire;
- round tables with the external group of experts (professionals on civil protection and forest fire).

In the initial phase, partners invited professionals on civil protection and forest fire to consult the project’s findings – this group would be known as External Group of Experts.

Then, partners investigated good practices that have been implemented worldwide (24 in total) whose aim was to increase awareness about forest fire and fires in general to the populations. The best practices were divided in different topics (general information about forest fires, forest fire prevention and self-protection against forest fires) to help match the content with the units of the training modules and to draw inspiration from available resources and existing practices.

After benchmarking, the partnership conducted face-to-face and online interviews to people from rural areas (99) and professionals on civil protection and forest fire (97) from all 7 participating countries. A set of significant data arose from the interviews which allowed the project team to efficiently identify the content that needed to be addressed in the training module, both from the rural population’s perspective and from the professionals in this matter.

In summary, the benchmarking of good practices and the interviews enabled to elaborate a preliminary training structure and define the methodology to further elaborate the training resources.

Once a preliminary training structure was created, round tables were organised in each of the 7 participating countries in order to obtain feedback from the External Group of Experts that were contacted early in the project. The round tables aimed at validating the findings, and better shaping the learning contents and the training structure.

Finally, a final version of the training structure for the module “Fire prevention and self-protection against forest fire” was created.





## 2. Activities implemented in the scope of Result 1

### 2.1. External Group of Experts

In order to consult and validate the findings of the project in a later phase, the consortium partners created an External Group of Experts. This process consisted in contacting political authorities, civil protection authorities and other stakeholders' representatives, who were considered by the partners with relevance and knowledge to assess the training needs of the rural population concerning civil protection.

In total, 8 external groups with 25 members were integrated into the External Group of Experts. Among them, there were professionals in civil protection and forest fire, forestry and nature conservation representatives, political actors, civil defence managers, education managers and trainers.

### 2.2. Benchmarking of good practices

A benchmarking of good practices on training the rural population on forest fire prevention and on self-protection when facing forest fires was conducted by the partnership. The different good practices collected from all over the world, including Erasmus+ projects that could be adapted to the project, enabled a better understanding of some of the initiatives, projects and approaches already implemented or ongoing to increase awareness. A total of 24 good practices were put together by the partnership and organised in three different groups, according to the units of the training module:

- 1) Introduction to forest fire;
- 2) Forest fire prevention; and
- 3) Protection against forest fire.

Below is listed information on the good practices collected, in specific a brief description on what they consist of, their country of implementation and the group it belongs to.

#	Country of implement.	Title	Brief summary	Group		
				1	2	3
1	Cyprus	Forest Protection Week	A yearly initiative by the Department of Forests aimed at enlightening and raising awareness among citizens on the importance of forests and the urgent need of protecting them from forest fires.	X		
2	Denmark, Spain, Romania, Lithuania, Estonia, United Kingdom	e-Learning for the Prevention, Preparedness and Response to Natural Disasters (e-PPR)	The "e-PPR" European Project (2014-1-DK01-KA200-000763) was created to address the need for education and training on natural disasters by creating educational material.	X	X	
3	European Union	Use of EFFIS System	Being aware of local fire risks can help citizens to evacuate and manage their own risks. Training individuals how to access and use the EFFIS allows access to a wider range of information on forest fires.		X	X
4	Germany	120 seconds to survive	This good practice focuses on house fires and covers the measures one should take immediately once a fire occurs in a house/apartment and what one should do to ensure survival.			X
5	Germany	Forest fire: what to do?	An unforeseen forest fire can spread quickly and have dire consequences. Therefore, you should react quickly in an emergency.			X
6	Greece	Forest Fires - Causes, prevention, landscape restoration	Educational material from the Argypolis Environmental Education Centre with the main purpose of helping students to critically reflect on the ways in which humans interact with the environment regarding the issue of forest fires.	X		
7	Greece	Protection Manual From Natural Disasters	Protection Manual From Natural Disasters in Schools in Greece and other European Countries addressed to primary and secondary school students.			X
8	Greece	The fire concerns you - "Η φωτιά σε αφορά" – WWF	Environmental Education Material for Prevention of Forest Fire addressed to primary and secondary school students.	X	X	
9	Greece, Georgia, Italy, Türkiye, Portugal	VOLunteers in ACTION: Raising Awareness for Volunteer Fire Fighters	The VOLinACT(Project Number: 2020-1-EL01-KA204-078872) was created with the aim of disseminating the necessity for forest fire prevention, utilizing the volunteerism of citizens through awareness-raising activities.	X		

10	Indonesia	Forest Fire Protection for Community	A training module aims to build a common perception on the importance of forest fire prevention, and to raise motivation and participation of the local community on Forest Fire Prevention.		X	
11	Indonesia	How to Prevent Forest and Land Fires (Cara Mencegah Kebakaran Hutan dan Lahan)	This good practice aims at providing guidance and tips on the procedures to follow when forest fire occurs.		X	
12	Italy	SicuraMente	“SicuraMente” is an experimental project of education and orientation to the culture of civil protection, safety and self-protection from risks.	X	X	
13	Lithuania	Forest school staff training "Let's go Wild"	The "Let's go Wild" European Project (2019-1-LT01-KA101-060145) aims at the development of school staff competencies, through attending Forest School Education training.		X	X
14	Portugal	Fire hazard communication	This initiative aims at alerting tourists and the overall population to rural fire hazards through the use of social media, media and signage.			X
15	Portugal	Forest fire prevention: a study about the forest technician's training	The study will focus on the initial training (University degree) of the technicians that work on the forestry area, their professional training needs and the existing offer of training in Portugal.			X
16	Portugal	Forest Walk ("Caminhada pela Floresta")	This initiative aims to mark the International Day of Forests by promoting a forest walk in the 18th districts of Portugal.	X		
17	Portugal	Safe Villages, Safe People ("Aldeias Seguras, Pessoas Seguras")	An initiative aimed at raising awareness to prevent the risky behaviour and to adopt self-protection and preparedness measures against rural fires.		X	X
18	Portugal, Romania, Norway, Spain	Careforest - Taking care of forest for protecting local and global ecosystems and human life	The Taking care of forest for protecting local and global ecosystems and human life (project number: 2019-1-ES01-KA201-065866) was created with the aim of raising awareness for the need for care and protection of forests and to enhance citizen's knowledge and capacity when facing forest fires.	X		

19	Spain	Animals to clear firebreaks	Grazing helps to keep the forest "clean", to reduce the vegetation. Animals are used in Aragon to graze on firebreaks.		X	
20	Spain	Guidance on Evacuation Drills in Educational Establishments	A guide for schools to use when conducting fire drills to train pupils on how to act in the event of a fire.			X
21	Spain	Total ban on the use of fire and the circulation of motor vehicles in forest areas and areas of forest influence.	The ban took place between 1 June and 15 October 2009. It addressed the burning of natural vegetation and agricultural and forestry waste, as well as the use of fire for the preparation of food and the use of motor vehicles in protected áreas		X	
22	United Kingdom	Be Firewise	The firewise communities programme focusses on the promotion of simple activites to create a community support network to reduce the risk of wildfires within a locality.		X	
23	United Kingdom	Fire Emergency Evacuation Plan and the Fire Procedure	A fire emergency evacuation plan (FEPP) is a written document which includes the action to be taken by all staff in the event of fire and the arrangements for calling the fire brigade. It can include any relevant information in relation to the FEPP.			X
24	United States of America	Creating a "Clean Room"	Wildfires can produce extremely high levels of smoke and pollutants for properties within its vicinity. Avoiding the smoke through the creation of a "clean room" within the home can prove lifesaving.		X	

### 2.3. Interviews with people in rural areas

A total of 99 people from rural areas were interviewed. The interviews aimed at collecting information on people's experiences with forest fires, current practices on forest fire prevention, and their knowledge of self-protection when facing forest fires. In total, 6 questions were asked, all of which were in an open-ended format.

#### 2.3.1. Interviews from Cyprus

Ten people from rural areas (7 female and 3 male) were interviewed. The large majority were aged between 31-61, although a few of them were 70 or older. The interviewees come mainly from villages around the mountainous region of Cyprus as well as around

National Forest Parks. The villages include Louvaras, Platres, Vavatsinia and Foini. This region and villages have been specifically chosen because every summer they report various incidents of forest fires, at times these incidents are smaller and easier to handle and other times they become uncontrollable and catastrophic, as occurred last year, in July of 2021, in the Arakapas-Ora fire.

More than 60% of the interviewees have either had direct experiences with forest fires in the past or have been very close to forest fires. The responses to the feelings of the interviewees have been common with most of them citing fear, stress as well as the inability to think clearly at that moment.

All of the interviewees have responded that calling the nearest firefighting station or 112 (national emergency number) or 1407 (Forest Department) is the first thing to do when someone spots a forest fire or smoke. Apart from this, many of the interviewees also noted that one should try to assess the situation: if the fire is still small and there is a water hose close by then they would try to wet the surrounding area to slow down the spread of the fire until the firefighters arrive; on the other hand, if the fire is big and uncontrollable the person should also assess the weather conditions if there is wind, which direction it is heading towards, that is so one will know which way to escape towards.

One person mentioned the “POLYVIOS” programme, under Civil Defence (Ministry of Interior), which trains civilians on how to react and which steps to take in the case of an emergency. However, this emergency response is not specific to forest fires but rather concerns the case of war, flood, fires and any other emergency. The other interviewees have noted they are not aware of any official programme/training/initiative which concerns the prevention of forest fires, as such, they have never taken part in any of it.

All of the inhabitants have agreed that fire protection education and training are very important for them, to learn some of the basic responses and to know exactly what to do and where to go during a fire emergency. Most have suggested that such initiatives should be promoted by the government and their respective community councils.

