

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



# Final Publication 2023

## Mid-term Impact Assessment of the Training Package During Fire Season

Prepared by:



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## Project partners



### L4Y Learning For Youth GmbH (Germany)

Web: <https://learningforyouth.com/>

Facebook: @Learning4Youth

**Ahmet Ateş**, [learningforyouth@gmail.com](mailto:learningforyouth@gmail.com)

**Pelin Turkmenoglu**,

[pelin.turkmenoglu@learningforyouth.com](mailto:pelin.turkmenoglu@learningforyouth.com)



### C.I.P. Citizens In Power (Cyprus)

Web: <https://www.citizensinpower.org>

Facebook: @citizensinpower

**Louiza Kythreotou**,

[louiza.k@citizensinpower.org](mailto:louiza.k@citizensinpower.org)

**Myria Ftellecha**,

[myria@citizensinpower.org](mailto:myria@citizensinpower.org)



### Growth Coop (Spain)

Web: <https://www.growthcoop.eu/>

Facebook: @GrowthCoop

**Javier Morales Luque**,

[javier.m@growthcoop.eu](mailto:javier.m@growthcoop.eu)



### Ovar Forma – Ensino e Formação (Portugal)

Web: <https://eprofcor.com/>

Facebook: @Instaeprofcor

**Daniela Martins**, [ovfprojectmanagement@gmail.com](mailto:ovfprojectmanagement@gmail.com)





**Sociedade Promotora de Estabelecimentos de Ensino (SPEL)  
(Portugal)**

Web: <https://spel.com.pt>

Facebook: @SPEL1990

**César Reis**, [spelprojectmanagement@gmail.com](mailto:spelprojectmanagement@gmail.com)



**Buyuk Ortadogu Saglik Ve Egitim Vakfi (BOSEV) (Türkiye)**

Web: <https://www.bosev.org>

Facebook: @bosevorg

**Ercan KÜÇÜKARSLAN**, [ekucukarслан@gmail.com](mailto:ekucukarслан@gmail.com)

**Ahmet Okan YAVUZ**, [aokanyavuz@gmail.com](mailto:aokanyavuz@gmail.com)



**Kentro Merimnas Oikogeneias Kai Paidiou (KMOP) (Greece)**

Web: <https://www.kmop.gr>

Facebook: @kmop.eu

**Panagiota Kokoliou**, [kokoliou.p@kmop.org](mailto:kokoliou.p@kmop.org)



**CESIE (Italy)**

Web: <https://cesie.org/>

Facebook: @cesie.ngo

**Emiliano Mungiovino**, [emiliano.mungiovino@cesie.org](mailto:emiliano.mungiovino@cesie.org)



## Introduction

The final publication of the “Mid-Term Impact Assessment of the Training Package During Fire Season” marks the definitive study of the Forest Fire Protection (FFP) European Erasmus+ Project (2021-1-DE02-KA220-ADU-000028430). The main impacts of the FFP Project are the preservation of the environment and the social inclusion of rural communities by promoting their readiness and resilience against forest fires. For this purpose, partners have developed a training package on “Fire prevention and self-protection against forest fires”. This publication complies with all the findings of the project and presents the data-driven results from the impact studies conducted during the summer period of 2023. Individuals from all consortium countries (Portugal, Spain, Germany, Cyprus, Greece, Türkiye, and Italy) participated in the impact study. The study aims to measure participants' preparedness and readiness to fight forest fires. In the impact study, comparisons between participants who had received the upscaled training package were made between participants not exposed to the training sessions. Both target groups had the same socio-geographic profile and were identified at the beginning of the activity.

The FFP Project was developed in response to the increasing threat of wildfires affecting these regions. 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 to increase the awareness and preparedness of the population from rural areas in case of wildfires. The consortium involves five of the six EU-28 nations with the highest burned area percentages from 2008 to 2018. It also encompasses Türkiye, a non-EU-28 country with a similar burned area percentage to the project partners. Additionally, Germany is part of the partnership due to its growing vulnerability to wildfires, primarily driven by the consistent rise in summer temperatures.

The outline of the project is tailored into seven main steps. The steps included the following: the desk research with benchmarking best practices, the field research with stakeholders and rural citizens, the development of a training package and platform, the online and in-person training, the impact study survey questionnaires and focus groups and the final publication.





Figure 1: Project's outline in visual graphic.

To achieve its goals, the project partnered with stakeholders and policymakers, signing 101 cooperation protocols and securing the support of approximately 32 local stakeholders for facilitating training sessions in rural communities.

Signed Cooperation Protocols (Communities, education institutions, foundations, local administrations, NGOs, Universities)	
Growth Coop Spain	10
BOSEV, Tukey	18
C.I.P. Citizens in Power, Cyprus	22
OVF, Portugal	10
SPEL, Portugal	11
CESIE, Italy	10
KMOP, Greece	10
Learning for Youth, Germany	10

Figure 2: Table 1 Singed Cooperation Protocols

Before developing the training package, initial desk and field research was conducted to identify best practices in forest fire prevention. The FFP training framework was developed over a period of nine months and comprised the following activities: the creation of an external group of experts, benchmarking on the good practices of training the rural populations on forest fire prevention and self-protection, interviews with professionals on civil protection and forest fires; definition of the preliminary modules structure; round table with an external group of experts to discuss the module structure; and report. In this research, people living in rural areas have been involved in interviews and focus groups. In total, 99 rural citizens participated and 97 professionals in forest fires, civil protection and policy-making. Table 1.1 outlines the interviews conducted in each country and partner. Further below, images from the interviews and the training framework are attached.

<b>Field Research (Focus Groups/Interviews):</b>		
<b>Partners / Countries</b>	<b>Interviews with Professionals</b>	<b>Interviews with Rural Citizens</b>
Learning for Youth, Germany	4	10
Growth Coop Spain	10	10
BOSEV, Tukey	35	23
C.I.P. Citizens in Power, Cyprus	10	10
OVF, Portugal SPEL, Portugal	24	26
CESIE, Portugal	4	10
KMOP, Greece	10	10
<b>TOTAL</b>	<b>97</b>	<b>99</b>

Figure 3: Table 1.1 Field Research

## UNIT 1 INTRODUCTION TO FOREST FIRE

Content	Learning outcomes	Timeframe
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>	4 hours  (including exercises and activities)

## UNIT 2 FOREST FIRE PREVENTION

Content	Learning outcomes	Timeframe
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>	5 hours  (including exercises and activities)



<h2 style="text-align: center;">UNIT 3</h2> <h3 style="text-align: center;">SELF-PROTECTION AGAINST FOREST FIRE</h3>		
Content	Learning outcomes	Timeframe
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>	6 hours (including exercises and activities)

After the creation of FFP training framework that is mapped in the images above, the consortium developed the content of the units. The training package includes the following information, training units, activities, training resources and trainer guidelines. Pictures from the material that consists the training package are listed below in figures 4,5 and 6.

The consortium developed a comprehensive training module consisting of three units:

- 1) Introduction to Forest Fires
- 2) Forest Fire prevention
- 3) Self-protection Against Forest Fires.

The module served as the foundation for the training sessions. The training materials, resources, and trainer guidelines are available online on the project's platform to ensure the efficient transfer of fire prevention skills to rural populations. The platform is an open access source for everyone who might be interested in the training or facilitating training in related topics which the units cover.

## Training Objectives and Implementation

The training material was adapted to tackle challenges related to limited access to rural areas, making conducting training sessions and monitoring participants effectively challenging. Additionally, rural communities often faced socioeconomic challenges, which affected their ability to adopt preventive measures for protection from fires. Adapting the training materials and approach to the cultural and linguistic diversity of the consortium countries required careful consideration and localisation efforts. These efforts facilitated active participation and engagement of rural communities in training sessions and impact assessments.

## Pilot Training

The training modules, training materials, resources and trainer guidelines have been disseminated and hosted through the training platform that ensures the transfer of skills in fire prevention to rural area populations. Along with the online training package, pilot testing activities occurred during May 2023 and an upscaled training session during the summer period. Through the consolidated actions, the project has increased the resilience of citizens to forest fires.

All partners successfully conducted pilot training sessions (both online and physical training), of which approximately 168 adults participated at this initial stage of training. After their feedback, another 16 upscaled training sessions occurred, training 314 new individuals. The project involved a total of 482 adults in the implementation of the training—tables 1.2 and 1.3 map out the participants that were involved in each activity and country.



<b>Initial Pilot Testing</b>		
<b>Partners / Countries</b>	<b>Physical Training</b>	<b>Online Training</b>
Learning for Youth, Germany	10	10
Growth Coop Spain	10	10
BOSEV, Tukey	18	10
C.I.P. Citizens in Power, Cyprus	10	11
OVF, Portugal	10	10
SPEL, Portugal	10	10
CESIE, Portugal	12	8
KMOP, Greece	8	11
<b>TOTAL</b>	<b>88</b>	<b>80</b>

Table 1.2: Initial pilot testing of training and platform.



<b>Upscaled Pilot Training</b>	
<b>Partners / Countries</b>	<b>Number of Participants</b>
Learning for Youth, Germany	40
Growth Coop Spain	32
BOSEV, Tukey	79
C.I.P. Citizens in Power, Cyprus	32
OVF, Portugal	36
SPEL, Portugal	35
CESIE, Portugal	37
KMOP, Greece	23
<b>TOTAL</b>	<b>314</b>

Table 1.3: Upscaled pilot training of the complete training package.

To achieve the protection of the environment and the social inclusion of rural communities, the advancement of their readiness and resilience against forest fires is necessary. For this purpose, the adult rural communities were trained on forest fires and, most importantly, on self-protective preventive and reactive actions when threatened by forest fires. After the training sessions, 309 participants were monitored through a wildfire season to evaluate the impact of the training package on their readiness and resilience against forest fires compared to 345 non-trainee participants who also completed the survey questionnaires. Part of the inhabitants from both groups (trained and non-trained) of rural areas face social and economic challenges, which are aggravated by the geographic location and the access difficulties. All the main findings have been combined to present the overall outcome and an overview of the situation on fire prevention across the countries. The impact study measured participants' and communities' situation by addressing five main factors: the survival rate of the community, the severity of fires, the survival rate of animals, the material loss, and the level of confidence.

The main outcomes of the forest fire training package conducted highlight the increased resilience of trained rural citizens. Through comprehensive training package, citizens that participated reported a higher level of preparedness and readiness to combat wildfires. However, in some areas especially in Greece, **participants reported a moderated level of confidence in both groups due to the situation and severity of fires in 2023**. In all consortium countries the specific findings of the data-driven impact assessment, provided valuable data on the effectiveness of the training package in improving and boosting confidence levels. The report also provides information on the survival rates of inhabitants, the fire severity in the communities, the survival rate of animals and the material loss during the summer period in 2023. Overall, the project aims to contribute to preserving the environment by reducing the impact of forest fires through better preparedness and prevention efforts.

