



## ADMINISTRATIVE INFORMATION

MEFISTO (Mediterranean forest Fire fighting training STandardisatiOn, GA No. ECHO/SUB/2016/742556/PREP24) is a cooperation European project co-funded by the Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO) of the European Commission (EC). DG ECHO is the department of the European Commission whose main mission is to prevent and alleviate human suffering and safeguard the integrity and dignity of populations affected by natural disasters and man-made crises. Headquartered in Brussels with a global network of field offices, DG ECHO ensures rapid and effective delivery of EU relief assistance.

MEFISTO has been a Preparedness action, held between January 2017 and January 2019 (24 months), with an EU Contribution of 325.732€. The project aimed at the development of procedures for improving efficiency and effectiveness of forest fire fighting at European level, increasing the capacity for collaboration among countries, developing common high-quality standards in fire fighting training systems and sharing knowledge.

Find out more about MEFISTO on [www.mefistoforestfires.eu](http://www.mefistoforestfires.eu)





## WHY MEFISTO IS NEEDED?

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In the last decades, the improvement of co-operation between EU countries in civil protection assistance interventions in the event of major emergencies has become one of a main priority.

Emergency Response Coordination Centre (ERCC), established in 2013, is daily working to reach this goal. Among the other, forest fires are civil protection events that yearly affect several EU countries, mainly in the Mediterranean area.

Over the last two decades in southern Europe, more than 10 million hectares of forest have been damaged by fire. Each fire-fighting season incurs significant costs, measurable principally in terms of loss of human lives, investment in fire-fighting resources, damage to the environment and infrastructures, and cost for recovering the burned areas.

International collaboration in forest fire fighting likely began in 1981, when two Canadairs from France were sent to Monte Argentario (Italy) for supporting the suppression of a large fire, threatening people and infrastructure. Starting from that time, bilateral agreements were developed between countries and then the European Civil protection and Humanitarian Aid Operations and Emergency Response Coordination Centre (ERCC) were created.

When national capacities to respond to a forest fire are surpassed, EU countries send assistance in the form of water-bombing aircrafts and helicopters, fire-fighting equipment, and personnel.

In the last decades, the deployment of experts, teams and equipment, among the member States during severe fire seasons has increased (e.g. aerial and / or ground means sent from other countries to Greece in 2009, 2015 and 2018; to Portugal in 2017, to Sweden in 2018).

At the same time, EU exercise on forest firefighting were organized (e.g. Sardinia 2008, Prometheus 2014) thus highlighting the needs of a co-ordination and collaboration improvement on forest fire response capacity at EU level.

In this context, MEFISTO project aims to raise preparedness level through an efficient and standardized training protocol developed by a representative network of Mediterranean stakeholders.

This project has addressed new opportunities regarding interoperability between several Mediterranean training centres, allowing international cooperation against disasters related with forest fires. The project aim is to define and establish a series of standardized training programmes with specific lessons on organization, protocols and procedures applied in the neighbouring countries in order to improve the effectiveness on cross-border firefighting and to allow an easy and safe transfer of human and material facilities from a country to another.







## WHAT AGENCIES AND ENTITIES HAVE PARTICIPATED IN THE MEFISTO PROJECT?

The MEFISTO partnership has been coordinated by the University of Florence (Italy), which has extensive experience in forest fires, education and learning assessment, and production of guidelines related to forests. The others partners are: Escola Nacional de Bombeiros (Portugal), École d'application de sécurité civile (France), and Regione Toscana (Italy), entities with recognized experience in training activities in forest fires; the last partner is CESEFOR, a foundation with strong experience in international cooperation on projects related to forests.

## WHAT HAVE WE DONE?

The first task has been to make a detailed analysis of existing organizations and management systems of forest fires. The analysis have been mainly developed in countries and regions where the project partners come from. With this analysis we have obtained a series of differences and similarities in forest fire fighting (legal frame, organization, procedure, etc.) between these countries and regions, which were used in the rest of the project's actions.

Cross-border agreements and procedures related to develop collaborations in the suppression of forest fires were also analysed with the aim of achieving an effective and efficient collaboration.

Standardized terminology, in the form of a multilingual glossary on forest fire, was produced in order to improve collaboration efficiency and avoid dangerous misunderstanding in international fire fighting cooperation.

The training activities for the positions included in the command chain of each country were analysed and a set of minimum training objectives and contents for the common positions and roles of responsibility were developed. Moreover, a new figure, specifically addressed to international collaboration has been identified starting from the figure of Incident Commander. This new profile is qualified to be what has been called the " European Forest Fire Officer " (EUFO), i.e. a figure capable to be a liaison officer in major fires with support from external forces, to be a leader of external forces involved in a cross-border collaboration and to provide functions of advice.