When asked how one should self-protect against forest fire, the interviewees said that calling the firefighters is the first thing they should do. Some interviewees noted that

they would try to protect their houses by keeping the surrounding areas wet. Another interviewee has stated that people should not be scorching vegetation, especially during the hotter months of the year. Additionally, some of the responses included that in case of fire, if they are to leave their homes, they should be going to a place that is open and clean of any excess vegetation and dry branches with no trees close by.

When asked about important measures, the interviewees stressed the need to create more fire breaks to be created around the villages as well as the installation of fire hoses that are easy to use every few meters across the villages so that even if a small fire breaks out it can be dealt with immediately. Finally, one interviewee highlighted the need to have a fire evacuation plan for the villages so that inhabitants will know at any given point depending on the direction of the fire which way they should escape.

### 2.3.2. Interviews from Germany

Ten people from rural areas (3 female and 7 male) consented to take part in the interviews. The respondents are aged between 18 to 61 years old, nominally: 50% between 18-30 years old; 10% between 31-40; 20% between 41 to 50; 10% between 51-60; and 10% were over 60 years old.

Most of the people interviewed had no previous experience with a forest fire, and only knew it from the media. One of them mentioned she had faced a fire before when hiking with her team and that, while the fire occurred, they just watched the fire with terrifying feelings, panic, and had no idea what to do.

One of the most common responses from people, when asked what is the right thing to do when a forest fire is spotted, is to call the national emergency number (112) so that the authority can get into the location and put the fire off. It was also mentioned by the interviewees that, if the fire is on a small scale and it is possible, one could try to extinguish it by using nearby tools before it spread out.

Even though the interviewees are living in places surrounded by forests, none of them is aware or has participated in training or activities concerning forest fire prevention. In addition, they did not get any information from the authority regarding that matter since

they moved to high-risk areas. Despite that, one of them watched a documentary from the local TV provider which gave an education about forest fire.

It was agreed by all interviewees that providing training on fire protection and prevention is necessary for those who need it, especially, first aid courses. Some of the interviewees thought that such training should be voluntarily and organised by the local authorities, civil society such as NGOs, foundations, and schools since it is crucial to teach the children about fire education.

When asked how one should self-protect against forest fire, the responses varied. Not smoking in the forest area was one of the most given responses. Some of them responded that it was important to make sure that the campfire is extinguished after use, as well as to keep a distance from fires. Finally, it was mentioned that it is important to cover the mouth and nose with a wet cloth while breathing to protect the lungs from the fire smoke.

Concerning important measures, a few were mentioned: installing an alarm system in needed places; giving a safety distance of at least 50m between houses and from the nearby forest; having a fire extinguisher at home, especially for those who have kids; monitoring the forest to determine if a fire had started so that it can be contained; understanding and obeying the fire prevention regulation at all times; and finally, in case of emergency, the population needs to have access to a fire protection plan.

### 2.3.3. Interviews from Greece

A total of 10 people living in the rural areas of Attica (3 males and 7 females) were interviewed. Of these, 50% are aged between 18 – 30, and the other 50% are between 31 – 40.

Out of the 10 people, 90% answered that they had faced forest fires several times. They all replied that the emotions that overwhelmed them were fear, anxiety, despair, and stress. One interviewee replied that he saw animals in danger, coming out on main roads and being in danger from cars. He felt helpless and angry about the lack of measures to fight the fire. The interviewees referred to the ashes that fill the houses and the suffocating atmosphere and that, most of the time, there is no water and the electricity

goes out. Also, many roads were closed by the municipal police and fire brigade for security reasons and create few escape routes in case of a fire spread.

When asked what is the right thing to do when a fire is spotted, all interviewees replied that the Hellenic Fire Service and local authorities should be called. It was mentioned that there should be an introductory training with the basic activities that one should do to help in such occasions as forest fires. For example: call the fire department; remove things that can worsen the situation; help people without putting other people at risk; how to extinguish a fire at home or, if not possible, leave and call the fire department immediately.

Most of the interviewees (80%) answered that they did not know of any program/training/initiative concerning the prevention of forest fire in their region. Two good practices were mentioned by two interviewees: Vodafone Smart Forest for fire prevention in the Parnitha region (in Attica); and training for volunteer firefighters provided by the Municipality of Dionysos. It was also mentioned that there is a group of volunteers that anyone can register called the "ASSOCIATION OF CIVIL PROTECTION VOLUNTEERS D.K. DIONYSUS," and that, last year, the Municipality invited the citizens to be a part of.

All the interviewees answered that training in fire protection is essential (not only for fires but for other natural phenomena as well). Furthermore, they all agreed that it should be present in schools, workplaces, and municipalities, especially if they are close to a forest area. Updates should be made in early summer in the open and the central regions, such as squares. Recently, an effort has been made to inform and raise awareness of civil protection. There must be information in schools, to citizens on social media, on television, on mobile phones, by letter in citizens' homes, and even in the workplace, especially in companies near or in forest areas.

In general, the interviewees stated that everyone should be informed about the way of self-protection and follow the instructions/framework approved by the relevant authorities. Some self-protection instructions were mentioned: cut the grass (if there is any) around their houses; keep distance from fire when a fire is spotted; cover the face with a wet blouse if facing a fire to protect from smoke and fumes; leave



immediately before smoke becomes heavier and more harmful. It was underlined by some interviewees the importance of having a First Aid Kit that should include non-flammable clothes and shoes, water, a mask, a blanket, and a cell phone to call for help. However, the interviewees concluded that, without the necessary knowledge, there is a high probability of injury and that makes the work of specialists difficult.

As for important measures concerning forest fire protection, the interviewees responded that everyone should have fire extinguishers, fire alarms, fire safety plans, emergency plans, houses with safe distances, deforestation in the wild grass during the summer months, and should avoid littering. The knowledge that the residents should have about the existing measures was pointed out once again, and it was mentioned that the Hellenic Fire Service should be rewarded with better earnings and more recruitments.

#### 2.3.4. Interviews from Italy

In Italy, 10 people from rural areas were interviewed. The interviewees are from many different small villages and town constantly at risk of damage caused by fires and specifically forest fires based in the centre of Sicily and Veneto. 100% of the respondents were aged between 18-30 years old.

None of the respondents had ever faced or experienced a forest fire in first person, although the majority mentioned that they live in areas which are usually targeted by forest fires during the Summer, especially when the wind is strong and warm (wind from the south in particular).

Respondents were quite homogenous when asked what is the right thing to do when a forest fire is spotted. All of interviewees essentially stated that they would call emergency numbers, firefighters and “forest guard” in order to involve the professionals in dealing with the emergency as soon as possible. Some of respondents also stated that they would intervene as well to prevent immediate danger, but recognised that it is risky because it is important to deal with fires in secure and efficient manner.

When asked if they were aware of programmes or trainings concerning forest fire prevention in their areas, 100% of the interviewees gave a negative answer.

Furthermore, none of them has ever participated in any kind of training due to the lack of initiatives on this matter. Considering that the respondent comes from rural areas at risk of great damage from forest fires, the feedback to this question comes to highlight the need to create initiatives and training.

The respondents were also unanimous when asked about the importance of fire protection education and training. 100% of them stated that such education and training is of utmost importance because they understand or have seen the extensive damage fires have done in their regions. Some of the respondents have mentioned that the promotion of such education and training should be conducted more often, and that it should start from school. One of the participants added that social networks would also be an efficient tool to reach more people and raise awareness about this topic. In general, all interviewees agreed that education should be improved regarding fire protection and fire prevention and that local authorities must take responsibility to do so.

Although all of the interviewees were hesitant about what one should do to self-protect against forest fires, all of them stated that the correct behaviour would be to involve local authorities and professionals who deal with fires and fire protection. Among other responses that were collected, some said that running away and protecting themselves from smoke and flames, while others were more specific involving knowledge of the terrain and which areas are more inflammable than others (like places with high grass) and staying away from them while getting away. Other self-protective measures mentioned by some respondents were to cover the face with a wet cloth and run opposite to the fire and wind. Finally, one interviewee explained the importance of knowing how fires expand in forests and which zones are more protected.

Regarding measures deemed important concerning forest fire protection, respondents stated several aspects, including fire alarms, proper safety and emergency plans, fire extinguishers, a safe distance of houses from forests and better cleaning and security of forests themselves from dry grass. Some interviewees also expressed the importance of knowing whom to call first to deal efficiently with the fire. Finally, it was also mentioned the convenience of having software that would be able to inform firefighters and forest guards which areas are the most dangerous and in which fires could start more easily.

### 2.3.5. Interviews from Portugal

The two Portuguese partners interviewed a total of 26 people (3 male and 23 female). The majority of the interviewees resided in different towns (such as Canedo, Gião, Olival and Lobão) in the region of Santa Maria da Feira – a region with some history of urban and forest fire. The respondents were aged between 18 to 61 years old, nominally: 8% were aged between 18-30 years old; 27% between 31-40; 30% between 41 to 50; 8% between 51-60; and the remaining 27% between 61-70.

The majority of the people interviewed had, at least once, faced a forest fire. One of the interviewees mentioned that, in her case, because the fire had turned so severe, the roads were blocked by the police and they were forced to take another route on the way home. When describing the experience, some related being worried and afraid, sentiments that were mixed with panic, sadness and despair. Some stated to feel anger and outrage from those who were not careful and set/started a fire.

When asked about what actions should one perform when a forest fire is detected, most of the respondents expressed the urgency to call the firefighters or the national emergency number (112), as well as follow the authorities' advice. Another popular opinion shared by the interviewees was that they would protect their houses and goods, mentioning the need to start putting off the fire with either water hoses or buckets, and even spraying water on the walls and ceilings. A few mentioned the necessity of saving oneself first and finding a way to create a safe place to stay. One person mentions the necessity of finding a piece of cloth to protect one's airways from smoke.