In summary, the FFP project aims to train and empower rural citizens to combat forest fires through the training package. The project's achievements include **increased resilience, data-driven impact assessment, environmental preservation, social inclusion, and policy recommendations despite facing challenges related to geography, socioeconomic factors, data collection, localisation, and community engagement**. These efforts collectively contribute to the protection and sustainability of forested regions across the consortium countries. By involving rural communities in training and preparedness activities, the project promoted social inclusion and community cohesion, as residents were actively engaged in protecting their environment. Considering the national context, the project offers specific recommendations for enhancing community resilience in the face of wildfires, contributing to policy development and improvements in fire prevention strategies.

## 1. Executive Summaries

The National Reports on the "Mid-Term Impact Assessment of the Training Package During Fire Season" presents the results of a study conducted during the 2023 fire season in each partner country – Portugal (SPEL and OVF), Cyprus (CIP), Germany (L4Y), Türkiye (BOSEV), Greece (KMOP), Spain (Growth Coop) and Italy (CESIE). This assessment aims to evaluate the significance



and effectiveness of a training program in enhancing community preparedness and resilience in forest fires. A total of 314 participants across participating countries received the upscaled training. The study compares the results from a cohort of approximately 40 trainee and 40 non-trainee participants from each partner with similar socioeconomic and geographic backgrounds. The findings of this result demonstrate the effectiveness of the project's training sessions, which provided trainees with valuable skills and enhanced their ability to respond effectively to fire threats and also possible gaps for improvement. In light of these insights, the report provides targeted recommendations to reinforce community resilience in the face of wildfires. Our recommendations include targeted education initiatives, enhanced information campaigns, and collaborative partnerships to further strengthen community resilience and preparedness against forest fires. What follows are the main conclusions in specific national contexts.

### 1.1. Portugal

In Portugal, the study involved 60 trained participants and 93 non-trainees from diverse communities affected by the fire season. The training sessions conducted by organizations like Ovar Forma and SPEL demonstrated a substantial positive impact on trainees' confidence levels, knowledge, and readiness in dealing with forest fires. Notable trends emerge from the comparison between trainees and non-trainees. Trainees consistently exhibited higher levels of preparedness, understanding of national legislation, and awareness of evacuation plans, underscoring the importance of expanding such training initiatives, particularly in vulnerable rural communities. Moreover, trainees expressed a more positive attitude regarding their communities' readiness and resources to deal with forest fires, while non-trainees displayed reservations and concerns. Both trainees and non-trainees shared an awareness of the importance of the forest, preventive measures, and the potential severity of forest fires. The report in Portugal emphasizes the urgent need for improved coordination and resource allocation at local and regional levels. The study in Portugal also highlights the crucial role of ongoing data collection and dissemination on forest fire severity and risk assessment. Accurate and up-to-date information is essential for informed decision-making and prevention efforts. Maintaining a comprehensive database to monitor forest fire trends and risk factors is recommended, along with continuous public awareness campaigns to educate residents about



forest fire risks, prevention, and preparedness. This reflects a commendable level of engagement and commitment to addressing forest fire-related concerns in Portugal. The collaborative efforts involving various entities and the inclusion of non-trainees in the impact study reflect a comprehensive approach to addressing this critical issue, aiming for a more resilient and informed community in the face of forest fires.

→ [Access to the National Report of Portugal](#)

## 1.2. Cyprus

The history of forest fires in Cyprus dates back decades, with natural and human-induced factors contributing to their occurrence. The results in Cyprus, compares the results from a cohort of 40 trainee and 40 non-trainee participants. Finding shows positively impact the trainees' confidence, readiness, and preparedness after the training package of the project. This outcome underscores the efficacy of the project's training sessions in enhancing individuals' abilities to address fire-related situations effectively. However, trainees' proactive stance and non-trainees' concerns about educating the broader rural population about fire preparedness are still vital. These recommendations encompass multifaceted approaches, including the launch of community engagement campaigns to encourage broader participation, the implementation of supplementary customized hands-on training sessions, initiatives for public education, the provision of psychological support, and the strategic establishment of fire suppression points to curtail response times. By embracing these suggestions, communities can better equip themselves to navigate the challenges of wildfires and further fortify their capacity to respond effectively.

→ [Access to the National Report of Cyprus](#)

## 1.3. Germany

In this study, key findings and insights were derived involving local citizens in Germany, of which 40 trainee participants who participated in training sessions and 44 non-trainee participants. The findings demonstrate that the project's training programme had a positive impact on the trainees' self-confidence, readiness, and preparedness compared to non-trainee participants. These individuals displayed higher levels of confidence in using firefighting tools, understanding fire safety zones, and interpreting emergency plans. However, while trainees benefited significantly from training sessions, the study identified knowledge gaps, including the



categorization of forest fires by risk and understanding the severity of fires, which need targeted educational initiatives. Furthermore, our findings indicated that non-trainee participants still possessed a baseline level of awareness, emphasizing the importance of extending training opportunities to a broader audience for a more consistent community level of knowledge and preparedness. The study in Germany, revealed that there is still room for improvement, particularly in addressing knowledge gaps and promoting inclusivity in community engagement.

→ [Access to the National Report of Germany](#)

#### 1.4. Türkiye

In the case of Türkiye, we share key findings and insights from a broad study involving 52 trainee participants and 50 non-trainee participants. The results show that education about wildfires should be continuous. In rural areas, even though people with fire experience are prepared in some areas, there is always a need for training. Although the importance of preparation for wildfires and fire training drills was emphasized by all, there were many respondents who did not feel fully prepared and safe. There is no significant difference between trained and non-trained participants in the process of fire preparations. The main difference was observed in the effectiveness of the preparations made, self-confidence and the use of new firefighting methods. During the training sessions, participants were particularly declared their concerns about the safety of the elderly, infants, disabled people and animals that cannot protect themselves. Almost all participants in Türkiye's study emphasized the importance of cooperation with local authorities and collective action rather than individual efforts in case of fire. The most effective parts of the trainings were fire causes, escape plan, firefighting according to fire types and protection of animals. Among the participants who did not receive training, the lack of knowledge and lack of confidence in these subjects is remarkable. The general findings can be listed as ; the training is generally effective, training on fire should be repeated at certain intervals, cooperation with local authorities is very important before, during and after the fire, and training should continue not only theoretically but also practically, necessary measures should be taken for the situation of vulnerable people and animals, fire causes mass damage rather than individual damage, determination of situations that require professional intervention in firefighting is crucial for safety.

→ [Access to the National Report of Türkiye](#)





## 1.5. Greece

Forest Fires in Greece are a recurring phenomenon that strikes urban and rural areas all over the country, as confirmed by the severe fires that broke out in Summer 2023 in Attica, Loutraki, Rhodes, Corfu, Magnesia, Fthiotida, Evros, and other areas. The study analyses the impact of the Forest Fire Training, by comparing the results from 40 trainee and 42 non-trainee participants, with similar socioeconomic and geographic backgrounds. The analysis showed that the training had limited impact on the level of preparedness and confidence of the participants, as trainees and non-trainees demonstrate similar levels of knowledge and ability to take action in case of a forest fire. Their level of preparedness and confidence is moderate, and their mean score in all five factors (survival rate of community, severity of fires, survival rate of animals, material loss, level of confidence) included in the survey ranges around 6 on a scale of 1-10. This outcome is explained by the severity of forest fires in Greece that cause irrevocable damage to human life, animals, material goods and the environment, while the state mechanism seems unprepared to prevent and intervene in a satisfying way. The lack of trust in state strategies at the local and national level accentuates the importance of training citizens at an individual and community level to feel confident and prepared to protect themselves and their community.

→ [Access to the National Report of Greece](#)

## 1.6. Spain

The questionnaires and the focus groups carried out in the project's result three show that in Spain, there is a significant lack of training for the population in self-protection in the event of forest fires or prevention. Most of the respondents have basic knowledge but feel that their communities are not well prepared to deal with the different problems that a forest fire can cause, nor do they inform themselves and know what measures to take and what not to take. This rationale is present in 72.5% of trained respondents and 65% of non-trained participants. There is a high level of environmental awareness, as evidenced by the fact that the entire population of both groups is well aware of the environment around them, its species, its value and the problem of a forest fire. Both groups, trained and untrained, are also aware of the importance of preventive waste management measures, forest cleaning and road maintenance. The most significant issue participants encounter arises during a fire emergency because their instincts can be misleading, and they possess limited expertise in interpreting plans or using



firefighting equipment. All these data are directly linked to the groups that have received training (the ones that obtain better data) and those that have not (in which the deficiencies are more accentuated). However, the latter also has a high environmental awareness and knowledge regarding forest fire prevention.

→ [Access to the National Report of Spain](#)

### 1.7. Italy

The Italian National Report by CESIE, which conducted the activities and prepared this report works in Sicily (Italy), a land where every summer forest fires are very frequent, very powerful, very dangerous and very destructive. This report includes the study conducted with 37 trainee participants and 36 non-trainee participants. The background of these participants ranges from being unemployed to students, civic workers and professionals in several different fields. The objective of this report is to compare the two groups and to assess the positive impact of even simplistic and short training session in the field of fires and forest fires and what are the effects on the public. As clearly showed by these results below in this document, trainee participants feel like they are much more prepared, ready and knowledgeable about forest fires, fire prevention and fire intervention. Not only do these results show the efficacy of initiatives such as the Forest Fire Protection, but also very clearly highlight the issues and lack of training (and the strong will to receive training) in rural communities by the general public and local institutions.

→ [Access Link to the National Report of Italy](#)

## 2. The goal of the Evaluation

This evaluation seeks to gain insight into the impact of the training package of the Forest Fire Protection project after the training piloting events across seven countries. This final publication examines how the participation in the training package and the application of acquired knowledge over the summer period from all countries affect the participants' behaviours during the fire season compared to participants who did not have the training. The evaluation has specific objectives tailored to trainee and non-trainee participants. For both target groups, the focus is on assessing their readiness and preparedness in the following five factors:



- 1) the survival rate of communities
- 2) the severity of the fires in the communities
- 3) the survival rate of animals in the communities,
- 4) the material loss
- 5) the confidence of the participants when threatened by fires.

Overall, this evaluation serves as a comprehensive tool to examine the effects of the training package on trainee participants compared to non-trainee participants.

## 3. Methodology

The methodological tool used for this evaluation was through a survey questionnaire process for each target group (trainee and non-trainee) that was carried out during the fire season. A set of questions were given to address the five main factors: the survival rate, the severity of fires, the survival rate of animals, the material loss, and the confidence of participants. The survey questionnaires were delivered online through Google Forms via emails and in paper formats for people lacking digital literacy skills. The reason for selecting self-administered questionnaires is to be easy to administer, anonymous and suitable for sensitive topics and self-paced.

### 3.1. Data Collection

#### 3.1.1. Survey Questionnaires

The survey questionnaires were the main instrument used for data collection. Trainees and non-trainees were asked to complete questionnaires during the fire season. The survey questions were designed to be easy to understand so participants could complete them without much assistance. The purpose of the survey questionnaire was to collect data to evaluate how prepared communities are to face the fire season and compare the readiness of trainee and non-trainee participants. The questionnaire responses were provided on a scale of 1 to 10, where 1 is the minimum and 10 is the maximum. The survey questionnaires also included open-ended questions at the end of all factors assessed.