In order to continue the collaboration among countries a European network of stakeholders in training for fire fighters (EUFORFIRE) was created.







## HOW HAVE WE DONE IT?

### 1. Similarities and differences between EU Mediterranean Countries in forest fire fighting.

The procedures, methods and techniques applied in partner countries and regions have been analysed, described and compared, including training activities and safety and health measures.

Through an elaborate survey, the partners of MEFISTO project collected information on the state of the art in fire fighting organization and activities in Partner's countries/regions in Mediterranean area.

The similarities and differences regarding the organization, techniques and procedures have been described.

A mutual better knowledge about the organizational systems applied in forest fire fighting in the different countries allow to improve collaboration and the ability to work together. From this analysis, we have decided to focus on the similarities as starting points to develop common approaches and procedures at the Mediterranean level.



### 3. European Procedure for Forest Fire Fighting

The improvement of frequency and effectiveness in collaboration among fire-prone countries may play a key role for reducing the economic, environmental and social impact of forest fires, especially under a changing climate. For moving towards this goal, it is very important to define a set of procedures able to facilitate and speed up the initial dispatch of means, as well as the reinforcement of means in fire operations theatres. This is especially important in fire-prone areas - formally separated by boundaries, but continuous in terms of fuel and from an operational point of view - where fires may increase their intensity and rate of spread due to a late intervention with suitable resources.

The MEFISTO project has defined a set of procedures and forms that can be useful as master lines or guidelines to facilitate international collaboration, but they should be adapted to the reality of each geographical area.

### 2. Forest Fires Multilingual Glossary

One of the aspects to consider for improving European collaborations in forest fire fighting is the standardization of terms and concepts.

The MEFISTO project has produced a valuable resource for professionals and specialists in forest fires across Europe, joining three glossaries already available, adding new concepts and translating all terms and definitions in five languages: English, Spanish, French, Italian and Portuguese.

The final version of the glossary is available in five versions in pdf format, each one based on a main language (English, French, Italian, Portuguese and Spanish) and a Smartphone application (available on both IOs and Android).







#### 4. European FOREst FIRE fighting Council (EUFORFIRE)

One of the most important results of this project is the creation of the Council of FOREST Fire Fighting training centres (EUFORFIRE). This association is a starting point for a future continue collaboration between European training centres and other entities involved in forest fire fighting and training.

The main objectives of EUFORFIRE concern:

- Sharing organizational models applied in the adherent training centres of participant Countries and share their developments
- Collaborating for exchanging training methods and skill evaluation procedures in the forest fire fighting
- Developing and defining the minimum basic knowledge and skills to be developed in the training courses for similar position within the command chain
- Improving mutual collaboration especially in the fields of big fire management and health and safety of forest firefighters

At present, this network includes the five partners of MEFISTO project and the agency D.R.E.Am. (from Italy), but the EUFORFIRE network aims to involve all European training centers in the field of prevention and training in the fight against forest fires.



#### 5. Definition of rights and duties between Countries aimed at efficient cross border collaboration

MEFISTO project has also analysed the existing agreements on cross-border collaboration in forest fire fighting between the partner countries and / or other regions and their neighbours. From this analysis, a list of the fundamental aspects to be treated during the redaction of a new agreement have been created.

A good agreement should include detailed information on rights and duties of each part. Administrative, financial, communication and responsibility aspects must be explicit in order to avoid controversies. The chain of command in joined fire fighting activities have to be planned in the agreement, to allow for efficient interventions. With the results of this study we intend to establish a reference for the redaction of the



#### 6. Training program standardisation and implementation Common and shared list of training programs

All the figures involved in firefighting activities and their specific role in the four partner countries / regions have been identified. We have made a comparative analysis of the existing roles, the training required for the qualification, the required prerequisites and the optional training that is available.

The functions that are specific to each country and that correspond to needs that do not exist in the other countries were identified. All the training programs that are provided in each country were collected to qualify for the performance of each function. Considering the skills, the required expertise and the training programs identified in each country, a set of common minimum training objectives and contents for the common positions of responsibility recognized by all the Partners has been created.

Finally, we focused our attention on the creation of a new figure of responsibility specifically developed for international collaboration in Forest fire fighting: the "European Forest Fire Officer" (EUFO). The profile, the functions and the training requirements have been defined.