The majority of interviewees admitted not being aware of any programmes/training/initiatives related to the prevention of forest fires, 100% expressed that they had never taken part in any of those. Most referred that they do not even know about the existence of such initiatives. One interviewee stated, though, that she knew about simple and short lectures that in the past were given on forest fire protection at the firefighters' headquarters. Another interviewee mentioned that the authorities had a platform where you let them know when you are burning disposal waste so that they know that it is not a wildfire (and the person does not get fined). Finally, one interviewee said to have participated in a fire safety course but it was only concerning prevention and protection in case of domestic fires in specific.

Once again, 100% of the participants agreed that there should be fire protection education training in which the basics are taught and a simulation of fire/evacuation is conducted so that people could be better prepared for panic moments. Furthermore, it was agreed that such training should be mandatory for all of those who live in areas with a higher risk of fire. These activities should be hosted at parishes, city councils and training centres. It was also mentioned that children, as young as pre-schoolers, should start to be exposed to awareness campaigns on forest fire prevention. It was suggested that an awareness day for the local population should be implemented, as well as some training on first aid and fire prevention.

When asked about what one should do to self-protect against forest fire, the most common aspect was the use of water hoses and safety paths. Furthermore, it was expressed by 69% of the respondents that they would help put out the fires and protect their houses and belongings at all costs using mattocks and buckets of water. It was also mentioned by some respondents that, as a good practice, people should have oxygen masks and other ways of protecting their airways (like wet cloth) and the importance of keeping forests, gardens, farms and groves cleaned all year long.

When asked about important measures concerning forest fire protection, of all measures presented, the interviewees highlighted that the essential action was the need to clean, and keep clean, all forests and woods. On this matter, it was discussed that the Government should take forest cleaning more seriously and that they should supervise the cleaning process, help those who, for many reasons, cannot do it, and charge those who do not follow this protective measure. This would help not only prevent rural fires but also would help reduce the possibility of spreading the burning. Many mentioned the creation of security distances between houses and forests, helping to not affect the habitations in case of a fire, which could also be used as a safe path for people, firefighters and emergency vehicles. Finally, some of the interviewees also said that it is important to have a water hose at home, in case they need to put out a fire, as well as the need to have fire extinguishers and First Aid Kits in case of fire emergencies.

### 2.3.6. Interviews from Spain

In Spain, ten people (7 female and 3 male) who live in rural areas and who are aware of the importance of their natural environment, either because they live from tourism or because they are lovers of nature, fauna and flora were selected to take part in this interview. The majority reside in the Andalusia region, living in populations of no more than 15,000 inhabitants, both in protected areas and in natural parks. Of these ten interviewees, 30% were under 30 years of age, 20% were over 70 years of age, and the other 50% were between 41 and 60 years old.

When asked if the interviewees had ever experienced a forest fire, 40% of them said they have been confronted with forest fires at least once in their lives. All of them were caused by human activity. The interviewees said that the first sensation was the helplessness of seeing how the flames were gradually consuming the flora, accompanied by the fear caused by the proximity of their own homes or those of their relatives. They all agree on the good fortune of the rapid action of the civil protection teams who managed to control it effectively and that there was no need to lament major damage.

All respondents agreed on the importance of notifying the emergency services. They also stressed the importance of warning the nearby population using loudspeakers, alarm sounds and trying to organise, together with the security forces, the rapid evacuation of people in vehicles in an orderly manner to traffic jams that could lead to fatal consequences.

The majority of the interviewees are not aware of any programmes/training/initiatives concerning forest fire prevention in the region, except for a few workshops in schools. Hence, most of the interviewees have no formal knowledge or training in forest fire prevention. The interviewees mentioned that they have basic notions, although these were from advertisements on television and some leaflets and panels in natural parks.

100% of interviewees agreed on the importance of taking part in forest fire protection training. Furthermore, they agree that such training should be compulsory in pre-schools, secondary schools and universities. Likewise, every year there should be publicity campaigns in the press and on television to complete the information and, in more sensitive environments, evacuation drills.

The interviewees highlighted evacuation as a measure to self-protect against forest fire: “Evacuation should be done always in the direction of the lower areas of the valleys, avoiding going up the mountains” and that “it is important to know the wind trajectory so as to predict the direction of the fire”. Covering the mouth and nose with wet cloths, as well as wetting the clothes, was also mentioned. Such measures can “help to control smoke and temperatures”. One of the interviewees suggested going upwind of the fire. Finally, it was mentioned the importance of fleeing to areas devoid of vegetation or moving to areas that have already burned.

When asked about important measures, it was said that being aware of the comprehensive fire action plan by the competent authorities is the most important. Other prevention measures include clearing undergrowth either by using human resources or with the help of livestock by feeding domestic herbivorous animals such as sheep or goats, which can prune the vegetation and their faeces used as fertilisers. Finally, it was also mentioned that fire alarms are also an important means of alerting the population.

### 2.3.7. Interviews from Türkiye

In Türkiye, 23 people (100% male) participated in the meeting held in Ankara's Bala district and Mamak/Ortaköy, where the interviews took place.

The majority of the interviewees, 78%, stated that they had never encountered a fire incident before, thereby suggesting that people living in rural areas have little experience with the fire incident. On the other hand, 22% of them have encountered a fire event before. Interviewee 9 said he was “afraid and confused with the fear of loss of life and property”. Other interviewees also mentioned feeling of helplessness and panic.

When asked about what they think is the right thing to do when a forest fire is detected, 44% mentioned calling the fire department and intervening directly. 26% of interviewees argued that it is the right behaviour to first call for professional help and then intervene on their own until the fire crew arrives. Interviewee 8 mentioned “ensure safety” and “remove people, if any, animals, then to call the fire brigade”; It was also

mentioned by 13% that, once the firefighters arrive, they would help them combat the fire. Interviewee 11 mentioned he would try to extinguish the fire and inform his surroundings, however, “To extinguish it, all citizens must be mobilized and all necessary units must be informed”.

When asked about programmes, projects or initiatives that promoted forest fire prevention in the region, 87% of the participants said that they did not know any training, nor that they had participated in any. On the other hand, 13% stated that they were aware and participated in the training.

All of the participants (100%) think that fire safety education and training are important. It was mentioned that “unfortunately most people do not have any knowledge about fire extinguishing”. Furthermore, it was discussed that unconscious fire extinguishing is likely to cause a greater disaster because “most people can harm both the environment and their health by unconsciously intervening” and that the wrong response to the fire may make things worse.

When asked how would they react to self-protect against forest fire, 65% of the interviewees agreed that the wisest thing to do is to walk away. It was also mentioned that informing the authorities and avoiding behaviours likely to cause a forest fire worse is crucial. Interviewee 23 highlighted the importance of covering both the mouth and the nose to protect against smoke, and interviewee 10 said he would cover himself in a wet blanket and try to keep a distance.

Finally, the interviewees were asked about their opinion on important measures concerning forest fire prevention. In this regard, 57% of the responses had to do with raising awareness among the inhabitants of any fire safety plans that existed in the town/city. 35% of the interviewees mentioned the removal of factors causing the fire is important, and that forest cleaning should be more frequent. Interviewee 14 added that forests must be free of objects that are prone to start fires, such as shards of glass. Finally, the last 8% of the responses had to do with having the city/town hall/council set up a safe assembly area in case of fires, and the use of electronic systems for warning of fire should be more abundant.

## 2.4. Interviews with professionals on civil protection and forest fire

A total of 97 professionals in civil protection and forest fire were interviewed. The objective was to collect information on the good practices for forest fire prevention and for self-protection that could be passed to the rural populations in the form of training. In total, 5 questions were asked, all of which were in an open-ended format.

### 2.4.1. Interviews from Cyprus

10 professionals (100% male) in civil and forest fire protection, mostly based around the Troodos region, were interviewed. The age range of the interviewees is a large majority between 31 – 60 years old.

The first question asked to the professionals was what suggestion they would offer concerning the prevention of forest fires. All the professionals interviewed stressed the importance of prevention as being the A and Z of forest fire protection. The suggestions on prevention measures have been similar for all professionals. Accordingly, they suggested that direct and in-person communication with people living in rural areas is vital. During these communications, having informational lectures and showing related films on the before and after of forest fires and the destruction that can be caused is useful for making the rural population more aware of the implications of their actions. Several of the participants noted that in general and especially during the fire season in Cyprus (May - September) rural inhabitants should maintain their properties clean of any excess and dry vegetation within, as well as around the perimeter of their properties. Additionally, having a water hose that can cover the perimeter of the house is essential.

As for suggestions concerning self-protection, once again, the professionals cited the proper and correct cleaning of private as well as public properties in villages around the forests as the most important measure. Other than that, it was suggested inhabitants should refrain from using any tools and engaging in any activities that produce sparks and can lead to a fire breaking out. Something very important is that if people are to engage in these activities, then they should be aware and know under which weather conditions to do this. If the weather is extremely hot or if there are strong winds, then



they should know to leave the activities for a different day. It was also added by most of the professionals that people in rural areas should know and understand that once they see fire or smoke, they should immediately call the 1407 or 112.

The professionals were also asked if they knew any institution that provided training on fire protection. To this question, 90% of the professionals interviewed noted that apart from the Cyprus Forestry College – which provides official and certified training on forest fire protection to future forest rangers/forest firefighters and other organised collectives such as volunteers in forest fires – there is no other institution providing such training to general citizens.

90% of the participants agree that fire safety education and training are important for rural populations. Related training in fire safety can allow people to understand which are the right times of the year to complete certain activities such as dry vegetation scorching as well as how to immediately respond to a fire breakout, always within their limits and safety. One of the respondents remained negative towards people of rural areas gaining any training on fire safety since he believes that one should be a professional to deal with fires.