### 3.1.2. Focus Groups

Additional data collection was carried out through focus groups as a complementary source of qualitative data. During the fire season, supplementary focus groups were conducted in all countries with trainee and non-trainee participants. In the focus group discussions, all five factors assessed in the survey questionnaire were introduced to have the same consistency in the data collection process. In some cases, focus groups were conducted online and recorded. In other cases, focus groups were conducted in informal settings and a common area of rural citizens in their communities.

### 3.2. Implementation

Trainee and non-trainee participants adhere to the same structure for the survey questionnaire and focus groups to maintain coherence. The entire evaluation process spanned the fire season, from May until September 2023, encompassing the time allocated for administering the survey questionnaire, collecting the data, processing, analysing and presenting the data. When responding to the survey questionnaire for trainees, they considered their experience participating in the training package. In contrast, non-trainees were informed about the training package only after the fire season.

## 4. Description of Participants

In the implementation of the impact study, there was a separation of trainee and non-trainee participants of similar socio-geographic areas that were identified from the early stages of the project. Trainee participants attended the training in piloting activities, engaging with the course content developed in the second project result. It was a blended learning of approximately 15 hours of studying. The trainees who actively participated in these training packages were exposed to strategies for self-protection, readiness, and preparedness. Also, some countries' expert trainers in firefighting facilitated workshops in the pilot training activities, which enhanced the implementation of practical exercises. On the other hand, non-trainee participants did not participate in any of the training sessions of the project. Still, they were people from nearby rural communities, intending to compare the participant's readiness to fight against forest fires.



### 4.1. Trainee Participants

A total of 309 trainees have participated in the survey of impact study. Trainee participants have diverse occupational backgrounds, such as public servants, teachers, police officers, doctors, nurses, private employees, journalists, researchers, IT specialists and self-employed persons. The age groups range accordingly.

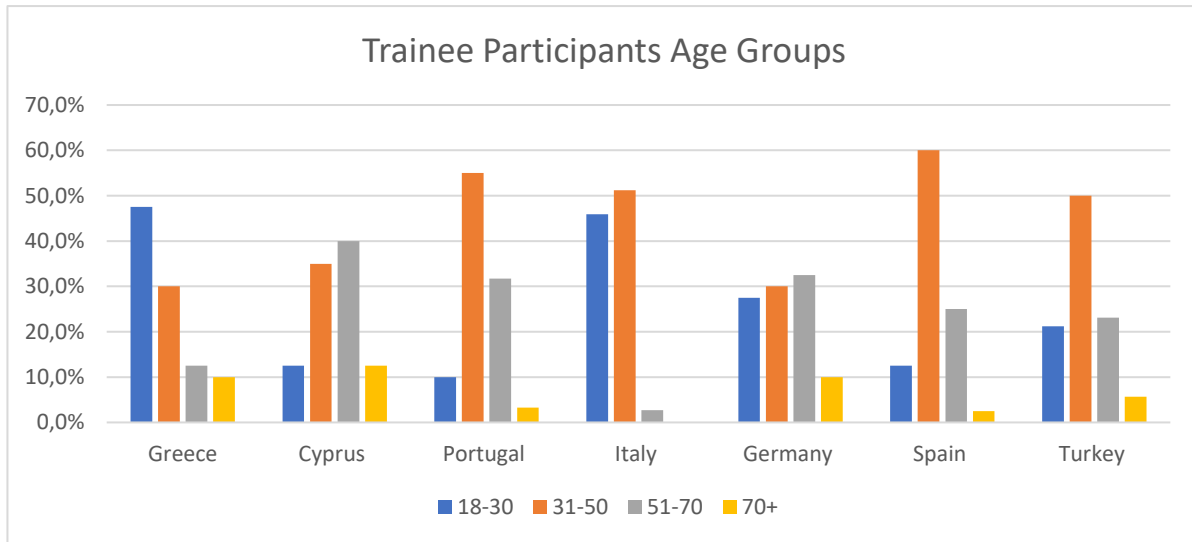


Figure 4: The age group range of trainee participants across all countries.

The age group range differs between countries, as shown in the graph above. The majority of participants lie between 31 and 50 years old, while in some countries, there are more participants between 18 to 30 years old and, in other cases, from 51 to 70 years old. A smaller percentage of participants lies in the category above 70 years old, while in Italy, there are no participants from this age group.

### 4.2. Non-Trainee Participants

A total of 354 non-trainees have participated in the survey of impact study. Non-trainee participants have diverse occupational backgrounds, such as public servants, teachers, police officers, doctors, nurses, private employees, journalists, researchers, IT specialists and self-employed persons. The age groups range accordingly.

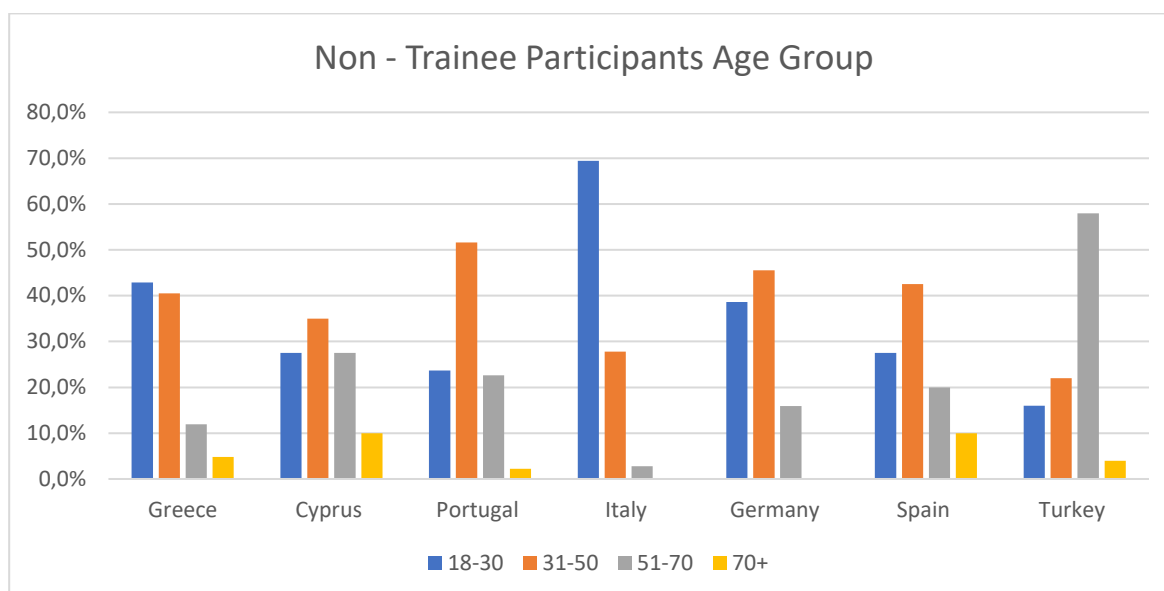


Figure 5: The age group range of non-trainee participants across all countries.

The age group range differs between countries, as shown in the graph above. Similarly, to the trainee participants, it is observed that the majority of participants lie between 31 and 50 years old, while in some countries, there are more participants between 18 and 30 years old, and in other cases, from 51 to 70 years old. A smaller percentage of participants lies in the category above 70 years old, while in Italy and Germany, there are no participants from this age group.

## 5. Presentation of Main Findings

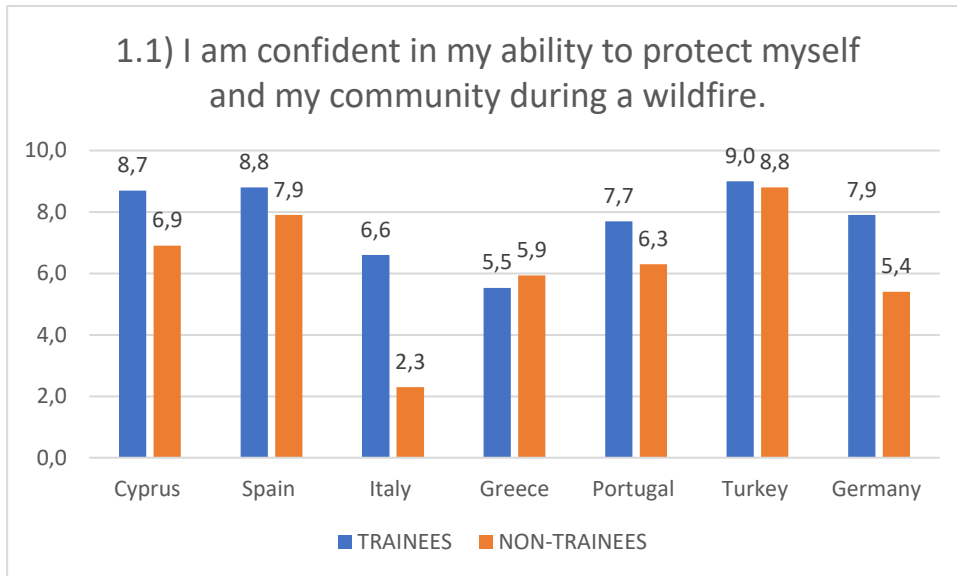
In general, the data shows both similarities and variations between countries for all five factors. The following section will present the data collected in all countries in a combined data analysis.

### 5.1. Factor 1: The survival rate of communities

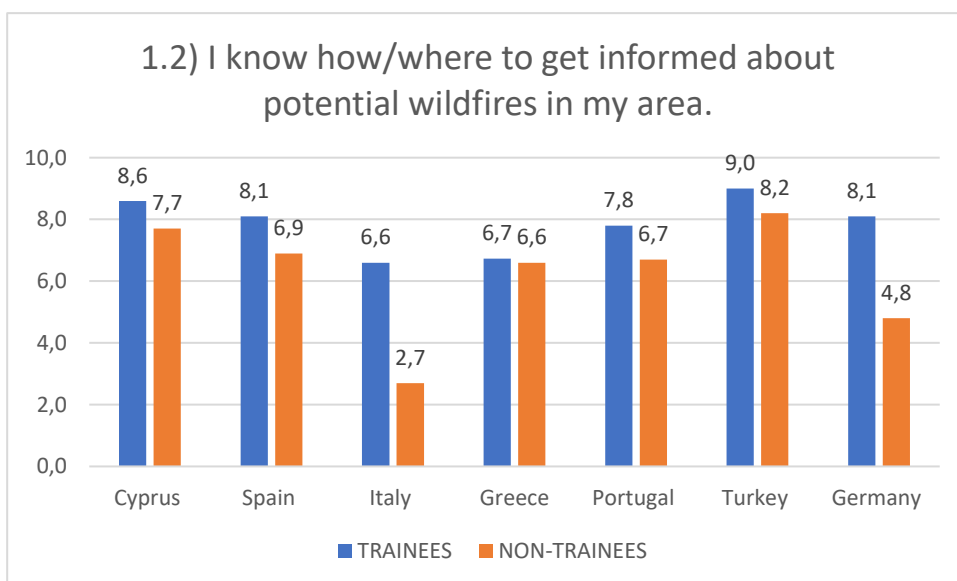
For the survival rate of communities, in some countries, there are no significant differences between the two participant groups, but overall, trainee participants score a higher mean value than non-trainee participants. **This indicates that the training affected the trainee participants positively.** In Italy, it is observed that the movement had the most significant impact as there is a noticeable difference in the mean value scored in the trainee participants compared to non-

trainee participants. It is observed that mean values in Greece are moderated for both groups and the lowest from all countries.

