



E.3	Report of the Pilot training course with the designation of the first EUFOs
MEFISTO	Mediterranean Forest Fire Fighting Training Standardization

Partners:



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## **Report of the Pilot Training Course**

**Valabre (France), May 22<sup>nd</sup> - 25<sup>th</sup> 2018**

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## Executive summary

MEFISTO project established a series of procedures, agreements and information aiming at improving collaboration in forest fire fighting. Moreover, specific and standardized skills and expertise, calibrated on the main figures operating in forest fire fighting, have been developed. In this context, the figure of European Forest Fire Officer (EUFO) has been defined, specifying its competence and role in fire suppression in collaboration resources made available by other organizations (i.e. regional or international support). In order to verify, the effectiveness of the new EUFO figure and its training process, a pilot training course addressed to the first EUFOs has been organized. The training course took place at the school of Valabre from 22<sup>nd</sup> till 25<sup>th</sup> May, 2018. It gathered experts in forest fire fighting (mainly Incident commanders) of four-member countries: Spain, Italy, Portugal and France. Three specialists in forest fire fighting per each country attended the pilot training course. Together with the trainees, also the components of MEFISTO partnership participated to the event, giving lessons accordingly with the educational programme defined within the project, and evaluating the strength and weaknesses of training implementation. In this document, the main issues concerning organization and implementation of the pilot training course are reported.

# **1. MEFISTO Pilot Training Course for European Forest Fire Officer**

## **1.1. Venue**

The MEFISTO pilot training course was organized in the training school of Valabre (France), which is the school in charge of the technical training of French firefighters.

Located in southern France, this is the national reference centre for forest fires and civil protection. The location is favourable to firefighting courses due to the fire-prone environment where the school is located in. Here, training courses for forest fire fighters are carried out every year, updating training programs and teaching techniques continuously, on the basis of new approaches tested in field. The training school of Valabre organizes different trainings about forest fires, from the prevention activities to firefighting operations. Innovative teaching techniques and devices are adopted. In particular, the centre has an important simulator used in practical activities, which is useful to improve benefits of the trainings and to prepare operators without risks for health and safety. In the near future, the simulator of the training school of Valabre will be equipped with helmets for 3D virtual reality. This innovation will allow the trainees to be in the closest conditions as possible to the reality. The school of Valabre concentrated the trainings forest fires on the simulator for the level trainings 3, 4 and 5: management of several vehicles of fight in the general management of a major fire.

The high level of teachers and organization allows the school to boast more than 1715 qualified fire fighter sand some of them made also some lessons during the pilot training course.

## **1.2. Organization of the pilot training course**

As planned in MEFISTO project proposal, the pilot training course has been organised in order to apply the decisions and the results obtained during project development. In previous deliverables prepared by MEFISTO partnership, a set of main figures involved in forest fire fighting at European level has been defined, from the basic operator to the highest prepared directive figure. The most important operative figure defined in the project, is the European Forest Fire Officer (EUFO – see chapter 3 for

details). This figure would improve the possibility and the efficiency of cross-border collaboration during major fires in Europe. The pilot training course have been organized in order to train 3 experts from each participant Country (France, Italy, Portugal and Spain) as EUFO. The theoretical and practical activities carried out during the pilot training, will be finalised during the pilot exercise, which will be held near Siena (Italy) on December 12th and 13th, 2018, in the Tuscan training centre for forest fire fighting.

The pilot training course has been the occasion to test the results of MEFISTO project, through the creation of the first EUFOs. During the 4 days course, 23 hours of lessons has been provided to trainees. 12 technicians attended the course... Being a course for advanced profile in firefighting command chain, as prerequisites, the trainees had to be qualified with academic and/or technical training in the area of forest fires and recognized professional experience in operations management and command of forces.

The lessons were provided by recognized experts from France, Spain, Portugal and Italy. Being the first edition of the course, representatives of MEFISTO partners attended the training too, to analyse and evaluate the strength and weaknesses emerged during course implementation. Starting from the knowledge and skills required to EUFO, a specific training program has been planned and applied, with frontal lessons and exercises.

### 1.3. Training Course programme

The activities included in the pilot training course were scheduled as follow:

#### Monday, 21st

Arrival of participants.