When asked about suggested tools/methods that could be utilised for the rural population to be informed on prevention and self-protection from forest fires, most of the interviewees in the professional field of civil protection and fire prevention highlighted the use of the media such as TV and social media platforms (such as Instagram, Facebook, Twitter). One of the interviewees noted that reaching out and collaborating with certain Associations and Clubs including the Cyprus Agriculture Organisation, Hunter's Associations, and Football Clubs located in rural areas could be beneficial in terms of delivering certain informational lectures and even training on forest fire prevention and self-protection. This would allow a wider reach in terms of audience and people that are not that familiar with social media.

### 2.4.2. Interviews from Germany

In Germany, four experts on forest fires and civil protection were interviewed. Out of these four, 50% were aged between 18-30 years old, 25% were between 31-40, and the remaining 25% were between 41-50.

Concerning suggestions that experts would offer for forest fire prevention, two suggestions stood out: increasing awareness campaigns and comprehensive conversion of the more resistant tree species, since the report of the forest fire danger index of the German Weather Service (DWD) showed that it was already on level 3 (medium danger) for the Saarland on 18/05/2022. One interviewee cited that cooperation between related organisations and the fire department regarding forest fire prevention should be strengthened and that forest visitors and inhabitants, in general, must be clear that most forest fires in Germany are not caused by natural disturbance events in forests, but are almost exclusively by human activity. It was added that grill-fire ignition and wrong parking in forest areas in Germany were the most common causes of a forest fires. Therefore, the importance of parking the vehicle in the designated parking spaces was also highlighted since car catalytic converters are hot and could cause dry vegetation to catch fire. Moreover, increasing target group-specific awareness among forest visitors was also mentioned by the experts as one important measure to prevent forest fires. Finally, it was added that information campaigns (signs in the woods, forest fire hazard information on the radio, Internet pages) must be abundant and repeatedly stress out forest fire hazards in summer and the correct behaviour one should strictly use in places like forests (no smoking, barbecues, campfires, etc).

As for important self-protection measures, the interviewees said that it was essential to avoid breathing the smoke because it can cause various health effects, including respiratory irritation and shortness of breath and can worsen medical conditions like asthma. Hence, they mentioned that as self-protection measures it is crucial to use nose and mouth protection is crucial. If by the house, one should leave it immediately using a wet towel.

Most of the experts acknowledged the lack of institutions providing training in fire protection. It was mentioned by one interviewee the German Fire Brigade Association

and the local fire departments. Additionally, one interviewee who is a part of the team “Evolnic” (from the Friedrich-Alexander-Universität Erlangen Nürnberg) that develop drones for different objectives, including forest fire prevention, mentioned that the State Fire Brigade School (Landesfeuerweherschule) offer courses and seminars on the subject of the fire brigade and that they were pioneers on the use of drones for fire prevention.

Most of the experts believed that fire safety education and training were vital to save people’s lives, not only in rural but also in urban areas, as well as those who visit forests very often. The respondents said that they must reckon with the fact that the danger of forest fires has increased significantly, therefore every single citizen should know how to behave in such situations, especially if, under certain circumstances, the authority cannot be there on time or at all. A curious fact which was mentioned by an expert was that most forest visitors come from urban settlement areas and that visitor pressure was significantly higher in metropolitan areas than in rural areas. Hence, since most forest fires in Germany are caused by human activity, it is crucial, among other things, to draw attention to proper behaviour in the forest, especially in these hotspots. Thus, they agreed that education and training modules are important.

When asked for tools or methods to inform the population about forest fire prevention and self-protection, it was expressed that an effective tool for reaching the rural population was the community newspaper, which regularly reached every household. Hence, especially during summer, these should contain relevant information on the current forest fire dangers, the correct behaviour in the household, and contact for urgencies. The experts were hesitant about the use of the internet to convey such information since in broad rural areas internet accessibility is still reduced and therefore might not be as effective. In addition to the newspaper, it was discussed that forest fire danger and correct behaviours should be pointed out at forest entrances with parking lots during the summer.

### 2.4.3. Interviews from Greece

Regarding the interviews with professionals, there were ten Volunteer Forest - Firefighters (9 males and one female), all aged between 18-30 years old, that were interviewed. They all belonged to the "Hellenic Volunteer Firefighters Association" located in Rodopolis, Attica. This Association was chosen since it is a part of the operational planning of the Fire Brigade and the Panhellenic Register of Voluntary Organizations of the General Secretariat of Civil Protection (with number 06/2003), and because it has more than 25 years of experience. This Association operates with an approved statute, internal regulations, an organisation chart, and a predetermined shift schedule, and covers many regions in the rural areas of Attica.

When asked about suggestions that they would offer concerning the prevention of forest fires, all firefighters responded with the exact instructions. They cited the Protection Guidelines (which have been officially issued by the Hellenic Ministry of Climate Crisis and Civil Protection and the "Hellenic Volunteer Firefighters Association"), which are the official guidelines that people should follow. The first instructions concern fire prevention in particular: Do not burn rubbish or dry grass and twigs during the summer months; do not light outdoor grills in the woods or areas with dry grass in summer; avoid tasks that could cause a fire (e.g., welding, using a wheel or other tool that creates sparks); do not throw lighted cigarettes; do not leave rubbish in the forest. There is a risk of ignition; respect the prohibitions of access in high-risk periods; create a fire zone around the house by cleaning dry grass and leaves, pine needles, and branches within a radius of at least 10 meters; prune the trees up to a height of 3 meters, depending on their age and conditions; remove dry branches from trees and shrub; do not let the components of the trees rest on the walls, the roof and the balconies of the house; prune them at least 5 meters away from home; dilute tree vegetation so that the branches of one tree are at least 3 meters away from the components of the other. For even more excellent protection, it was suggested the removal of the tree and shrub vegetation around the building at a distance of at least 10 meters, provided that the cleaning works of the natural vegetation imposed for the protection of the buildings do not, in any case, violate the provisions of the forest legislation; do not place plastic gutters or pipes on the walls of the house; do not place flammable shutters on windows

and patio doors; make sure that the covers on the chimneys and vents of the house are made of non-flammable material so that sparks do not penetrate; do not store flammable objects near the house; place the firewood indoors and in a sheltered area; do not build uncovered fuel tanks near your home; obtain the appropriate fire extinguishers and take care of their maintenance; equip yourself with a watering hose with a length proportional to the area you want to protect; equip yourself with a water tank, a simple pump without electricity and a water pipe.

Following the Protective Guidelines aforementioned, the interviewees also referred to examples of self-protective measures when facing a fire. It was mentioned that the Fire Department should be called immediately (tel. 199) as soon as a fire is spotted, and clear information on the location and exact location, the direction of the fire, and the type of vegetation that burns should be clear. The respondents also said that people need to remain calm if a fire is approaching homes. Some self-protection measures they can do if that happens is to transfer all flammable materials from around the building to enclose it. It was mentioned that all sheltered areas should have all passages (chimneys, windows, doors, etc.) closed so that the heat does not penetrate inside the house, that gas and liquid fuel supplies inside and outside the home should be turned off and that the awnings on the balconies and windows should be folded. It was also mentioned that garden doors or gates should be opened to facilitate the access of fire trucks and that a ladder could be placed the outside of the house, opposite the direction of the fire so that there is direct access to the roof, to connect the watering hoses and lay them out to cover the perimeter of the house. Finally, it was suggested that, if visibility is reduced, turning on the interior and exterior lights would make them visible through the smoke.

When asked about institutions providing training on fire protection, the respondents said they were not aware. On the other hand, they mentioned significant educational material has been produced by the Hellenic Ministry of Climate Crisis and Civil Protection, as well as by the World Wide Fund for Nature (WWF). The majority of the interviewees also mentioned (and have attended) the Forest Firefighting Conference organised by a civic organisation “HIGGS.”

All interviewees underlined that fire safety education and training are important for everyone, but particularly essential for vulnerable groups. The respondents said that

people must know exactly where they live and know the escape or the meeting points (e.g., in case of evacuation, they must know where to go). The most appropriate place for such education to take place would be in Municipal buildings, to reach the general citizens of the town/city.

Finally, when asked for tools/methods they would suggest to keep the rural population informed, it was mentioned that demonstrations should be promoted by the Municipality in consultation with the fire department. Such demonstrations should convey regular information about citizens and different actions to deal with these difficult situations. It was also suggested the organisations of Open Days in areas with increased risk by the Municipalities and the volunteer firefighters' groups. Moreover, home distribution of information material should be done, videos about fire protection measures should be produced and informative sessions should be conducted in schools.

#### 2.4.4. Interviews from Italy

Four professionals working in the field of fire protection and prevention were interviewed by the Italian partner, all of whom are professionals coming from Palermo city and the Palermo region.

Regarding suggestions offered concerning forest fire prevention, the professionals interviewed shared several ideas. One common suggestion given by the interviewees was to invest more resources in forest control and fire prevention. Public authorities and organisations working with natural areas must implement strict controls and fire prevention activities. Additionally, there should be more attention in relation to which vegetation grows uncontrolled which can pose a threat to the safety of the forests. A more complex approach was proposed by one of the respondents, consisting of the use of volunteer groups as well as new technology such as satellites, drones and the strengthening of the fire intervention infrastructure with more planes, helicopters as well as the areas in which they can operate from. Moreover, it was stated by the interviewees that it is important to strengthen the ordinary activities of monitoring the territory and contact with the population by the staff of the Forestry Corps and Civil Protection. Another aspect taken into consideration was the cleaning of the road edges,

considered the main source of possible triggers, by enhancing the activity of the road service authority in areas and periods at greatest risk of fire.