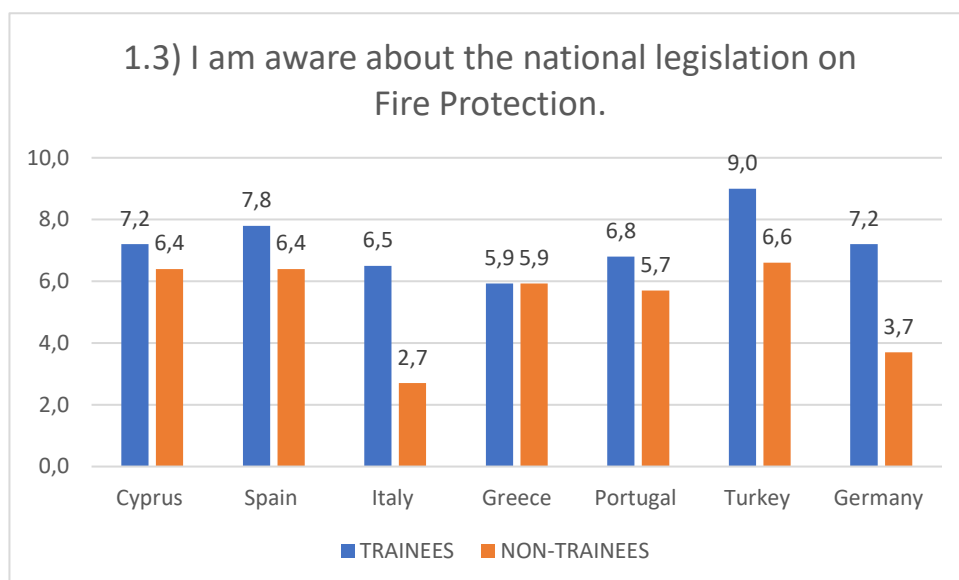
Regarding the ability of trainees to protect themselves and their community during a wildfire incident, the mean values lie between 5.4 to 9.0, while the range of non-trainees varies from 2.3 to 8.8. In all countries, the trainee participants score higher than non-trainees, expect from Greece.



Regarding where to get informed about potential wildfires in their area, the mean values of trainees lie between 6.6 to 9.0, while the range of non-trainees are from 2.7 to 8.2. In all countries, the trainee participants score higher than non-trainees, and/or approximately the same, expect from Italy which has a noticeable difference.



In regards to participants' awareness about national legislation, the mean values of trainees lie between 5.9 to 9.0, while the range of non-trainees are from 2.7 to 6.6. In all countries, the trainee participants score higher than non-trainees, except from Greece which is the same and Italy which has a noticeable difference.



### Trainees:

Even though the remarks of trainee on the community's survival rate show a generally optimistic outlook, some participants expressed their fears that the survival rate in case of a wildfire would be low, due to uncertainty of circumstances. It is important to highlight that participants from Greece mentioned that there are limited resources in their community areas. While in other countries participants also reported limited or no access to fire trucks. Overall, they stress the importance of community preparedness in dealing with crises and emphasizes the role of education and information in effectively addressing potential fire threats.

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### Testimonial

*"After this training, I believe that my community has taken enough measures for awareness and prevention." (Cyprus, Private Servant, age group, 51-70)*

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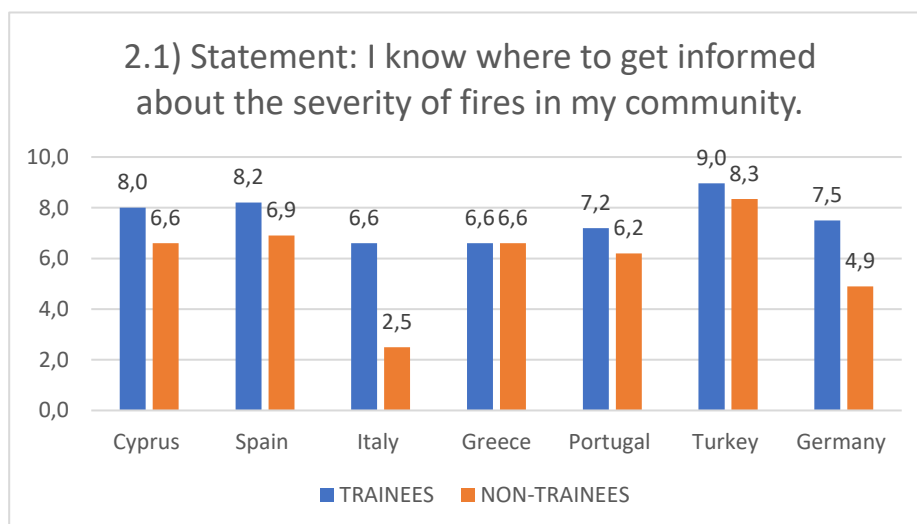
## Non-Trainees:

As for non-trainee participants comments on the topic lack of awareness and education, implying a need for greater knowledge and training, including simulation exercises. Also, participants refer to the firemen for community, which demonstrates trust in emergency response services. For example, one participant in Portugal describes a real-life scenario in which the population displayed effective and adequate response capacity in a specific crisis, illustrating the community's potential resilience. Also in Cyprus participants, reported availability of water tanks, while in other areas a lack of resources and fire trucks are reported.

## 5.2. Factor 2: The severity of the fires in the communities

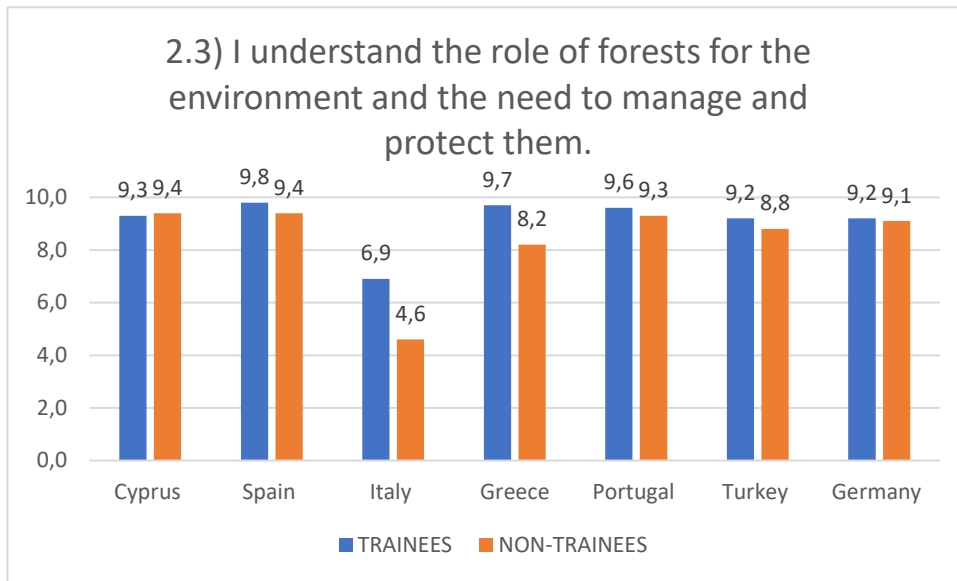
It is important to highlight that from all questions in the survey, the highest score is observed in the role of forest for the environment and the need to protect them. This shows that both groups value the necessity to take preventive measures for the environment and understand the important of forests in the environment.

Regarding where participants get informed about the severity of fires in their community, the mean values of trainees lie between 6.6 to 9.0, while the range of non-trainees are from 2.5 to 8.3. In some countries, the trainee participants score higher than non-trainees, expect from Greece which is the same value and Italy which has a noticeable difference.

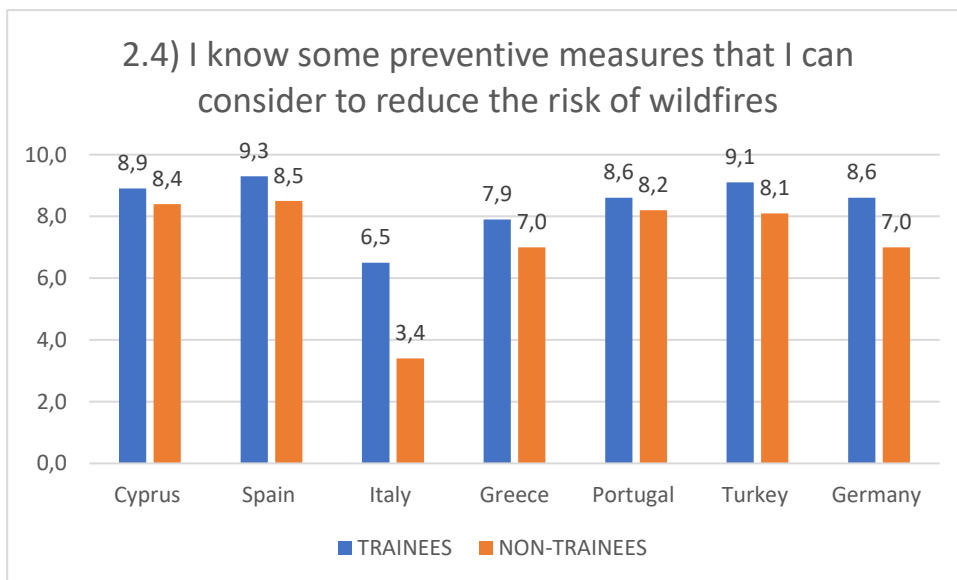


For the understanding of the role of forests for the environment, the mean values of trainees lie between 6.9 to 9.7, while the range of non-trainees are from 4.6 to 9.4. In some countries, the

trainee participants score slightly higher than non-trainees, except from Italy which has a noticeable difference.



With regards to participants’ knowledge on preventive measures, the mean values of trainees lie between 6.5 to 9.1, while the range of non-trainees are from 3.4 to 8.5. In some countries, the trainee participants score slightly higher than non-trainees, except from Italy which has a noticeable difference.



**General Comments:**

**Trainees:**

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Overall, **trainee participants expressed that wildfires have devastating effects** while they recognise the presence of large forested regions with a high fire risk, highlighting the **importance of attention and preventative measures**. Specifically in Cyprus, after the knowledge they gain from the training they discuss about the protective measures to mitigate fire risks. The vast majority of respondents stated that they are well aware of the forest surrounding of the area they live in.