#### Tuesday, 22<sup>nd</sup>

Time	Lesson	Trainer
9.00	Welcome by the Organizers of ECASC	Tosello
9.15	Project and training course presentation	Marchi
9.30	EU Mechanism	Barroux
10.30	<i>Coffee break</i>	
11.00	Forest fire fighting organisation in Spain/Castilla y Leon	Blanco Lago
12.00	<i>Lunch</i>	
13.30	Fire fighting organization in Portugal	Cruz
14.30	Fire fighting organization in Italy	Foderi
15.30	<i>Coffee break</i>	
16.00	Fire fighting organization in France	Patimo
17.00	<i>End of day 1</i>	

## Wednesday, 23<sup>rd</sup>

Time	Lesson	Trainer
9.00	Bilateral agreement and operational procedure	Blanco Lago
10.00	<i>Coffee break</i>	
10.30	Communication tools and methods in France	Varyn
11.00	International experience in Europe, France	Bozabalian
12.00	Communication tools and methods in Portugal	Blanco Lago
12.30	<i>Lunch</i>	
14.00	Communication tools and methods in Italy ( <i>Tuscany</i> )	Tonarelli
14.30	Communication tools and methods in Spain ( <i>Castilla y Leon</i> )	Blanco Lago
15.00	Common and shared list of training programs	Gomes
15. 45	<i>Coffee break</i>	
16.15	Cartography in Portugal	Reis
16.40	Cartography in France	Meresse
17.00	<i>End of day 2</i>	

## Thursday, 24<sup>th</sup>

Time	Lesson	Trainer
9.00	Cartography in Spain	Blanco Lago
9.15	Cartography in Italy	Montorselli
9.30	Fire management system in France	Bonfils
10.00	<i>Coffee break</i>	
10.30	Fire management system in Spain (Castilla y Leon)	Huerta
10.45	Fire management system in Portugal	Chambel
11.30	Fire management system in Italy	Tonarelli
11.45	Leadership and communication skills	Ferreira
12.15	<i>Lunch</i>	
13.45	International experience in Europe, Portugal	Cruz
14.30	<i>Coffee break</i>	
15.00	Fire behaviour and international experience	Nebot Hernández
17.00	<i>End of day 3</i>	

## Friday, 25<sup>th</sup>

Time	Lesson	Trainer
9.00	Practical exercise	ECASC TEAM
11.30	Final Assessment (trainees evaluation)	
12.00	<i>Lunch</i>	
13.30	Final assessment (trainers evaluation)	
14.30	Lesson learnt – Feedback	
15.00	Debriefing and closure	
15.30	<i>End of Day 4</i>	

## 2. The European Forest Fire Officer

The deliverable D\_E.1 – “Common and shared list of training programs” is the basis of the definition of EUFO. Here are reported the results obtained among Partners after a long and intense debate about the role and the skills the EUFO should have. 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 has been defined and recognized by all the organizations involved in MEFISTO. This set has been the basis for the organization of the training course.

During the training course for EUFOs the minimum standards to be reached by trainees about knowledge, skills and attitudes are:

### **Knowledge:**

- Role of the EU Fire Officer in the field of major forest fires;
- Competencies and responsibilities of the EU Forest Fire Officer;
- Organization of the forest fire fighting system in each country (FR, IT, ES & PT);
- Existing cooperation agreements;
- Functioning of the European Union Mechanism;
- Host Nation Support Guidelines for operational deployments inside the EU;
- Resource types and deployment methods;
- Operational procedures for receiving assistance under cooperation agreements and through the European Union Mechanism;
- Operational Procedures for the deployment of forces in other countries;
- Documentation methods and requirements;

- Leadership and communication skills;
- Communication tools and methods used in each country;
- Training organization in the Mediterranean countries;
- Forest fire cartography and mapping in Mediterranean countries;
- Main aspects of big fire management.

**Skills:**

- Assume the role of liaison officer with experience on major fire;
- Interact with ICS staff and representatives of local authorities and agencies present in the forest fire;
- Conduct an operational briefing with several entities;
- Plan and ensure the welcome of detached forces;
- Guarantee the articulation between local authorities and detached forces;
- Plan and manage the demobilization process of deployed forces;
- Compose mission reports.

**Attitudes:**

- Communicate clearly and assertively with all stakeholders;
- Leadership attitudes.

It is proposed that the training lasts four days (23 hours) and fire officers appointed by national or regional authorities must be the target audience. As prerequisites, the trainees must be qualified with academic and/or technical training in the area of forest fires and recognized professional experience in operations management and command of forces”.

## 3. Training Activities

### 3.1. Aims and contents of the lectures

#### 3.1.1 Project presentation - European Forest Fire Officer (EUFO)

Prof. Marchi briefly described the aims and activities of the MEFISTO project, highlighting the main results obtained, which allowed the organization of the pilot training course. Starting from the recognised increasing need of international support in firefighting Mediterranean countries, he showed the main roles of EUFO figure and the basic knowledge and skills should have and European Forest Fire Officer to guarantee an efficient exchange of resources (ground and aerial) during large and long-lasting fires.