When asked about suggestions concerning self-protection, the interviewees gave different examples that citizens can do to become more active in order to prevent and protect better, such as being better citizens when it comes to not commit action that can cause forest fires, especially in more dangerous seasons like summer and inform and participate about targeted forestry interventions, information campaigns on the value of woodland protection education.

The interviewees were also asked if they were aware of any institution that provides training on forest fire protection. 50% of the respondents said they were not aware. One respondent mentioned the regional authority and civil protection, although he was not sure how and how often they take place. One interviewee also mentioned the University as a possible place where training on fire protection might be taught.

Nevertheless, all the respondent agreed that training and education on fire safety was important. Some mentioned that, usually in rural areas, farmers are aware and capable of self-protecting against fires since they are experienced and worried for their livelihood, but information campaigns and awareness campaigns would be useful and helpful. Some mentioned that these kinds of initiatives should be implemented by public and local authorities including “Guardia Forestale” and other volunteer organisations. Lastly, but not less important, one of the interviewees stated that education is fundamental and crucial in forest fire prevention and there should be cooperation between universities, training centres and local organisations (especially the ones who fight for the protection of the environment) in order to provide such training and educational opportunities.

Several different ideas were proposed regarding how to get the population informed about forest fire prevention and self-protection. It was stated that awareness campaigns should be conducted more often and that informational advertisements should be presented via television and smartphones. One of the respondents stated that there should be awareness and education campaigns early in school together with events and

activities that would prepare future generations and raise awareness of the danger of forest fires.

#### 2.4.5. Interviews from Portugal

The two Portuguese partners interviewed a total of 24 experts (19 male and six female). Of these respondents, nine were firefighters from the Humanitarian Association of Voluntary Firefighters of Ovar; one was a firefighter from the Volunteer Firefighters of Esmoriz; 11 were firefighters from the Volunteer Firefighters of the Municipality of Espinho; one was a psychologist, and the remaining two were the president of the town Canedo and a civil protection representative from the same town. All of them were aged between 18 and 60 years old, in specific: 54% were aged between 18-30 years old; 13% were aged between 31-40; 29% were aged between 41-50; and the remaining 4% were aged between 51-60.

When experts were asked what suggestions would they offer concerning forest fire prevention, the majority mentioned the clear necessity of raising awareness of forest fires and campaigns in towns/cities, not only during the summer season but all year round, when the weather is more prone to fires but rather all year long and in different formats (online, newspapers, television, gamification, brochures, posters, etc.) to reach a wider age group. It was likewise mentioned that people should be aware of the need to create escape paths or safety zones in their forests or cultivated areas and follow an evacuation plan if and when needed. In addition, people should remove, in advance, flammable vegetation or material around their houses. Furthermore, the interviewees rose awareness about the need to create training/education – especially in cities and towns surrounded by wooden areas – so that residents can learn topics such as: how to use fire correctly and when to do it; how to avoid starting a forest fire; how do fires arise and spread; how to act in case of a fire; how to help themselves and other. It was argued that children, adults and elders alike should have customized workshops and brainstorming sessions according to their age, mental capacity and living conditions. On a general note, the respondents said that it is important to follow authorities' recommendations, as well as to apply punishment to those who litter forests and who start fires. They also expressed the need to improve viewing and supervising points to



be more vigilant about activities done in forests and woods. Finally, on a more mental health matter, one interviewee underlined the importance of not giving too much mediatic attention to events such as these, because pyromaniacs like the spotlight and all the drama around these catastrophic situations

When asked about suggestions concerning self-protection, the experts mainly suggest that civilians who experience a fire should immediately call the national emergency number (112) or the fire stations. Whilst the fire brigade is coming, civilians should find themselves a safe shelter or a place that has been burned down, and when the fire brigade arrives, the interviewees suggest that people are told how they can help the firefighters and should follow their instructions and advice. Similar to the question before, most of the experts suggested that people should participate in training about self-protection, particularly those who live in rural areas so they could learn what to do in case of fire, how to act, and how to stay safe. However, the interviewed firefighters recognised that there is not enough training or even awareness campaigns on the topic. Wildfire smoke can be very harmful, therefore other suggestions include the need to cover the nose and mouth with a cloth – which is even more important if there are children around or people with asthma, allergies or chronic health issues; if people are inside the house, any airflows, such as windows, vents and doors, must be closed; in some cases, people need to accept that leaving everything behind and follow the authority's instructions is the only option. It is crucial that locals are aware of the city's emergency plan (if there is one) so that they know where is the meeting point and where can water access points be found. Once people meet at the meeting point, they should follow the instructions given by a representative of the town/city hall/council who would be present too.

As had happened with civilians, the majority of the professionals do not know any training/education programmes on fire protection for the general population. The interviewees stated that the only training they are aware of is the one provided by the ENB (National Fire Service School - Portugal), the training and certification entity for the training of firefighters in Portugal, which is not open to the public in general. The VET School of Cortegaça (ran by Ovar Forma) was mentioned, even though VET Courses are for youngsters within a certain age range and to have certified training means taking

part during the three years of the course, which means it is not appropriate for inhabitants who just want to be informed on specific actions about forest fire prevention and what to do when facing one. The project “Aldeia Segura” (Safe Village) was mentioned. It is a programme created by the Portuguese government after a national major fire situation in 2017 and aims to create awareness for those who live next to forests and woods, on how to act in case of fire and how to avoid it and prevent it. Other than that, the only information people can find that comes close to training is specific information/guidelines about these topics on the websites of relevant institutions. The website of ICNF (Forest and Nature Conservation Institute) was given as an example.

All firefighters agreed that there should be training concerning prevention and protection in case of fire. Furthermore, they mentioned that these should take place not only during the summer season but all year round. When preparing smaller activities or workshops it was suggested that the content should be more general since some of these concepts are hard to grasp and it would help the firefighters work if locals knew the basics of self-protection and prevention. The interviewees believe that the most appropriate place for such training activities to take place and/or be promoted should be in recreational places, like the City Council and City Halls, Fire Departments, Associations and also training centres close to populations at risk so as to reach the adult audience. Nevertheless, it was argued the need to reach children as well, and that, therefore, mandatory training should be introduced in schools from a very early school year.

The expert interviewees were also asked if there is any tool/method that they would suggest informing people about the topic of forest fire prevention and self-protection, no matter the age group. For this to work, the dissemination method should be adapted, since the elders do not access digital media at all and the youngsters do not read the newspaper or barely watch the news on the television or radio. Regarding the children, some interviewees said that the best way to reach them was through school activities; In order to reach youngsters, the majority stated that one should use school as well, but also social media and gamification material; as for elder people, distributing flyers or brochures announcing training, workshops and any campaign both face-to-face and by post could be a good option. Furthermore, television and newspaper ads would also

have a good chance of being seen by elders. Some of the interviewees also mentioned that everyone should have protection kits in case of emergency and have fire experience (controlled and supervised by the local firefighters) to know how to act and not panic. Finally, it was also expressed that the National Authorities should be sharper in announcing the punishment measures when someone commits a fault related to fire protection.

#### 2.4.6. Interviews from Spain

Ten professionals (5 female and 5 male) were interviewed. The majority reside in the Andalusia region, living in populations of no more than 15,000 inhabitants, both in protected areas and in natural parks. All of the interviewees were under 55 years of age, with 50% being over 40 years of age.

When the interviewees were asked about suggestions they would offer concerning forest fire prevention, the main suggestion highlighted was to avoid panic and make quick decisions, preferring to consult the authorities and always and at all times follow their instructions. It was also mentioned that confronting the fire should be avoided if one does not have personal protective equipment and the supervision of fire-fighting professionals.

Regarding self-protection suggestions, the professionals said that the first thing to do is to always notify emergency services of the location of the fire and the location itself. It is important to protect the respiratory tract with wet handkerchiefs and wet the clothes, as well as carry a whistle to be able to be located if the fire is reducing visibility. It was agreed that inhabitants should always run away from the fire in a downwind direction to avoid being surrounded by it and avoid the high ground. It was expressed that, if caught in a vehicle, one should not drive if visibility is low due to smoke, and should stop the vehicle in an area clear of vegetation, away from the fire, and with the lights on.

When asked about institutions providing training on fire protection, the experts mentioned that apart from the training received during the study of the profession to be carried out, and fire drills, by public institutions, little training is given to the general

population, with NGOs being the only ones to provide training in this field in natural environments.

All interviewees agreed on the utmost importance of training for the rural population, which should be promoted in educational environments with information from professionals in the field, as it would avoid many of the negligence that is often committed when a forest fire develops. More evacuation and fire drills should also be carried out.

Finally, when asked for tools/methods to convey information related to forest fire prevention and self-protection to the rural populations, the main measure suggested by the experts was to carry out simulations, since it allows to verify the failures and shortcomings of the population in this area and proceed with corrective measures.

#### 2.4.7. Interviews from Türkiye

In Türkiye, 35 experts in the civil protection and forest fire fields were interviewed. The interviewees were employees of the Ankara Metropolitan Municipality Fire Department, Ankara Provincial Directorate of Agriculture and Bala District Directorate of Agriculture.

When asked for suggestions to prevent forest fires, the experts mentioned that, firstly, to prevent forest fires, society must become sensitive to this issue, therefore the need to raise public service announcements on forest fire prevention. It was also mentioned that people should not do picnics in forest areas and that this practice should be prohibited at all.

When asked for suggestions concerning self-protection when exposed to forest fires, interviewee 7 mentioned that, during a fire, one should be and act consciously by taking precautions first (for instance, pay attention to the direction of the wind and how fast the fire is spreading). It was also mentioned that having equipment such as masks, tubes and backrests at home and creating an escape route is also essential when exposed to a fire. Some respondents also said that people should stay away from fires, especially if they have not received any adequate training on this subject and that they should follow the forest fire professional instructions to the smallest detail.