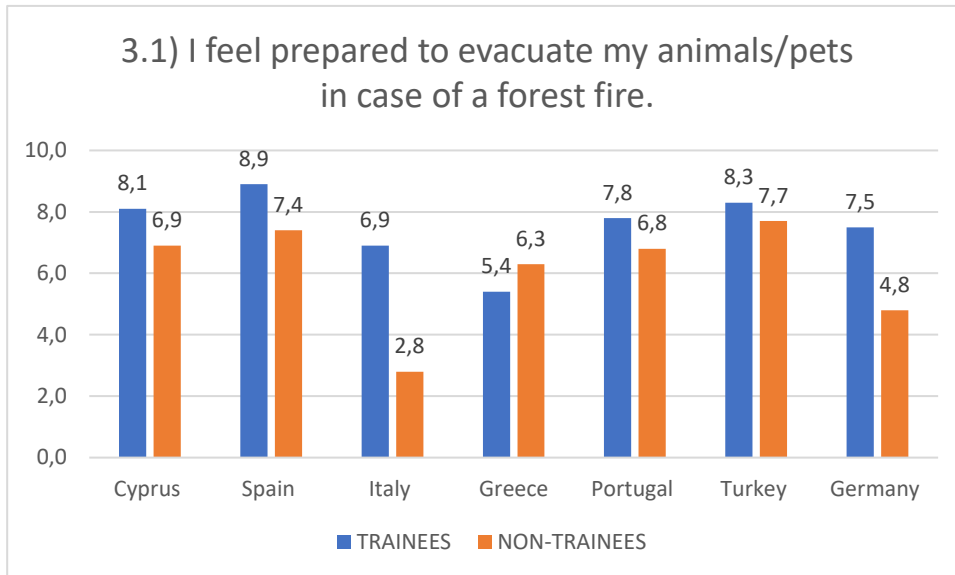
### **Non-trainees:**

**Non-trainee participants emphasised the severity of fires they have previously encountered**, while they mentioned challenges faced during previous fire incidence, **like the lack of firefighting resources, the response time, the lack of preventive actions**. The variable nature of fire severity is recognized, with some years experiencing more serious fires than others, highlighting the unpredictability of this natural hazard. Specifically, some participants mentioned that there are no actions taken prior to the fire season, such as the clearing of fields and bushes, which they believe could reduce the severity of fires and safeguard the ecosystem.

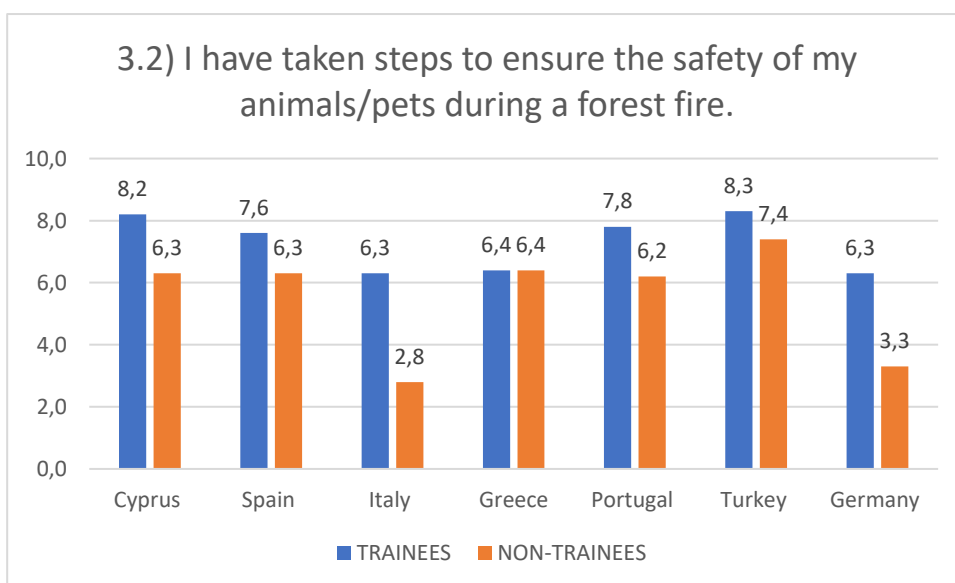


### 5.3. Factor 3: The survival rate of animals in the communities

About participants' preparedness to evacuate their animals/pets in case of a forest fire, the mean values of trainees lie between 5.4 to 8.9, while the range of non-trainees are from 2.8 to 7.7. In all countries, the trainee participants score slightly higher than non-trainees, except from Italy which has a noticeable difference.



Concerning the steps taken to ensure the safety of participants' animals/pets in case of a forest fire, the mean values of trainees lie between 6.3 to 8.3, while the range of non-trainees are from 2.8 to 6.4. In some countries, the trainee participants score higher than non-trainees, except from Italy and Germany which has a noticeable difference, and Greece that has the same.



## General Comments:

### Trainee:

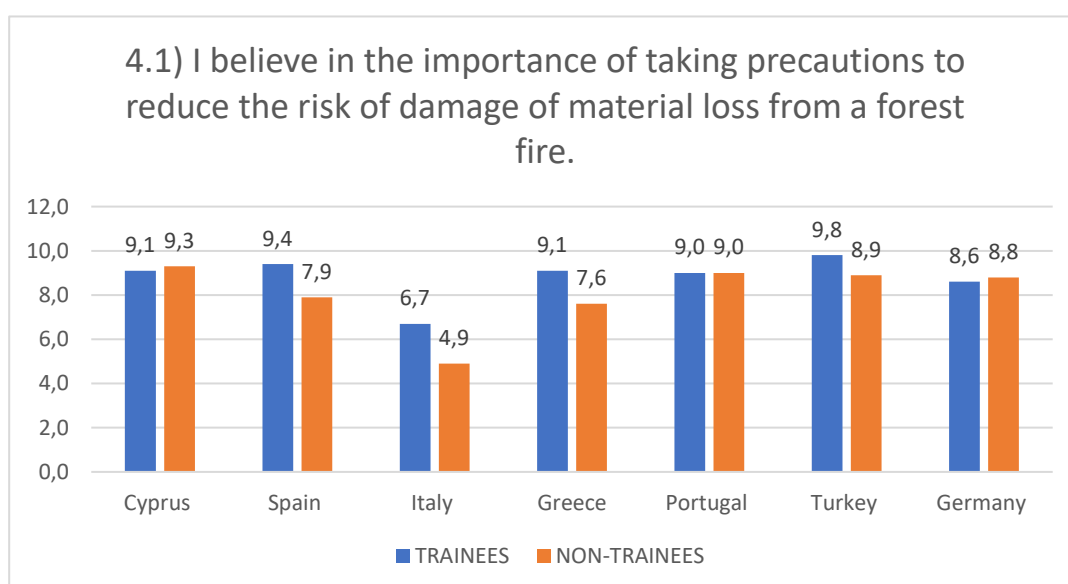
The remarks made by trainees about the survival rate of domestic animals reflect a thoughtful view on the value of animal well-being in their communities. Participants emphasized the importance of creating firebreaks by cleaning the premises and providing suitable shelter options. Individuals have close bonds with their pets, such as cats, and they consider them to be members of their families, emphasizing the importance of animal survival. Participants also mention that the high frequency of animals in their areas, including livestock and pets, may have an impact on the survival rate.

### Non-trainee:

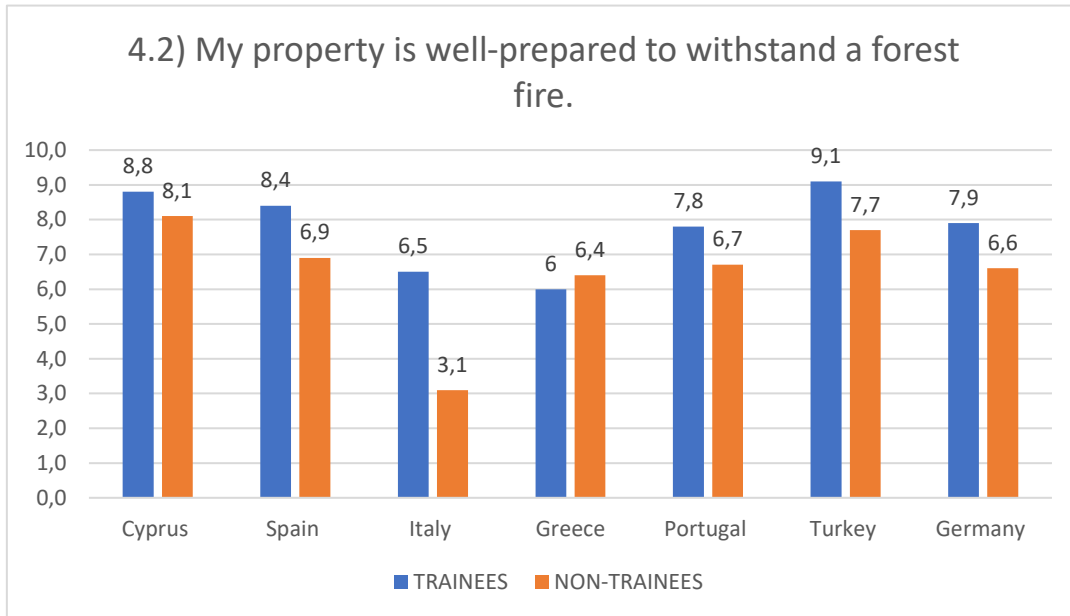
The majority of non-trainee participants discussed their approach to ensuring the survival of animals in their community in case of emergencies.

#### 5.4. Factor 4: The material loss

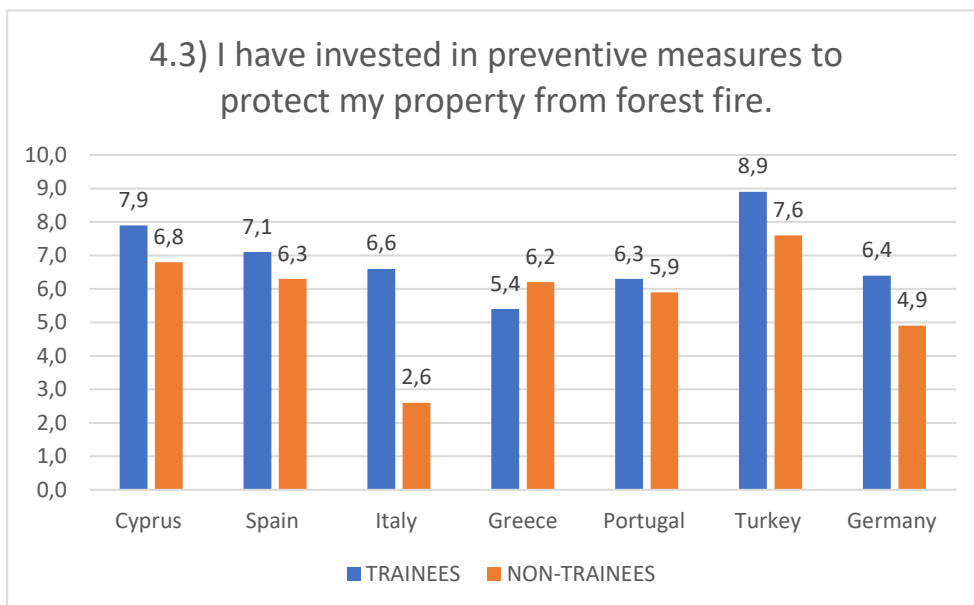
For the importance of taking precautions to reduce the risk of damage of material loss, the mean values of trainees lie between 6.7 to 9.8, while the range of non-trainees are from 4.9 to 9.3. In some countries, the trainee participants score slightly higher than non-trainees.