#### 3.1.2 EU Mechanism

The European Civil protection Mechanism CPM is a framework under which civil protection forces of EU Member States and other participating states can be deployed across the European Union, where assistance is required. Instead of requesting support to each authority of the different Member States a centralize coordination has been created in order simplify disaster assistance across the European Union. The Emergency Response Coordination Centre (ERCC) is the ultimate core of the EU Civil Protection Mechanism that coordinates the delivery of assistance to disaster stricken countries.

The objective of this presentation was to describe the EU mechanisms and the procedures existing at European level in the field of civil protection, highlighting the most interesting issues in the field of forest fires.

#### 3.1.3 Fire fighting organization

To guarantee an efficient and safe support to a country during a forest fire emergency, it is fundamental for external teams giving support to know the operational organizations of the receiving country. In particular, it is important to know the structure of the firefighting system, the main position of responsibilities, the command chain as well as the firefighting, means, tactics and strategies applied

in that country. Four lessons on this topic, one for each participant country (France, Spain, Portugal and Italy), has been provided to participants in order to give the basic knowledge for facilitating the integration of the foreign reinforcement resources in the operational process of the hosting country. .

### **3.1.4 International, National and Regional agreements for cross-border collaboration**

For several years and before the creation of the European Union, countries developed agreements for cross-border cooperation in forest fire fighting, in order to avoid administrative and operative constraints operating along national (regional) borders. In this presentation, the agreements existing in the Four countries involved in the project were described, highlighting the most important content of the agreements for improve the collaboration efficiency and effectiveness.

### **3.1.5 Communication tools and methods**

A crucial aspect in terms of efficiency and safety of forest fire suppression is related with the communication tools and methods. In different countries different methods, procedure and tools are used for communications during forest fire suppression. To know all the aspects should be essential for guaranteeing a fruitful and safe collaboration among firefighters of different countries. Specific lectures on communication tools, strategies and methods were given by a trainer of each country. The main aspects concerning communication were treated, highlighting the most important points to be considered to operate in the territory of the hosting country.

### **3.1.6 Common and shared list of training programs**

Accordingly with the deliverable D\_E.1 “Common and shared list of training programs”, Artur Gomes from ENB described in deep the main figures involved in firefighting in each country and the training programme associated to each figure. A description of the figure along the command operating in all the participating countries were made. For the common position of responsibility minimum standards to be considered in the implementation of training course was also described. A standardization of the minimum knowledge is the first step aiming to an efficient exchange of forces

among European countries. EUFOs should have a good knowledge about the common figures involved in firefighting, in order to organise the operations in the best way, allowing collaboration between local and foreign forces.

### **3.1.7 Forest fire cartography and mapping**

Cartography and operational maps are one of the most important tool in forest fire suppression management. Each country and sometime each region, usually has its own “Thematic cartography” for forest fire fighting. This cartography may include maps with different and particular geographic themes, specifically oriented toward the audience of forest fire prevention and suppression professionals. For maximizing the efficiency in international collaboration, it is very important to share the knowledge about the existing type of maps and their availability in digital or traditional formats. For this reason, the training course included specific lectures about this important topic, one for each country.

### **3.1.8 Fire management system**

Each partner described the management system applied in its country/region. After communication, organization and mapping, this has been the last point described at national/regional level. Each teacher showed the similarities and differences between the management systems of the different countries, in order to allow trainees to understand the importance to know this aspect when operating abroad.

### **3.1.9 Leadership and communication skills - Ferreira**

The role of EUFO requires firstly deep knowledge and skills about the management of big forest fire suppression. Moreover, considering the main role of the EUFO as a link between local and foreign forces and its responsibility of managing firefighters and means in an uncommon operational scenario (foreign country with different organization), it is clear that this role should be covered by high-motivated officers, characterised by strong leadership and communication skills. In this lesson, the good manners and the important behaviours in managing firefighting intervention in international collaboration have been described.

### **3.1.10 Fire behaviour and international experience extra EU**

Two interesting lessons have been presented by two internationally recognised experts in forest fires. These lessons have been an added-value in training course contents, showing the key-aspects to be considered operating in emergency with a high number of operators involved, with the additional constraint of different provenience. Different examples of real events have been described, with a strong interaction between the teacher and the trainees.

## **3.2. EXERCISE – Description, Implementation and Results**

The final step of the pilot training course has been an exercise in the simulation centre of ECASC. The practical activities have been an important occasion for participants to simulate a cross-border collaboration during a big fire. The organizers established a detailed scenario of major fire, and trainees were equipped with cartography and communication tools.

The exercise started with a briefing where the simulation scenario and the objective were explained.