When asked if they knew institutions that provide training on fire protection, 89% of the interviewees said they were aware, whereas 11% were not. The institutions mentioned by the interviewees were the General Directorate of Forestry, the Disaster and Emergency Management Presidency and in some cases even Universities.

100% of the respondents agreed that fire safety education is very important for rural populations. One example of a topic shared by most interviewees was fire extinguisher training. Responsibility in the fire extinguishing process is not only for people who are experts in the job but also for the population living in rural areas. In this context, interviewees said that the first response to the fire is very important to minimise the loss of life and property and that therefore it would be helpful if such a response was done in the right way, otherwise, inhabitants might put their lives at risk and/or even cause the fire to become more intense. Interviewee 9 added that the populations need to be educated on forest fires because of the lack of fire brigades in rural areas in Türkiye and the time it takes to get there. Hence, as mentioned by interviewee 25, a well-done “intervention of rural citizens until the fire department reaches the scene prevents the fire from growing.”, which reinforces the need for forest fire training in rural populations.

Finally, the experts were asked for suggestions of tools/methods to keep the rural populations informed about the prevention of forest fires. It was mentioned that inhabitants should engage in forest fire educational activities such as public education seminars and public service announcements and that these should be increased to raise public awareness. Additionally, publications on the topic could be distributed in rural locations.

## 2.5. Preliminary module structure

Based on data collected and analysed from the previous activities, a preliminary module structure was defined. The structure reflects the different training needs of the different socio-geographic profiles identified during the interviews.

Module structure: Forest fire prevention and self-protection against forest fires			
Unit	Content	Learning outcomes	Timeframe
<b>1. Introduction to forest fire</b>	1.1 Definition of forest fire 1.2 Impact on the environment 1.3 Causes of ignition 1.3.1 Fire Triangle 1.3.2 Natural activity 1.3.3 Human activity 1.4 Fire classification 1.5 Managing forest fires	<ul style="list-style-type: none"> <li>Understand the concept of a forest fire;</li> <li>Recognise the impact of forest fire on the environment;</li> <li>Recognise the presence of fire hazards and common ignition sources;</li> <li>Identify the types of fire and how they are spread.</li> </ul>	4h
<b>2. Forest fire prevention</b>	2.1 Staying informed 2.2 Preventive measures 2.2.1 General 2.2.2 When in forests 2.2.3 Equipment 2.3 Fire safety zone	<ul style="list-style-type: none"> <li>Understand the importance of being aware of the local law regarding forest fire;</li> <li>Be aware of preventive forest fire measures;</li> <li>Identify different types of fire prevention equipment and know when to use them;</li> <li>Identify the main steps to create a fire safety zone</li> </ul>	5h
<b>3. Self-protection against forest fire</b>	3.1 Escape Plan 3.2 Responding to a forest fire - what to do when: 3.2.1 It approaches the area of residence 3.2.2 Confined at home 3.2.3 Outside 3.3 Emergency kit	<ul style="list-style-type: none"> <li>Identify the main steps to create an escape plan and how to proceed during an evacuation;</li> <li>Understand general procedures on how to respond to a forest fire in different situations and locations;</li> <li>Understand the importance of the items that are part of an emergency kit</li> </ul>	6h

## 2.6. Round tables to discuss the module structure

The round tables were conducted by all partners, one in each participating country. The aim of the round tables was to discuss the module structure with the External Group of Experts and gather inputs for the final structure of the module. In total, there were 27 participants who were, among others, education representatives and professionals on forest fires. The round tables were conducted between July and September 2022.

### 2.6.1. Round table from Cyprus

C.I.P Citizens in Power conducted the roundtable on 05/09/2022, online, via Microsoft Teams. There were two experts who participated: one fire service professional (specifically, the head of communications for the Cyprus Fire Service) and one political actor (the head of the community council of one of the rural villages in Cyprus). In addition, a validation questionnaire in the form of a google form was sent out to all participants, including the absent participant (ex-Fireman and current associate of the Civil Protection Agency), in order to gain their expert input and validate the structure of the training programme. Moreover, following the suggestion of one of the roundtable participants (see below) we also contacted an Officer and trained Forest Firefighter at the Department of Forests, to give their own feedback as well.

In general, the responses on the validation of the content were positive. All participants have stressed the importance of the concepts which we want to stress through our module. The consistency of the three units' contents against the objectives of the training programme has been rated as very good by all participants. Moreover, the participants have reassured us that the material is being presented in a logical and coherent way by giving this section a rating of very good. As far as the knowledge gained by each of the units in regard to the prevention and self-protection from forest fires, the participants generally rated it as very relevant with one giving it a rating of relevant.

The fact that we have included a point on the local laws and regulations regarding forest fires was commended very positively. The participants also discussed the important technological innovations that are either being implemented or have been in effect for the past few years in order to assist with the early detection and the confrontation of

forest fires by professionals. A good suggestion that was made by one of the participants was that we should receive a validation of the material by a staff of the Forests Department. Whilst civil protection in forest fires does not fall under their jurisdiction, forest rangers are specifically responsible for firefighting forest fires and could have important input and feedback to give to the module's structure.

In summary, the participants of the roundtable and the respondents to the questionnaire recognised the topics as well as contents covered by the proposed units as sufficient. The efforts of the project in general have been commended very positively by the experts. In addition, the experts contacted stressed the importance of our work in assisting the ongoing efforts of officials in informing and securing our forests and rural populations.

### 2.6.2. Round table from Germany

L4Y Learning for Youth GmbH organised the roundtable online using Google Meet on 15/09/2022. The meeting was attended by two experts: one expert from Saarforst Landesbetrieb in Saarbrücken, Germany, who works in forestry and nature conservation, and one trainer from Jugendvision e.V. in Stuttgart, Germany.

During the round table, the experts considered that the content in Units 1, 2 and 3 covered the fundamental topics. It was emphasised that informing people about fire causes was important, as well as explaining the types of fires to distinguish them (ground fires, base fires, etc.) to increase rural people's understanding and participation in wildfire mitigation.

Regarding the knowledge of Unit 2 based on the content they were asked to cover, most experts again rated it as "Relevant". Regardless, it was emphasised that it is vital to have the equipment - at least a fire extinguisher- in case of fire. Most participants rated all three units as "Good". At the same time, some statements were "Very Good", "Excellent", and "Needs Improvement".

In Unit 3, it was also mentioned that it is essential to create a coloured map for people in rural areas, showing rescue points, meeting places and affected people from the surrounding area, which can then be used as escape routes in the field. Especially in the



case of a forest fire, it would be helpful to provide contact information for the people living in rural areas. However, for all types of disaster events, the Federal Office of Civil Protection and Disaster Management has compiled information for the public on what to do, what emergency measures to take, whom to contact, where to go, etc.

Finally, all participants agreed that each unit's content was clear and logically structured. In conclusion, all participants of the meeting agreed that the content of the training structure is sufficient and contains important information needed by people in rural areas.

### 2.6.3. Round table from Greece

KMOP organised the roundtable online using Google Meet on 09/09/2022 with three experts from the field of forest fires protection and the ministry of civil protection. Two of the participants are volunteer firefighters from the forest firefighting and forest protection unit of Rhodopolis and the other participant is a representative of the Ministry for the climate crisis and civil protection from the forest fires department.

The experts received the content of the three Units before the round table so they already reviewed all the topics, and during the round table, the content was discussed.

In general, they were very positive about the structure of the preliminary module on forest fire prevention and self-protection, and they also underlined that Unit 2 and Unit 3 are very well structured. They also commented on the pedagogical approach: they believe a face-to-face format for this specific topic may be more suitable, and they have concerns about the digitalisation of Unit 2 and Unit 3 still it is content that should be taught in a face-to-face format. Nevertheless, they are waiting for the training platform to be released in order to give their opinion.

One good suggestion that was made by one volunteer firefighter was that since the volunteer firefighting teams are more than the officials in the rural areas, maybe, this dedicated training should be piloted to their teams at first and then be tested on the rural population.

Their general evaluation was very positive, and they are waiting for the full training program adapted to the Greek reality and about the adaptation, they were more than willing to give their feedback and knowledge.

Concluding, the three participants of the round table admired that the three Units of the training were very well structured and especially the third one that identified the main steps to create an escape plan and tips for the evacuation process. They also underlined that Unit 2 is very well structured. Still, it must be a local adaptation in the Greek case, not only a national adaptation because there are many different regions with many different approaches and also volunteer units that help, and the rural population must know this information.

#### 2.6.4. Round table from Italy

CESIE conducted its round table on 26/09/2022, online via the ZOOM platform. Emiliano Mungiovino moderated the activity as project manager on behalf of the Italian organisation. Three people were invited and involved in the activity: Giuseppe Maria Amato (Manager AANNPP Legambiente Sicily, Scientific coordinator of the Rocca di Cerere UNESCO Global Geopark); Francesco Zanna (Legambiente Sicily); Laura La Scala (project manager and expert in digital education, CESIE). All the participants are based in Sicily and have direct experience with both the local rural communities and the local authority as well as being part of organisations involved in the protection of the environment and enrichment of education towards sensitive issues and topics.

After a brief introduction about the project and its objectives, Emiliano Mungiovino from CESIE presented the round table agenda and what was expected from all the participants during the event. Afterwards, the preliminary training structure was presented as a whole and then, one by one, each main unit and topic was discussed by participants.