With this figure we intend to improve the possibility and efficiency of cross-border collaboration during the main fires in Europe. In particular, it has been stated that the EUFO should be a figure capable of performing the following tasks:

- To be a liaison officer in major fires;  
To be the leader of the external forces involved in a transboundary mission;
- To provide an added value of common knowledge (at European level) in major fires (advisory function);
- Accordingly with the specific roles, the EUFO should embody a set of minimum standards in terms of knowledge, skills and attitudes that have been defined and recognized by all the organizations involved in MEFISTO. This set has been the basis for the organization of the training course.





## Pilot training course for "European Forest Fire Officer"

In order to verify the effectiveness of the new EUFO figure and its training process, a pilot training course was organized for the first EUFOs. The training course was held at the school in Valabre (France) from from 22nd till 25th May, 2018. It gathered experts in forest fire fighting (mainly Incident Commanders - IC) of four-member countries: Spain, Italy, Portugal and France. Three forest fire fighting specialists from each country attended the pilot training course. Together with the trainees, also the members of the MEFISTO consortium participated in the event, provided lessons according to the educational program defined within the project and evaluated the strengths and weaknesses of training implementation.

The theoretical and practical activities carried out during the pilot training in Valabre ended with the field exercise held near Siena (Italy) on December 12th and 13th, 2018, in the Tuscan training centre for forest fire fighters.





## WHAT HAVE WE LEARNT?

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Most of the work carried out in the project has been reflected in the EUFOs pilot training course. Although it may be considered very successful, there are several aspects that need to be improved:

- Sharing information among countries about fire prevention and suppression organization (legal frame, organization, procedure, etc.) play a key role for the improvement of efficiency and effectiveness of international collaboration.
- The security measures in case of major fire are not the same in all countries. It is important to clarify them and to show their consequence on equipment, vehicles but also on the operational commitment.
- The creation of a specific figure, with a specific training is also required .
- The first pilot training course highlighted that more time to perform practical exercise should be scheduled in the training programme (at least one or two whole days).
- The use of a simulator, as we did in the pilot training, should be very useful for allowing people coming from different countries to work together on different fire scenarios. It is an operational tool of training which allows to organize exercises without mobilizing resources. Simulation of possible and/or happened fires can be made several times allowing the skills acquisition. Thanks to this tool, the operative teams can test and define operational procedures in cross-border collaboration, which is a fundamental aspect to consider. Each reinforcement works according to its own rules of employment integrating with the operational procedure of the hosting country.
- It is important that the training would be given by a team of international experts, together with local experts in the field of forest fire fighting operations.
- Contributions about real experiences in international collaboration are very important in this kind of course. They may show the main difficulties to be faced during international collaboration, thus allowing to develop the capacity of adaptation that the EUFO should have as leader of the reinforcements.
- In the field exercise carried out in Siena, Italy, it was necessary to carry out a more exhaustive analysis of the results obtained by each team, so it is calculated at least half a day more for it.

## CONCLUSIONS

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In Europe, in particular in the Mediterranean area, forest fires are becoming more and more frequent, intense and long-lasting. In this context, experience exchanges and collaboration at national and international level are required for maximizing the suppression capacity and the management of the resources and for increasing the anticipation capacity. The activities carried out in the MEFISTO project can be the basis for increasing and improving the collaboration in forest fire fighting at European level. Sharing knowledge and experience, standardization of procedures and techniques, definition of minimum common training, taking advantage of the best practices in each country is crucial for moving toward an improved collaboration capacity.

The role of the EUFO will be crucial during operational commitments involving foreign reinforcements, where international collaboration is required. For this reason, EUFO should have a strong experience in big fire management and safety regulations, as well as a good knowledge about tools, communication system, organization and fire management strategies applied in other countries. Moreover, competences and international experience of EUFOs will be an important added value also in the standard interventions of firefighting, where international cooperation is not required. In fact, the exchange of knowledge is fundamental to increase the level at different scale, from local to global.





## WHAT NEXT?

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With this project we have established the basis to enhance the collaboration among countries/regions in forest fire fighting. However, in order to broad the general objective and to advance in cross-border collaboration in Forest Fire Fighting there is the need of further efforts, among others:

- To disseminate the activities carried out in MEFISTO Project.
- To develop similar experiences with a wider partnership, thus allowing knowledge sharing from traditionally fire-prone countries to other countries that are becoming more and more affected by forest fire due to climate change.
- To involve other European training centres in the EUFORFIRE network.
- To implement the EUFO course program with the proposed improvements highlighted at the end of the pilot training course of the MEFISTO project.
- To recognize the importance of the European forest fire officer (EUFO) in international collaboration.
- To continue the training of this new figure of responsibility.







Partners:



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