### **3.2.1 Scenario**

A major forest fire is spreading in a border area between France and Italy. Due to other simultaneous forest area spreading in the area, the national forces are not sufficient and external support has been requested to the other countries. Spain, Italy and Portugal sent support.

### **3.2.3 Mission**

The EUFO meet the local Incident Commander and takes in charge the mission. He receives the mission to contain the fire spread in a sector on the left flank of the fire to prevent the fire line to spread out of control.

### 3.2.4 Means

Three teams were created, mixing French, Italian, Portuguese and Spanish technicians. Thanks to the simulator and the availability of different rooms and tools, each team carried out the simulation of procedure application. The roles of each trainee was changed during the activity in order to give the opportunity to each of them to cover different roles. The main activity has been the connection between the incident command centre and the operational resources, both ground and aerials one.

By means of the simulator, each EUFO candidate had the possibility to move between the headquarter and the assigned sector, deploying ground means and following the fire front spread and the operations of the committed aerial means.

### 3.2.5 Results

For two hours, each candidate played the role of EUFO in an operational context close to the reality.

During the activity, the trainees faced the problems that they will have to manage and solve in real conditions: language communication issues, different approaches to firefighting, use of different cartography and maps, etc... Thanks to the high experience of participants and the knowledge shared with the previous lectures, they were able to collaborate in an efficient and useful way, sharing information and fruitfully managing the available resources.

## 4. EVALUATION PROCESS

### 4.1. Results from the analysis of the scoresheets

According with the contents of the deliverable D\_E.2 “*Standardised scoresheets for the evaluation and the awarding of the EUFO after training course*”, the scoresheets were submitted to the trainees at the end of the course. As reported in the deliverable, due to the expertise of the participants in the field of forest fire fighting, the evaluation process was not traditional, but it was a self-evaluation. All the trainees compiled the scoresheets, and results for each activity and related competences are reported in the tables below (Tables 1-11), expressed in form of percentage of number of answers provided by all the EUFO candidates.

As reported in The competences related with the topic “Communication tools and methods” were fully obtained by the majority of the trainees (Table 3). Some minor doubts and aspects to be enhanced are related with the communication of the position and how to communicate about water points, roads and dangers. This has been one of the points where trainees have not fully understood all the information given by trainers.

Table 1 and **Errore. L'origine riferimento non è stata trovata.**, the results of the evaluation process showed the full success of the training course, with an average 80% of complete acquisition of information and skills. In few cases, the level of full acquisition of the topic has not been the best as possible, and further activities are required to optimize the EUFO training. In the following tables, the results of the final evaluation are reported in detail, considering all the competences to be acquired in all the activities carried out.

The topic “Cartography and mapping” was entirely acquired by all in most of the competences included in this field (Table 2).

During the pilot training, almost all the trainees acquired all the competences about European standards (Table 4), with a minor part of them who have to revise the information to fully understand the topic.

The competences related with the topic “Communication tools and methods” were fully obtained by the majority of the trainees (Table 3). Some minor doubts and aspects to be enhanced are related with the communication of the position and how to communicate about water points, roads and dangers. This has been one of the points where trainees have not fully understood all the information given by trainers.

*Table 1: results of evaluation process for each activity carried out during the training course*

ACTIVITY	Acquired	In course of acquisition	Not Acquired	N A
	%	%	%	%
<i>Cartography and mapping</i>	98	2	0	0
<i>Communication tools and methods</i>	73	15	3	10
<i>European standards</i>	93	7	0	0
<i>Fire behavior</i>	75	25	0	0
<i>Fire management system</i>	85	13	3	0
<i>Integrate his detachment in the foreign organization during a forest fire</i>	81	16	1	2
<i>Leadership and communication skills</i>	90	8	2	0
<i>National levels/roles of operators</i>	83	17	0	0
<i>Request of support in the framework of the EU Mechanism</i>	61	29	11	0
<i>Roles of the European Forest Fire Officer</i>	96	0	4	0
<b>Total Result</b>	80	15	2	3