First of all, there was a discussion, while examining the first unit, regarding the objective of the training itself: the participants started by debating on the importance of taking into consideration the protection against fire not only for humans but also for the environment. They continued by mentioning the need to differentiate the type of forests and woods. To give context, they added that some are natural, while others are

created by humans and therefore, offer fewer environmental values especially if they are cleaned and kept under specific controls. So, according to the participants of the round table, there must be a lot of specifications and explanations regarding how many types of woods (or non-woods) and forests exist, how to identify them and what are their values and benefit for the environment as well as for humans. It was also stated that there should be a focus on the type of fires as well, not only how it is physically possible, but what different types of fires exist and how they develop and cause damage. Another important aspect should be a focus on the effect of forest fires, after they are extinguished and what are the permanent results of their damage both in terms of environment and finances for the communities who have to endure the consequences. Apart from this feedback, Unit 1 was considered relevant and the content was deemed organised clearly and logically. The content was considered very much in line with the learning objectives.

Regarding Unit 2, participants stated that this one was a more informative one and there should be a focus on the consequences for people who violate rules and laws regarding forest fires. Also, they focused on the aspect of planning and good practices in managing the territory from the local authorities which, often in Sicily, do not plan the expansion of forests or woods leading to disasters. According to the participants, there is a lack of expert personnel at both high and low levels in dealing with the management of the environment leading to poor maintenance and issues, so an informative module like this one could be important, especially if enriched with pictures and example of good management of forests and woods in contrast to bad management. This unit was considered relevant and the content was deemed well-organised and logical. The content was considered very much in line with the learning objectives.

Unit 3 was considered by the participants a more practical one and was suggested that the length of this one should be shorter than the first two as knowledge and information are more important. There was no particular feedback for Unit 3 if not a consideration on how difficult it could be to adapt material and information regarding things such as “escape plans” if the content should be relevant for forest fires. However, the module was considered relevant, clearly and logically organised as well as its topic well aligned with its learning objectives.

All the participants provided crucial feedback on the topics of the preliminary course structure with many ideas and unexpected comments and suggestions. The content of the observations and comments was highly technical, probably more than necessary for the type of training expected by both the consortium and the application. However, most of the feedback was very practical and useful and will lead to a better training structure and better training content.

#### 2.6.5. Round table from Portugal

SPEL and OVARFORMA conducted the round table on 28/07/2022, online, via Google Meet. In total, there were seven experts: two education professionals (a VET Trainer and a coordinator of an adult education centre), two political actors (a representative from a parish council and a president from a parish council), three civil protection representatives (a deputy firefighter from the Volunteer Firefighters of the Municipality of Espinho, a deputy firefighter from the Volunteer Firefighters of Ovar and a professional from the Portuguese Red Cross of Ovar).

All experts in the round table considered that the content included in Unit 1, Unit 2 and Unit 3 corresponds to the expected topics to be covered. Nevertheless, during the session, it was underlined the importance of providing psychological support to forest fire victims and thus it was suggested to include it in Unit 1. Moreover, one professional proposed adding a topic related to the “Valorisation of the forests” (at an economic, environmental, social, and leisure level), aiming to strengthen the awareness and involvement of rural populations in their defence against aggressors. It was argued and agreed by all participants that if a forest has meaning and value to a person/population/society, fires set up by human activity can be potentially reduced hence the importance of including such a topic in the module structure. Additionally, general recommendations and guidelines promoted by the competent authorities were referred to. Such a proposal is intended to reinforce the messages about prevention regarding certain activities and procedures. In this sense, common and practical topics such as the timing and the requisites to burn the forest and household waste should be included. A great percentage of the population seems not to be familiarised yet with the

legislation and the inherent administrative procedures, which sometimes create and put them in unnecessarily risky situations.

When asked about the consistency of contents covered in comparison with the learning outcomes, the majority of the participants rated “Excellent” in all 3 units, and “Very good” was the second most given response.

Regarding the knowledge provided by each unit based on the content that they will cover, once again, the majority of the experts rated it as “Very relevant”, followed by “Relevant” as the second and only answer. Nonetheless, it was stressed that, considering the profile (dominant age and cultural profile of our rural populations), practical activities such as fire drills should be privileged to better prepare the population.

Finally, all participants considered that the content in each Unit was structured in a clear and logical way. Except for the inclusion of the topic related to the valorisation of the forests in Unit 2, no other comments were made regarding an eventual restructuring of the content covered in any other Unit.

#### 2.6.6. Round table from Spain

Growthcoop, S.C.A. held the meeting telematically, via zoom, on 05/09/2022, and had four participants. Of the four, two are civil protection workers in rural areas, in Jaén and Almería, one person is a member of the military who collaborates with the UME (Emergency Military Unit) in Galicia, and the fourth is a forest firefighter from the Navalperal INFOCA fire station.

The experts gathered at the round table to analyse the contents of the project unanimously agreed on the acceptance of the contents of the units and their correspondence with the topics foreseen when analysing them at the meeting. It was referred by one of the civil protection workers the importance of visits by forestry experts to students from secondary schools or schools near the areas where there have been recent fires, to raise awareness of the damage caused and the negligence that can cause them, thus creating awareness in the young population of the importance of

cares for and values the natural environment of their area of residence. They also advised on the need to value the ecological level of natural areas and to make the population aware of the characteristics of their flora and fauna, endemic or endangered or protected species. Furthermore, it was mentioned that the population should be aware of legislation affecting the disposal of waste, or the burning of pruning waste or crop residues, in order to avoid fires caused by possible negligence. Regarding the coherence of the content with the learning outcomes, in Unit 1, half of the participants rated it as "excellent", and the other 50% rated it as very good. For Unit 2 and 3, 75% of the participants rated it as "excellent" and 25% rated it as "very good".

On the question of the relevance of the unit in providing basic knowledge, for units 1 and 2, 75% of the participants rated it as "very relevant" and 25% rated it as relevant. In the case of unit 3, 100% rated it as very relevant. Regarding the organisation of the content, 100% of the participants agreed that the content of the different units of the project is expressed in a clear and concise manner.

The general assessment of the project by the participants has been very positive, considering that it is a very necessary subject in rural areas, especially in those with a high ecological, botanical or zoological importance, since a population that is aware of the means of action in case of fire, is, in turn, a population aware of the importance of fire prevention subjects. They focus on the importance of raising awareness at an early age, which is one of the stages in which respect for the environment and the importance of conserving the natural environments around them can best be instilled. On the other hand, they point out that at present there are no effective prevention programmes, either at a local, regional or national level, and these projects, with such specific content, can help to improve this situation, both on a large scale, in the population, and on a small scale, in the political leaders who must legislate better to protect forests with coherent legislation on prevention and continuous training.

#### 2.6.7. Round table from Türkiye

BOSEV held its roundtable meeting face-to-face on 10/08/2022. There were seven participants in total: one local authority manager: Mustafa ÖZEL, Director of Mamak

District Directorate of National Education (DoNE); one municipality manager: Deniz SAYIN, a Corporate Development Manager from Mamak Municipality; one civil defence manager: Hayrettin YILMAZ, County Schools civil defence director; one education manager: Aydın ÖZTÜRK, Mamak DoNE, Head of Education and Culture Department; three R&D department representatives from Mamak DoNE: Güler Keskin TANRIVERDİ, Head of R&D department, and Nurcan GÜNGÖREN and Şeyma TOPÇU, R&D department Experts. Additionally, there was one project manager, Bilal KILINÇ, to moderate the session.

All the experts at the roundtable reviewed the modules on the hard copies of the presentations, assuring that the content in Unit 1, Unit 2 and Unit 3 corresponded to the topics expected to be addressed. In addition, the current training programs on forest fire were reviewed during the session, and the adaptation and replication of the contents, units' titles, training contents, and the benefits to potential beneficiaries across the district were discussed.

Participants mentioned that Unit 1 could be used to raise awareness on the topic and to organise a social media campaign to prevent fires caused by individual mistakes, especially in Summer. In addition to the measures for the use of social media campaigns, up-to-date communication channels, and perhaps cutting-edge announcement channels in rural areas, which can be considered within the scope of fire prevention activities, the importance of what to do during and after the fire was also emphasised. For this purpose, the importance of first aid training during and after the fire was emphasised. Moreover, the coordination, team management, effective communication and emergency response training that may be needed during the fire were also stated as important.

All participants shared that the topics and contents covered in the module were appropriate, having mentioned that these were innovative and could be used in regional schools, municipalities, research and development and educational content.

They stressed the need to teach first aid training, that awareness campaigns and campaign management via social media channels on the topic should be more promoted, as well as the importance of necessary skills and competencies during and

after the fire. It was also mentioned that the training module could be integrated into the training conducted throughout the district and that it would close an important gap in the field of fire prevention. Finally, they showed interest in the project and mentioned that will keep up with the progress of the project.





## 3. Main findings of the activities

### 3.1. Benchmarking of good practices

Considering the 24 good practices collected by the partners of the consortium, it is possible to conclude that:

- A number of Erasmus+ projects, initiatives and informative documents with the aim to better prepare the population in case of wildfires have been carried out; Additionally, some campaigns of awareness about the dangers of wildfires, as well about the importance of forests and how these should be valued by everyone, have been implemented;
- Most of the good practices have been promoted by Fire Departments, environmental-related training centres or European funded projects;
- There is still the need to respond to the lack of actions taking place in rural communities;
- Likewise, there are actions taking place in a specific part of the year rather than throughout the year;
- Collaboration between organisms such as Fire Department and governmental structures for the implementations for initiatives and campaigns, as well as the promotion of these, will ease the access to the information and education to the rural population.