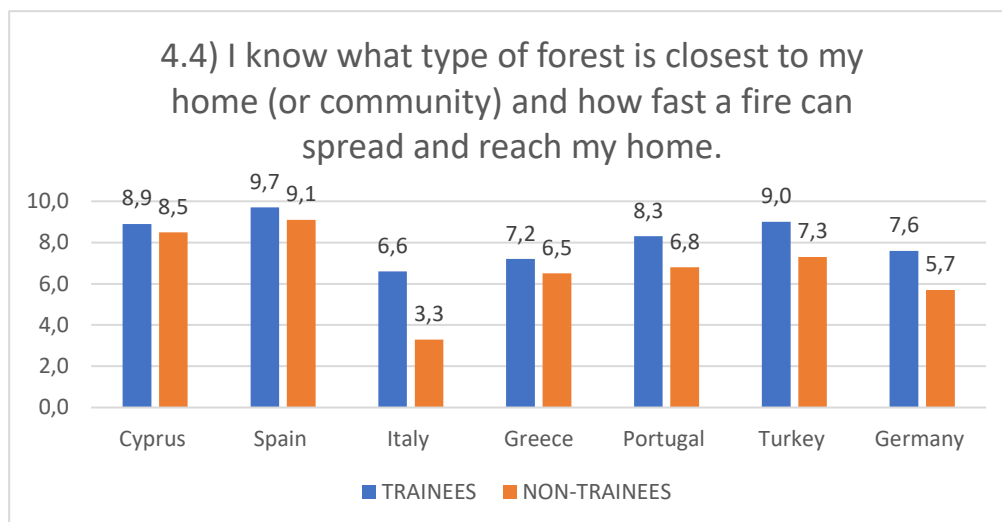
With regards if participants property is well-prepared to withstand a forest fire, the mean values of trainees lie between 6.0 to 9.1, while the range of non-trainees are from 3.1 to 8.1. In some countries, the trainee participants score slightly higher than non-trainees, expect from Italy which has a noticeable difference.



Regarding if participants investment in preventive measures to protect their property, the mean values of trainees lie between 5.4 to 8.9, while the range of non-trainees are from 2.6 to 7.6. In some countries, the trainee participants score slightly higher than non-trainees, expect from Italy which has a noticeable difference and in Greece where non-trainees scored higher.



Regarding the participants' knowledge on the type of forest closest to their home, the mean values of trainees lie between 6.6 to 9.7, while the range of non-trainees are from 3.3 to 9.1. In some countries, the trainee participants score slightly higher than non-trainees, except from Italy which has a noticeable difference.



### Additional Comments:

#### Trainees:

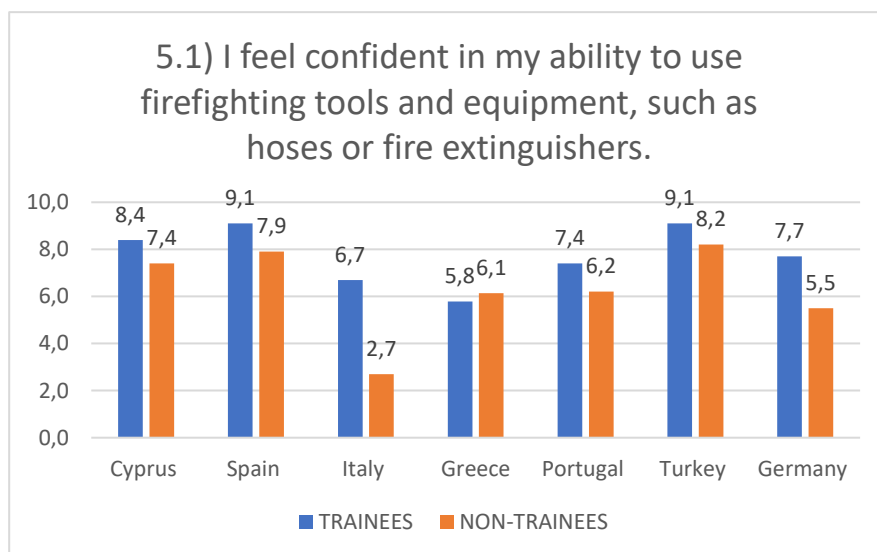
The trainees' comments on material loss highlight the severe impact of forest fires on their communities. **Participants express severe sorrow**, emphasizing that fires leave nothing to enjoy, **meaning total destruction of property and things**. For example, in Greece participants seem to accept that material loss is common in the case of a forest fire and houses, cars and other kinds of material goods are usually destroyed. The above statements confirm the lack of trust in the state mechanism to protect sufficiently citizens and their properties against forest fires. Also, trainee participants expressed concern about **the significant material losses caused by wildfires in previous years**, particularly in terms of ecological damage to forests and wildlife. They acknowledged the dangers of wildfires and sources of ignition, emphasizing the need to recognize these risks. They also mentioned that forest fires can result in substantial material damage as they destroy forests and vegetation, leading to harm to natural resources and the environment. This damage can have adverse effects on the environment, economy, and human safety.

## Non-Trainees:

Similarly, non-trainee participants expressed grave concerns about the potential consequences of a wildfire, highlighting both material and environmental damages as immeasurable. They mentioned **the destruction of properties, the devastation of local flora and fauna, and decreased goods production as possible outcomes**. Some participants lamented the limited means they have left to protect against future fires and conveyed a sense of tragedy. Moreover, they recognize that, while material belongings cannot be equated to the loss of life, for some people, these losses represent the entirety of what they have in life, emphasizing the importance of property damage. Recognizing the importance of financial safeguards, there is a desire for effective insurance to reduce the financial burden of these losses. Participants also underscore the substantial negative implications of forest fires, both economically and environmentally, emphasizing the wide-ranging consequences on various sectors of life. They also emphasized the importance of timely management, such as cutting grass that comes into contact with house walls, to mitigate fire risks.

### 5.5. Factor 5: The confidence of the participants when threatened by the fires

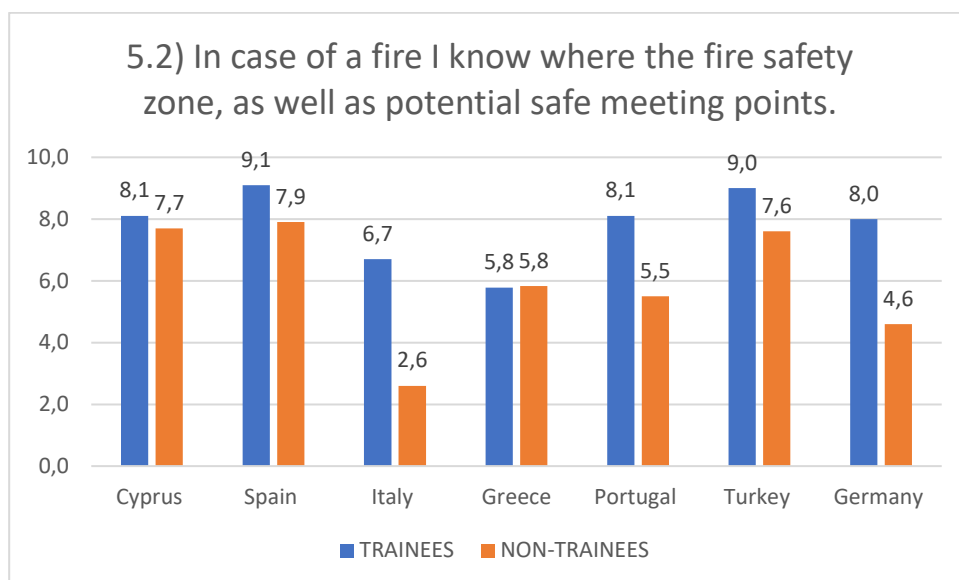
Concerning the confidence of participants' ability to use firefighting tools, the mean values of trainees lie between 5.8 to 9.1, while the range of non-trainees are from 2.7 to 8.2. In some countries, the trainee participants score slightly higher than non-trainees, expect from Italy



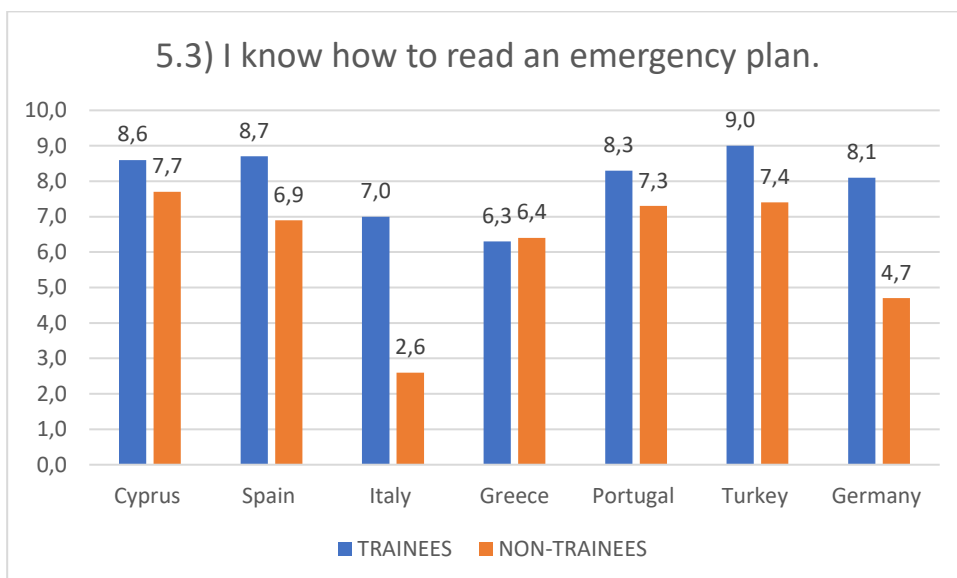


which has a noticeable difference and in Greece where non-trainee participants score higher mean value.

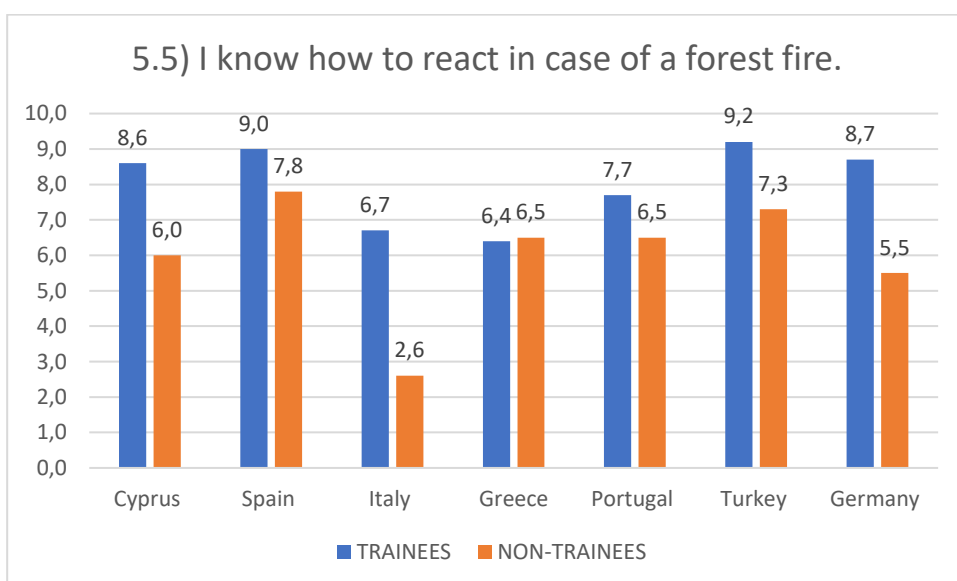
Regarding the knowledge of participants about the fire safety zone, the mean values of trainees lie between 5.8 to 9.1, while the range of non-trainees is from 2.6 to 7.9. In some countries, the trainee participants score higher than non-trainees, expect from Italy which has a noticeable difference and in Greece where mean values remained the same.