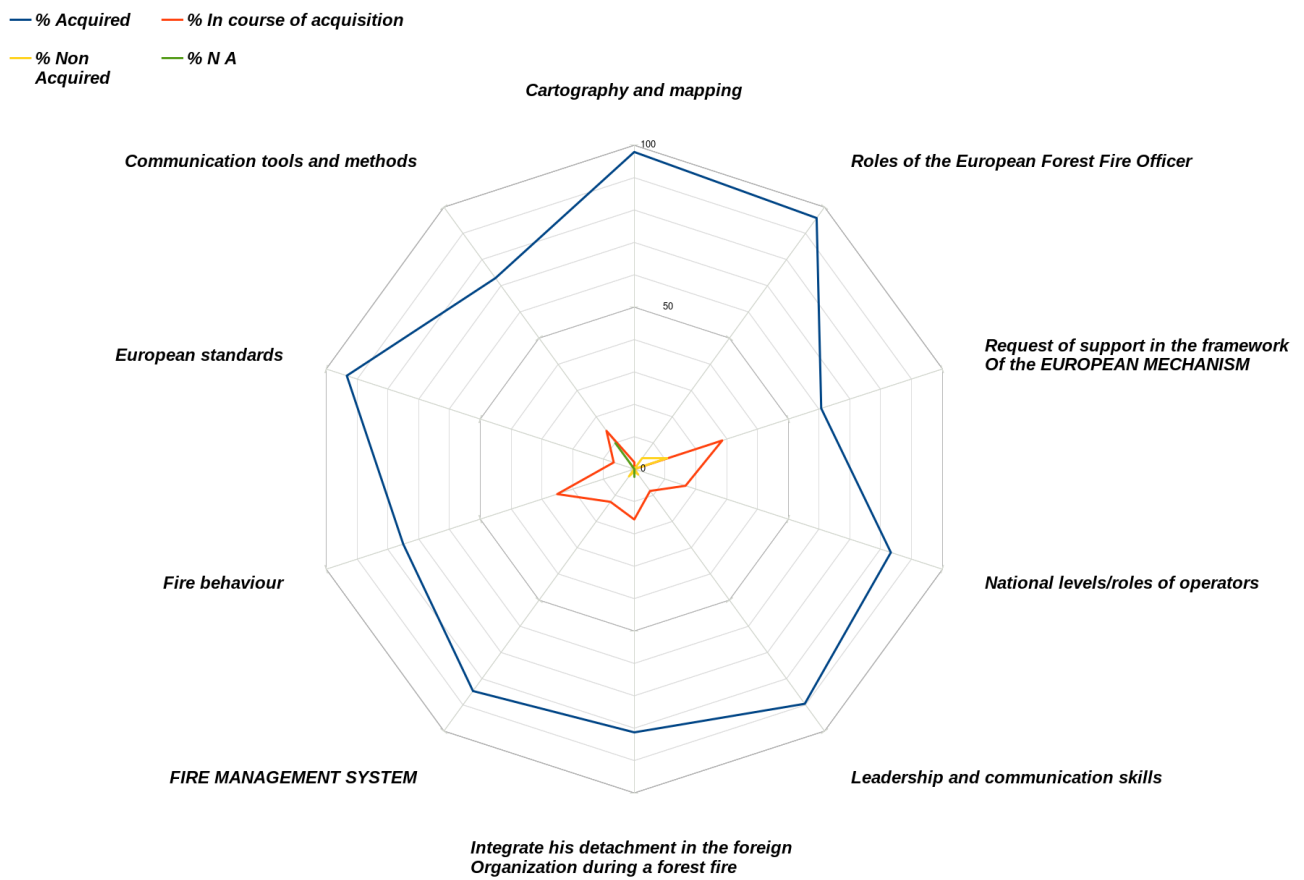


Figure 1: graphical representation of the results of the assessment

*Table 2: results of the final evaluation about the lesson "Cartography and mapping"*

### **Cartography and mapping**

	Acquired	In course of acquisition	Not Acquired	N A
COMPETENCES	%	%	%	%
<i>To communicate my position</i>	100	0	0	0
<i>To communicate to the command post the fire localization</i>	100	0	0	0
<i>To define the fire perimeter</i>	100	0	0	0
<i>To find water, road, danger...</i>	92	8	0	0

*Table 3: results of the final evaluation about the lesson "Communication tools and methods"*

### **Communication tools and methods**

	Acquired	In course of acquisition	Not Acquired	N A
COMPETENCES	%	%	%	%
<i>To communicate my position</i>	58	33	0	8
<i>To communicate to the command post the fire localization</i>	92	0	0	8
<i>To define the fire perimeter</i>	83	8	0	8
<i>To find water, road, danger...</i>	58	25	0	17

*Table 4: results of the final evaluation about the lesson "European standards "*

#### European standards

COMPETENCES	Acquired %	In course of acquisition %	Not Acquired %	N A %
<i>Group leader</i>	92	8	0	0
<i>Incident commander</i>	92	8	0	0
<i>Logistics section leader</i>	92	8	0	0
<i>Team leader</i>	92	8	0	0
<i>Team member</i>	100	0	0	0