### 3.2. Interviews

The analysis of the data collected from the 99 interviews conducted with people from rural areas and 97 professionals on forest fires and civil protection allowed us to reach the following main findings:

- Most people from rural areas lack the knowledge and the appropriate equipment to fight forest fires or protect themselves when exposed to fires;

- The knowledge that rural area residents have was acquired informally, mainly from their own experience with previous fires and from the general information spread on social media;
- There is a clear lack of training and initiatives on forest fire conducted in rural areas;
- It is of utmost importance to promote training and initiatives on forest fire since these can produce significant impacts such as delaying a fire until the competent authorities arrive, as well as saving lives;
- Both younger and older generations want to learn about forest fire prevention and self-protection tips;
- However, older generations do not have the opportunity to participate in long courses, due to unavailability or age requirements. Instead, they want to learn specific forest fire prevention and self-protection topics in a quicker way. For instance, they want to learn specifically what is the right fire prevention equipment to have at home, what is the right behaviour in forests, how to correctly use a fire extinguisher, how to promote a fire safety zone and what is an escape plan;
- Initiatives and campaigns to raise awareness of forest fires must be implemented all year long and not only before (or during) the fire season starts.

### 3.3. Round tables to discuss the module structure

The implementation of round tables in each participating country led to the creation of a space where 27 participants had the opportunity to comment on the training programme and provide suggestions to improve it. By analysing the feedback collected, different topics were referred to as very important to be addressed in forest fire prevention training.

Since the training developed will focus only on forest fire prevention (as background knowledge) and most importantly on self-protective preventive and reactive actions when threatened by forest fires, certain topics, although relevant, were not included in

the training structure. For instance, it was underlined the importance of providing psychological support to forest fire victims and first aid training. However, it was reasoned by the consortium that such topics do not promote forest fire prevention or self-protection. Instead, that it is the role of health experts and psychologists to provide this training and support after the fire if needed.

Nevertheless, the training structure was considered to be complete if it addressed the following topics:

- Local laws and regulations regarding forest fires and the consequences for people who violate them;
- Contact information of relevant institutions that can be contacted in case of forest fires (Municipalities, Fire Departments, Police);
- Fire causes and types of fires;
- Difference between the types of forest and woods;
- Good management of forests and woods in contrast to bad management;
- The need to value forests and the benefits they have on the environment and for humans;
- Permanent results on the environment and finances for the communities who endure forest fires;
- Useful equipment to have at home (e.g., fire extinguisher, first aid kit);
- Practical activities such as fire drills and the creation of coloured maps for people in rural areas, showing rescue points, and meeting places;
- Protection against fire not only for humans but also for the environment.

In addition, it was mentioned the importance of creating a training programme that is adapted to rural regions, rather than making it too general/national. Since the training will target people from rural areas, this is certainly a recommendation that the consortium will consider then developing the training module.

Finally, to make the training module more appealing and help to transfer the knowledge, it was suggested that it should be enriched with pictures and images.

## 4. Final version of the module structure

### 4.1. Introduction

The activities developed during the first phase of the project intended to help the partners define a preliminary module structure on forest fire prevention and self-protection when exposed to forest fires, adjustable to the different training needs of the different socio-geographic profiles identified in the interviews (activities R1:A3 and R1:A4).

Thus, the preliminary module structure is the result of an in-depth analysis of the data collected by the Forest Fire Protection consortium: a collection of good practices and case studies worldwide and interviews with people from rural areas and experts on civil protection and forest fire. The structure summarises the recommendations obtained by the different good practices and the opinion of the interviewees and was opportunely validated by experts in a round table format.

Specific training about forest fire prevention and self-protection against fires is an essential tool for people living in rural areas since they are more prone to being exposed to forest fires. Developing a training module on these topics will, therefore, provide the rural inhabitants with the knowledge and competencies to prevent forest fires and be better prepared when facing forest fires, although, by no means, these will ever replace the role of the firefighters.

Below is presented the general module structure and the main goals, the training material structure and the methodology for the training. A table summarising the topics covered in each of the units, the learning outcomes and a reference time dedicated to each unit are also included.

### 4.2. General module structure and the main goal

The module on Forest Fire Prevention and Self-Protection aims to provide rural inhabitants with the skills and competencies to prevent forest fires and be better prepared when exposed to fire, as well as to enhance the confidence of the rural

stakeholders involved in the project for the implementation of educational activities for protection against fires in rural areas.

The module is divided into three different units:

1. **Introduction to forest fire:** the first unit will provide a general overview and acquaintance with concepts associated with forest fires;
2. **Forest fire prevention:** the second unit will include procedures and recommendations that rural inhabitants can adopt to prevent forest fires;
3. **Self-protection against forest fire:** the third unit will provide procedures and recommendations on how to self-protect against fires and ensure better forest fire control.

#### 4.3. Pedagogical approach

The pedagogical methodology is oriented both for an online and a face-to-face format.

Regarding the online learning format, a training platform will include a section for each of the three units, which will be visible at all times (so that the user can select what topics she/he wants to learn about without having to complete the previous unit). By accessing each unit/section, the content covered in it will be revealed along with illustrations and images of the contents, as well as videos and/or animation. At the end of each unit, an evaluation in a test form is available. The results will be automatic, and the learners will have access to them in real-time.

Concerning the face-to-face learning format, the training units will be available in PDF format and power point presentations will be developed with the content covered in each unit. Similar to the training platform, the presentations will also have illustrations and images, as well as videos and/or animation to help the learner visualise the contents delivered.

Moreover, training material with exercises/activities will be created to ensure that the learning outcomes are reached more easily.

At the end of each unit, more information and resources will be available. In addition, a Trainer’s Guidelines will be included with useful tips concerning time management and activities to perform so as to support trainers implement the content both in an online and in a face-to-face learning environment.

Finally, online and printable versions of each unit and training resources will be available for download.

#### 4.4. Structure of the training material

The module will be oriented to be implemented both in an online learning environment and in a face-to-face format. An online and printable version of each unit and training resources will be available for download in the training platform.

The units will be organised as follows:

- **Abstract:** short summary (1 paragraph) of what will be presented in the unit;
- **Learning contents:** the content covered in the unit as validated by the experts;
- **Learning outcomes:** the outcomes that the learner will be able to achieve at the end of the unit;
- **Timeframe:** the expected timeframe to deliver the unit;
- **References:** the references of the original sources used for the theoretical content;
- **Content:** the theoretical part of the unit. There will be a section for each topic covered in the unit;
- **Additional information and resources:** references and links for extra information about the topics covered in the unit.

The training material will be organised as follows:

- **Description of the activity/exercise:** a brief description of the suggested activity for the unit;

- **Type:** refer to the type of activity proposed (e.g., multiple choice, fill in the gaps, field exercise, true/false, etc.)
- **Material:** identification of the material required to implement the activity in case of face-to-face activities;
- **General instructions:** instructions to carry out the activity or exercise successfully.

#### 4.5. Final training structure

Module structure: Forest fire prevention and self-protection against forest fires			
Unit	Content	Learning outcomes	Timeframe
<b>1. Introduction to forest fire</b>	1.1 Definition of forest fire 1.2 Impact on the environment 1.3 Causes of ignition 1.3.1 Fire Triangle 1.3.2 Natural activity 1.3.3 Human activity 1.4 Fire classification 1.5 Managing forests and forest fires	<ul style="list-style-type: none"> <li>• Understand the concept of a forest fire;</li> <li>• Recognise the impact of forest fire on the environment;</li> <li>• Recognise the presence of fire hazards and common ignition sources;</li> <li>• Identify the types of fire and how they are spread.</li> </ul>	5h
<b>2. Forest fire prevention</b>	2.1 Staying Informed 2.2 Valuing forests 2.3 Preventive measures 2.3.1 General 2.3.2 When in forests 2.3.3 Equipment 2.4 Fire safety zone	<ul style="list-style-type: none"> <li>• Understand the importance of being aware of the local law regarding forest fires;</li> <li>• Understand the ecological level of natural areas and the environmental importance of forests;</li> <li>• Be aware of preventive forest fire measures;</li> <li>• Identify different types of fire prevention equipment and know when to use them;</li> <li>• Identify the main steps to create a fire safety zone</li> </ul>	5h

<b>3. Self-protection against forest fire</b>	3.1 Escape Plan 3.2 Responding to a forest fire - what to do when: 3.2.1 It approaches the area of residence 3.2.2 Confined at home 3.2.3 Outside 3.3 Emergency kit	<ul style="list-style-type: none"> <li>• Identify the main steps to create an escape plan and how to proceed during an evacuation;</li> <li>• Understand general procedures on how to respond to a forest fire in different situations and locations;</li> <li>• Understand the importance of the items that are part of an emergency kit</li> </ul>	6h
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## Conclusion

This report presents an overview of the activities developed by the partnership of the Forest Fire Protection project during Result 1 – FFP Training Framework.

The implementation of the different activities described in this report laid the foundations for the creation of the structure of a training module and training materials aimed at providing knowledge about forest fire prevention and self-protection against forest fires.

The recommendations and opinions of the experts involved during the project were taken into consideration in order to create a final training structure that met the quality and expectations of the beneficiaries of the project. Furthermore, by involving experts and other relevant stakeholders, the partnership has learnt valuable lessons about:

- the lack of training and initiatives to raise awareness on forest fire prevention and self-protection, especially in rural areas;
- the constraints faced by the forest fire experts regarding the lack of knowledge about the local laws and forest fire prevention procedures in the population in general, as well as the lack of information communicated in rural areas;
- the willingness of both the younger and older generations to learn about forest fire prevention and how they can self-protect against forest fires in order to preserve the environment, save lives, and ease the role of the forest fire experts; and
- the most fundamental topics that should be addressed in the training module will be developed in a later phase of the project.

Considering the data that was collected during the activities and the validation and involvement of experts, the partnership is convinced that the training module that will be developed will support the transfer of knowledge and skills to the rural populations to increase their safety, thereby matching the objectives of the project.