About the knowledge of participants to read emergency plans, the mean values of trainees lie between 6.3 to 9.0, while the range of non-trainees is from 2.6 to 7.7. In some countries, the trainee participants score higher than non-trainees, expect from Italy which has a noticeable difference and in Greece where non-trainee participants scored slightly higher.



For the knowledge of participants to react in case of a forest fire, the mean values of trainees lie between 6.4 to 9.2, while the range of non-trainees are from 2.6 to 7.8. In some countries, the trainee participants score higher than non-trainees, expect from Italy which has a noticeable difference and in Greece where trainee participants scored slightly lower.



With regards to the knowledge of participants about the steps to take in case of a fire, the mean values of trainees lie between 6.1 to 9.1, while the range of non-trainees is from 2.7 to 7.5. In all countries, the trainee participants score higher than non-trainees. While in Germany and Italy values between two groups has a noticeable difference.



### Additional Comments:

#### Trainees:

A common trainees' comments were their general degree of confidence with fire situations. Some admit **to having little to no confidence in such situations**, others emphasize the importance of mindset, emphasizing informed and **intentional action over panic in the face of a fire threat**. Confidence gained via training and understanding is a repeating theme, with some participants stating their preparedness to respond well even under tremendous duress, especially in rural fire scenarios. Other participants who are not experts in the field mentioned that attending the seminars has enhanced their understanding of the importance of forests and how to protect themselves. They comprehended general **procedures for handling forest fires in various situations and locations**, including the significance of emergency kit items. They emphasized that fire management is crucial and should be undertaken by specialized and trained professionals. After the training, participants reported increased knowledge.

#### Non-trainees:

Generally, non-trainee participants from all countries **stressed the importance of being intimately familiar with the village and the area where the fire**. The responses of non-trainees regarding the potential contributions of protected areas to the economic and social growth of rural areas demonstrate a thorough understanding of the numerous benefits these areas provide. First and foremost, respondents understand the critical significance of protected areas

in supplying clean water for both household and agricultural needs, which is especially important in rural populations. Furthermore, they recognise that these regions are an essential economic driver, attracting tourists interested in ecotourism and nature-based activities. In Portugal, respondents shed light on the preservation of species within protected areas and the potential for sustainable tourism programs, which align with responsible forestry practices. These areas are also valued for their role in resource utilization, encompassing timber and resin production, serving as catalysts for local economic growth. **The importance of education and awareness-raising within protected areas is emphasized by several responses in all countries**, contributing to environmental knowledge and generating employment opportunities. Biodiversity conservation takes center stage, with respondents underscoring the role of protected areas in safeguarding native species and promoting nature-related businesses.



## 6. Discussion and Conclusion

Upon thorough examination of the primary findings derived from the analyzed data, it is evident that the training, which closely adhered to the guidelines provided by FFP, had a **positive influence on the confidence levels** of trainee participants. Those trainees who actively engaged in these training programs were exposed to strategies for self-protection, preparedness, and readiness. Consequently, overarching observations reveal a **strong recognition of the importance of environmental and forest protection** within both participant groups. This sentiment is particularly noticeable among those participants who have invested time and effort in promoting fire prevention strategies. In conclusion, it is clear that **experience and knowledge can enhance an individual's readiness** to confront wildfires.

The comments of both trainee and non-trainee participants **offer valuable insights into the perception of communities regarding the severity of fires** and their preparedness. In all countries trainee participants exhibited a positive outlook toward fire preparedness. They discussed their efforts to strengthen community readiness, which included initiatives like the presence of volunteers, fire trucks, and a fire station. The impact of the training on their awareness and understanding was distinctive, as they acknowledged the diversity of fire types and the importance of preventative measures. Their emphasis on collaboration, education, and proactive strategies underscores a comprehensive approach to mitigating potential crises.

In contrast, non-trainee participants presented a more apprehensive perspective. They expressed **concerns about their communities' ability to effectively handle fires**, citing the challenge of distant suppression points as a potential obstacle to prompt responses. Their comments highlighted the wide-ranging repercussions of fires, encompassing psychological distress, discouragement of newcomers, economic losses, and environmental devastation. A specific concern was expressed for agriculture and the potential destruction of valuable orchards and olive groves, underlining the economic implications of inadequate preparedness.



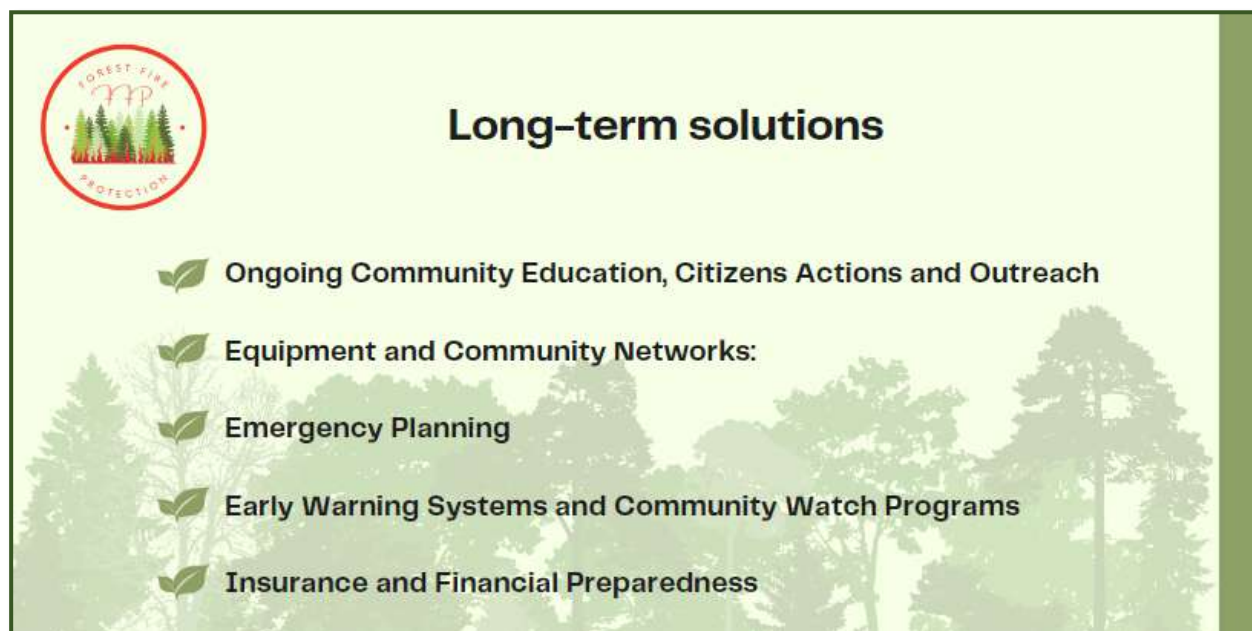
**Both trainee and non-trainee participants attached significant value to material losses resulting from fire catastrophes during the fire season.** However, the training influenced trainee participants to invest in preventative measures to safeguard their property, and some non-trainee participants also made such investments. The training program notably impacted participants' confidence, attentiveness, preparedness measures, and practical skills in dealing with forest fires. However, its effect on understanding emergency plans and familiarity with fire safety zones appeared less pronounced, as both trained and non-trained participants displayed similar results in these areas.



Considering everything, while both target groups express their concerns and reported common challenges faced during a high-risk fire season, the training package have proven to boost effectively the confidence, knowledge and readiness of trainee participants. The compile results from all countries shows the importance of continued education and outreach efforts to enhance forest fire prevention across countries.

## 7. Recommendations

Implementing the FFP's initiative at the community level is essential for safeguarding lives, property and the natural environment. Below are some initiatives that a community can undertake.



### I. Community Education, Citizens Actions and Outreach

The **continuation of education and outreach** of the training program is essential. It is suggested to continue the education of rural citizens about wildfires and prevention measures through workshops, seminars, and informational materials. The promotion awareness of local fire danger levels and their regular updates. An extension to the Forest Fire Protection training package could be training by fire experts on how to use fire equipment safely and effectively.

**Community engagement campaigns** could be initiated to encourage wider participation. Tailored training programs for trainers/educators and the general public will help build skills and confidence. Moreover, regular simulated fire training initiatives could provide practical experience and guidance. Encouraging lifelong learning through ongoing education and training will solidify confidence in fire management efforts.

**Establish communication and coordination protocols with neighboring communities** to ensure a unified response in the event of a wildfire. In addition, it is suggested to form community-based

wildfire response teams composed of trained volunteers who can assist in emergency situations. Organize regular clean-up days to remove dead vegetation, fallen leaves, and other flammable debris from public spaces and private properties.

## II. Equipment and Community Networks:

To enhance community fire preparedness, it is recommended to establish a **localized network of strategically positioned fire suppression points within the community**. This initiative would reduce response times during fire incidents, minimizing potential damage and risks associated with distant suppression points. By placing these resources, the community can significantly improve its ability to effectively address fires, thereby increasing overall resilience and safeguarding residents, property, and vital agricultural assets.

## III. Emergency Planning:

**Develop and communicate evacuation plans** with local authorities, including designated **assembly points** and routes. **Conduct regular drills** to ensure that residents are well-prepared for evacuations. In addition, include pets and animals in the evacuation plan. Designate a safe meeting point and transportation method and ensure that animals are trained to enter carriers or leashes quickly to facilitate quick evacuation. Identify and arrange safe shelters for your pets in case you cannot take them during an evacuation.

To **enhance animal survival during emergencies**, the community could establish a comprehensive preparedness plan that includes creating firebreaks by clearing premises, ensuring access to essential firefighting tools such as fire extinguishers and hoses, and developing organised evacuation strategies for pets and animals. Raising awareness about the potential for panic-induced abandonment of pets and providing information on proper animal care during crises will contribute to a more resilient and compassionate community response.

## IV. Early Warning Systems and Community Watch Programs:

Establish a **community watch program to monitor and report** fire hazards, suspicious activities, or signs of wildfire. Invest in early warning systems such as sirens, alarms, and community alert systems to notify residents of approaching wildfires. These systems should be tested regularly. Also, the impact study of the FFP project underscores **the importance of ongoing data collection** and dissemination regarding forest fire severity and risk assessment. Access **to accurate and up-**





**to-date information is crucial for making informed decisions** and taking appropriate preventive measures. Therefore, it is recommended that a comprehensive database be maintained to track forest fire trends, severity levels, and risk factors, which can guide future mitigation efforts.