*Table 5: results of the final evaluation about the lesson "Fire behaviour"*

#### Fire behaviour

COMPETENCES	Acquired %	In course of acquisition %	Not Acquired %	N A %
<i>During a convective fire , to estimate fire behaviour when smoke columns collapse</i>	50	50	0	0
<i>To determine fire behaviour during the interaction of different fire front</i>	83	17	0	0
<i>To forecast fire behaviour with extreme meteo condition (humidity and/or wind)</i>	75	25	0	0
<i>To recognize spotting fires behaviour</i>	92	8	0	0

The lesson on fire behaviour has been very important to prepare the EUFO to international cooperation in big fires (Table 5). Working on this topic, trainees faced some problems in acquiring the fire behaviour in convective fires and in minor part on the forecast fire behaviour. Being this topic crucial in EUFO's competences, an enhancement of this part, also in terms of more time dedicated to, should be integrated in the revision of the training program.

*Table 6: results of the final evaluation about the lesson "Fire Management System"*

### Fire Management System

COMPETENCES	Acquired %	In course of acquisition %	Not Acquired %	N A %
<i>To call the aerial means to ask a drop</i>	92	8	0	0
<i>To contact the incident commander</i>	92	8	0	0
<i>To describe my area to the aerial means</i>	83	17	0	0
<i>To look at the safety frequency</i>	58	25	17	0
<i>To propose a deployment for my detachment</i>	92	8	0	0
<i>To regularly inform my sector leader about the situation of the fire</i>	92	8	0	0

Good feedback arrived on "Fire management system" (Table 6), where almost all competences were acquired by trainees. A lower percentage has been obtained in the part "To look at the safety frequency", probably due to a weakness during the presentation of the topic.

*Table 7: results of the final evaluation about the topic "Integrate his detachment in the foreign organization during a forest fire"*

**Integrate his detachment in the foreign organization during a forest fire**

COMPETENCES	Acquired %	In course of acquisition %	Not Acquired %	N A %
<i>How are organized the modules (ground means)</i>	92	8	0	0
<i>Knowledge about national or regional organization of forest fire fighting in the Mediterranean countries (France, Italy, Portugal Spain)</i>	58	25	0	17
<i>Knowledge about the organizations and responsibilities of the agencies/institution involved in firefighting</i>	83	17	0	0
<i>To know the incident command chain</i>	75	25	0	0
<i>To know the main procedure for implementing initial and extended fire attack</i>	58	42	0	0
<i>To know the operational tactic</i>	75	25	0	0
<i>To know who is responsible of both strategy and tactics of forest fires fighting</i>	83	17	0	0
<i>What are the functions of a command post</i>	75	25	0	0
<i>What are the functions of Incident commander</i>	83	17	0	0
<i>Who asks for reinforcements</i>	58	33	8	0
<i>Who coordinates the aerial means</i>	92	8	0	0
<i>Who defines the mission of aerial means</i>	75	25	0	0

Regarding the information related with the different countries, fundamental for the EUFOs operating abroad, a general good result has been obtained (Table 7). All the information has been acquired or are in course of acquisition, which is a positive response considering the huge amount of information delivered to trainees.

*Table 8: results of the final evaluation about the topic "Leadership and communication skills"*

### Leadership and communication skills

COMPETENCES	Acquired %	In course of acquisition %	Not Acquired %	N A %
<i>To identify possible barriers in communication process</i>	92	8	0	0
<i>To know the main characteristics of the leadership types</i>	83	17	0	0
<i>To understand the importance of communication</i>	100	0	0	0
<i>Verbal and non- verbal communication characteristics</i>	83	8	8	0

All participants appreciated the clear lessons about leadership and communication skills (Table 8), recognising the importance of these tasks for a successful management of collaboration events.

The 83% of trainees fully assimilated the information about national levels of operators in each country, while the rest of them declared that the acquisition has to be finalized with further study (Table 9).

*Table 9: results of the final evaluation about the topic "National levels / roles of operators"*

**National levels/roles of operators**

COMPETENCES	Acquired %	In course of acquisition %	Not Acquired %	N A %
<i>French levels</i>	83	17	0	0
<i>Italian levels</i>	83	17	0	0
<i>Portuguese levels</i>	83	17	0	0
<i>Spanish levels</i>	83	17	0	0

*Table 10: results of the final evaluation about the topic: "Request of support in the framework of the European Mechanism"*

**Request of support in the framework of the European Mechanism**

COMPETENCES	Acquired %	In course of acquisition %	Not Acquired %	N A %
<i>How to ask the operational European tools</i>	67	25	8	0
<i>Procedures to deploy the European modules</i>	58	33	8	0
<i>To identify the EURCC (functions, missions,...)</i>	67	33	0	0
<i>To identify the process of reinforcement</i>	50	50	0	0
<i>What is the HNS?</i>	33	8	58	0
<i>When can you ask reinforcement?</i>	67	33	0	0
<i>Who pays the loads of the reinforcements?</i>	83	17	0	0

The way to ask for assistance to the European mechanism has not been acquired by all the trainees (Table 10). Some doubts about different competences emerged from the evaluation. In detail, the less clear aspects were related with the Host Nation Support (HNS) and the process of reinforcement. These aspects should be treated more in detail during the specific lesson in order to give complete and clear information to the EUFOs.

*Table 11: results of the final evaluation about the topic "Roles of the European Forest Fire Officer"*

### **Roles of the European Forest Fire Officer**

	Acquired	In course of acquisition	Not Acquired	N A
COMPETENCES	%	%	%	%
<i>To be aware about the main three roles of the EUFO?</i>	92	0	8	0
<i>To clearly understand and recognize the objectives of the EUFO's training</i>	100	0	0	0

All participants well understood the roles and the objective of EUFO as reference figure in cross border interventions. The low percentage of "not acquired" is related to a trainee who lost some information during the lesson (Table 11). This lack has been solved with a dedicated refresh.

Finally, a good level of acquisition of competences has been reached in the pilot training course, which has been a success. Obviously, being the pilot training the first practical occasion to test MEFISTO's results, some improvements could be applied to the training program and to the implementation of the course, in order to optimize the transfer of knowledge to the trainees. Interesting indications about that emerged from the described scoresheets and form the satisfaction questionnaires object of the next chapter.

## 4.2. Satisfaction Questionnaire

At the end of the pilot training course, the trainees have been asked to answer to a satisfaction questionnaire prepared by organizers to evaluate the satisfaction level after the course. All trainees have answered, in an anonymous way, allowing the organization to identify eventual weaknesses in course implementation. The complete questionnaire is reported in the Annex II, and the results are reported below, in Table 12 and in Table 13. A general appreciation of the course evidently emerged from the questionnaires. In the general evaluation, improvements should be focused on the support material to trainees. Moreover, the most important aspect to be improved is related with the time dedicated to practical exercise, which has been judged as insufficient. In this sense, it is important to highlight that a practical exercise is planned in Italy in December 2018, and this activity, for trainees, will be the final step on the way to become EUFO. Looking at the appreciation of each lesson, the feedback has been very positive, with an average of votes always higher than 4, where 5 was the maximum score. This is the confirmation of the high level of expertise and knowledge of all the experts involved as teachers.

Table 12: results of general questions about pilot training course submitted to attendants.

General questions	Trainee n.												Average	Min	Max
	1	2	3	4	5	6	7	8	9	10	11	12			
1. The objectives of the training were clearly defined	4	4	4	5	5	4	5	4	4	4	5	5	<b>4,42</b>	4	5
2. Participation and interaction were encouraged	5	4	2	5	5	4	5	3	4	5	4	4	<b>4,17</b>	2	5
3. The topics covered were relevant to me	4	4	3	5	5	5	4	4	4	5	5	4	<b>4,33</b>	3	5
4. The contents were well organized and easy to follow	5	5	3	5	5	4	4	4	4	4	5	4	<b>4,33</b>	3	5
5. The materials distributed were helpful	4	3	2	3	5	4	4	3	4	4	3	2	<b>3,42</b>	2	5
6. This training experience will be useful in my work	5	5	2	5	5	4	5	4	4	5	4	5	<b>4,42</b>	2	5
7. The time allotted for the training was sufficient	4	4	4	4	5	4	5	4	4	4	4	4	<b>4,17</b>	4	5
8. The meeting room and facilities were adequate and comfortable	5	3	4	4	5	3	5	4	4	4	3	5	<b>4,08</b>	3	5
9. The practical exercise was useful	4	5	4	5	5	4	5	5	5	5	2	5	<b>4,50</b>	2	5
10. The time dedicated to practical exercise was enough	3	4	3	4	5	3	5	2	2	4	2	2	<b>3,25</b>	2	5
11. The training course was adequate to prepare myself for international collaboration	3	5	3	5	5	4	5	4	4	4	4	2	<b>4,00</b>	2	5
12. The feeling with Incident Commanders coming from other countries has been positive	3	5	5	5	5	4	4	5	4	4	5	5	<b>4,50</b>	3	5

Table 13: results of the satisfaction questionnaire on each lesson delivered by teachers.