#### **V. Insurance and Financial Preparedness:**

Encourage residents to have adequate **insurance coverage for their homes and properties**. Provide information on available resources and assistance programs. Another recommendation to enhance community readiness against forest fires is establishing a community firefighting fund. This fund could be created through collaborative efforts between local authorities, residents, and relevant stakeholders. It would ensure a sustainable financial resource for acquiring and maintaining firefighting equipment, such as fire trucks, tools, and protective gear.



## 8. Bibliography

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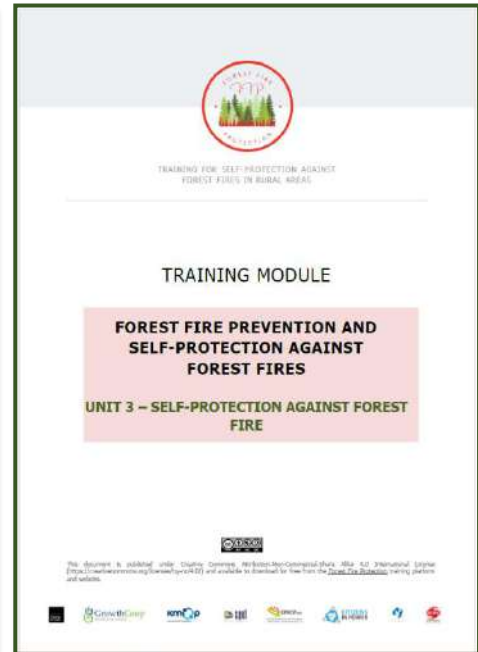
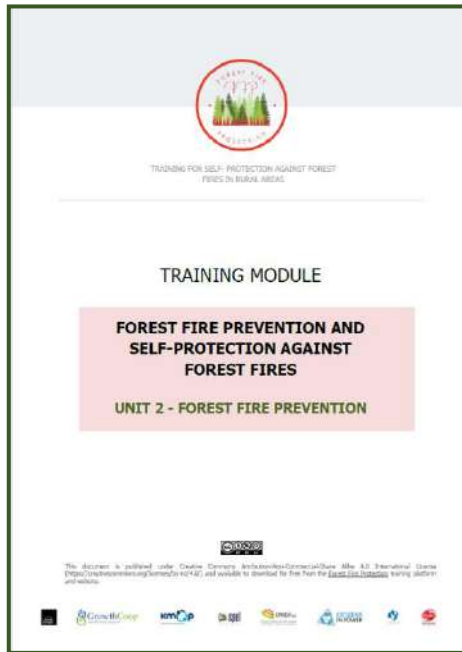
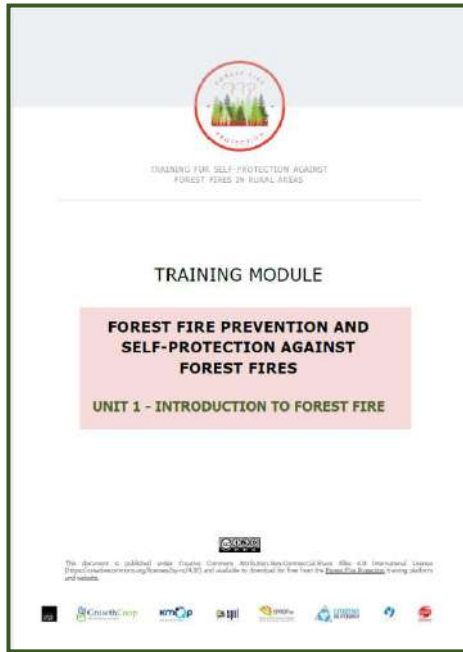
## Appendix

Links Access to National Reports:

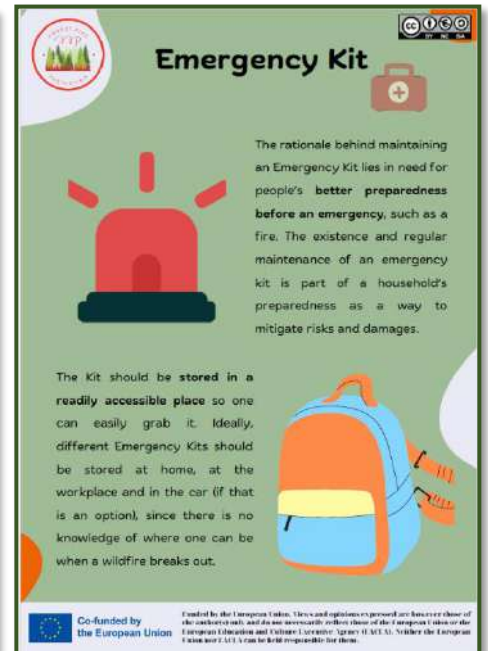
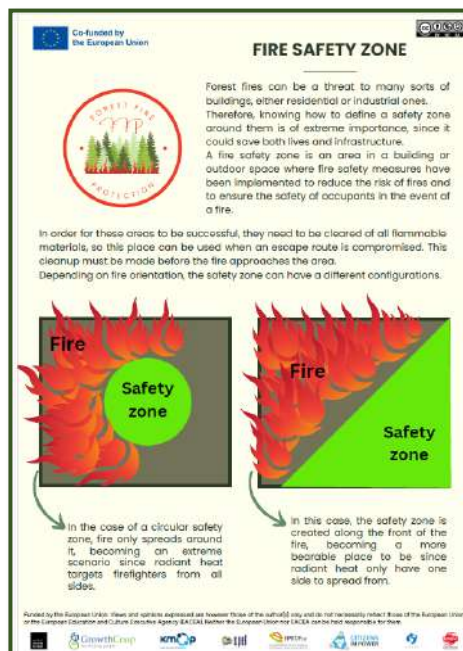
- [Access to the National Report of Portugal](#)
- [Access to the National Report of Cyprus](#)
- [Access to the National Report of Germany](#)
- [Access to the National Report of Türkiye](#)
- [Access to the National Report of Greece](#)
- [Access to the National Report of Spain](#)
- [Access Link to the National Report of Italy](#)



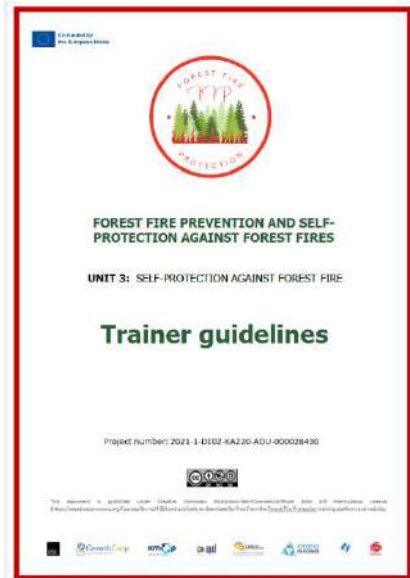
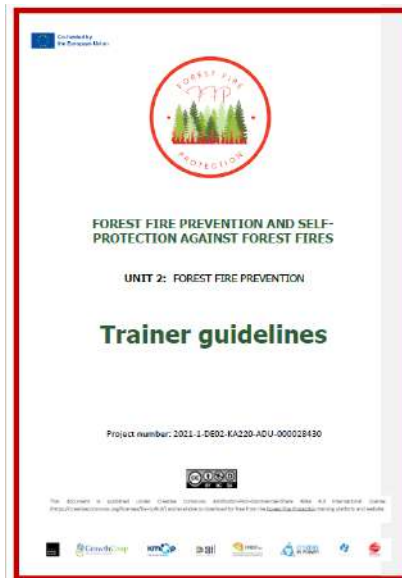
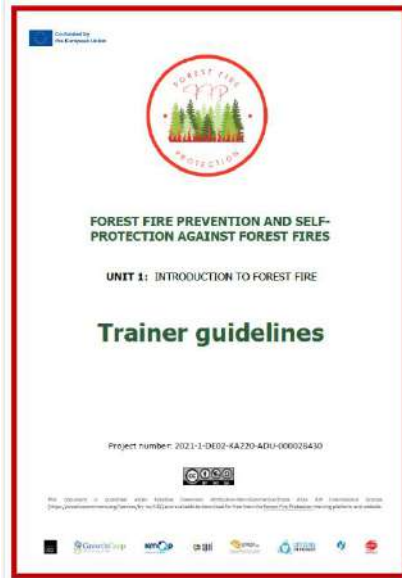
# Training Package Material



Units Developed and Available on the Platform



Training Resources Developed and Available on the Platform

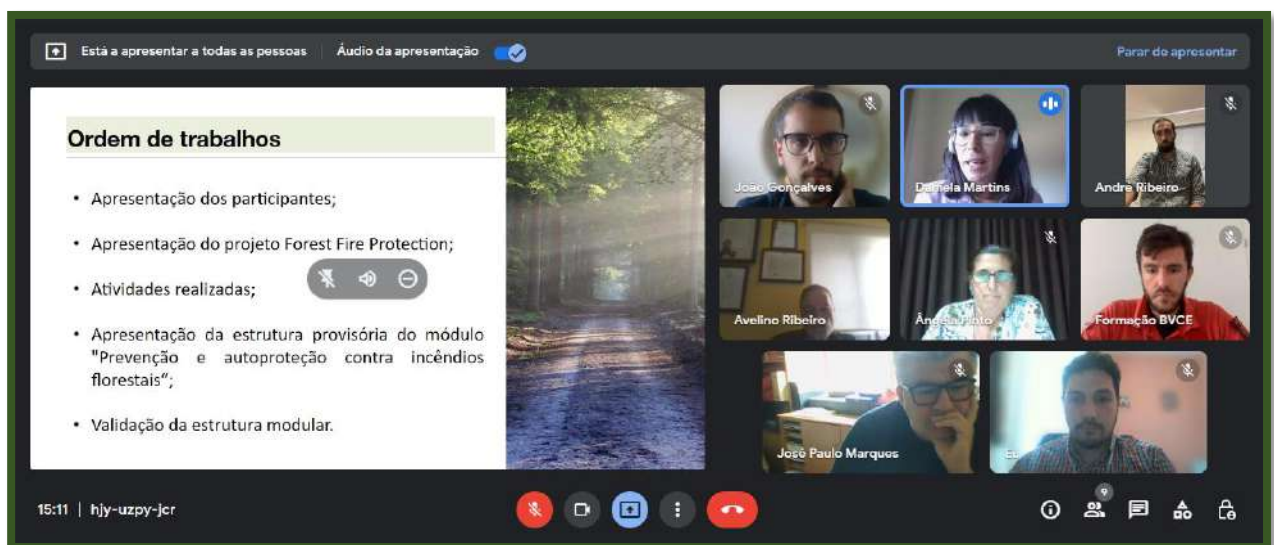


*Trainer Guidelines Developed and Available on the Platform*

## Images



*Image from the Focus Groups in Spain*



*Image from the Focus Groups in Portugal*



*Pilot Training Images from Cyprus*



## Pilot Training Images from Portugal







## Pilot Training Images from Türkiye



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## Pilot Testing Images from Spain





Pilot Testing Images from Greece



Pilot Testing Images from Italy



### Pilot Testing from Germany