Performance of teachers	Trainee n.												Average	Min	Max
	1	2	3	4	5	6	7	8	9	10	11	12			
1. <b>Marchi</b> – Project presentation	5	4	5	5	5	5	5	5	4	4	5	5	<b>4,75</b>	4	5
2. <b>Barroux</b> – EU Mechanism	5	4	5	5	5	5	5	5	4	4	4	5	<b>4,67</b>	4	5
3. <b>Blanco Lago</b> – Fire fighting organization in Spain	4	4	4	5	5	5	5	5	4	4	3	5	<b>4,42</b>	3	5
4. <b>Cruz</b> - Fire fighting organization in Portugal	5	4	4	5	5	-	5	5	4	4	5	5	<b>4,64</b>	4	5
5. <b>Foderi</b> - Fire fighting organization in Italy	4	4	5	5	5	3	4	5	4	4	3	5	<b>4,25</b>	3	5
6. <b>Patimo</b> - Fire fighting organization in France	5	4	5	5	5	4	5	5	4	4	4	5	<b>4,58</b>	4	5
7. <b>Blanco Lago</b> – International, National and Regional agreements for cross-border collaboration	4	4	4	5	5	3	5	5	4	4	3	5	<b>4,25</b>	3	5
8. <b>Varyn</b> - Communication tools and methods in France	4	4	5	5	5	4	5	5	4	4	4	5	<b>4,50</b>	4	5
9. <b>Bozabalian</b> – International experience in Europe, France	5	4	5	5	5	4	5	5	4	4	4	5	<b>4,58</b>	4	5
10. <b>Chambel</b> - Communication tools and methods in Portugal	3	4	2	-	5	4	5	5	4	4	5	5	<b>4,18</b>	2	5
11. <b>Tonarelli</b> - Communication tools and methods in Italy ( <i>Tuscany</i> )	3	4	4	5	5	3	4	5	4	4	4	5	<b>4,17</b>	3	5
12. <b>Blanco Lago</b> - Communication tools and methods in Spain ( <i>Castilla y Leon</i> )	4	4	4	5	5	4	5	5	4	4	3	5	<b>4,33</b>	3	5
13. <b>Gomes</b> – Common and shared list of training programs	4	4	3	5	5	4	4	5	4	4	4	5	<b>4,25</b>	3	5
14. <b>Reis</b> – cartography in Portugal	4	4	4	5	5	4	4	5	4	4	4	5	<b>4,33</b>	4	5
15. <b>Meresse</b> - Cartography in France	4	4	4	5	5	4	4	5	4	4	4	5	<b>4,33</b>	4	5
16. <b>Montorselli</b> – Cartography in Italy ( <i>Tuscany</i> )	4	4	5	5	5	4	4	5	4	4	4	5	<b>4,42</b>	4	5

17. <b>Bonfils</b> – Fire management system in France	5	4	5	5	5	5	5	5	5	4	4	5	<b>4,75</b>	4	5
18. <b>Huerta</b> - Fire management system in Spain (Castilla y Leon)	4	4	3	4	5	4	5	5	4	4	5	5	<b>4,33</b>	3	5
19. <b>Chambel</b> – Fire management system in Portugal	4	4	4	-	5	4	5	5	4	4	5	5	<b>4,45</b>	4	5
20. <b>Tonarelli</b> – Fire management system in Italy (Tuscany)	4	4	5	5	5	4	4	5	4	4	4	5	<b>4,42</b>	4	5
21. <b>Ferreira</b> – Leadership and communication skills	5	4	2	5	5	5	4	5	4	4	5	5	<b>4,42</b>	2	5
22. <b>Cruz</b> – International experience in Europe, Portugal	5	4	4	5	5	-	5	5	4	4	4	5	<b>4,55</b>	4	5
23. <b>Nebot Hernández</b> – International experience in Europe	4	4	4	5	5	4	5	5	4	4	4	5	<b>4,42</b>	4	5

### 4.3. Feedback on training course implementation and results

The pilot training course addressed to EUFOs may be considered very successful even though some improvements should be considered:

- The practical exercise must be extended. Probably one full day or two days may be more effective. The participants quickly put in the mood but they did not have the time required to improve their actions.
- The simulator is an operational tool of management which allows to organize exercises of top management without mobilizing the ways. Simulation of possible and/or happened fires can be made several times allowing the acquisition of the know-how. Thanks to this tool, the operative teams can test and define operational procedures in cross-border collaboration, which is a fundamental aspect to take care. Each reinforcement works according to its own rules of employment integrating with the operational procedure of the host country.
- It is important that the lessons would be given by a team of international experts, together with local experts of in-field operations. To preserve the quality of the service and the high level of intervention, time slots should not to be lower at the 1 am.

- The presentations made about real experiences in international collaboration are very important in this kind of course. They show in particular the possible difficulties of EUFO, highlighting the original side of each of the missions and the capacity of adaptation that the EUFO should have as leader of the reinforcements.

The security measures in case of major fire are not identical to every country. It is important to take time to clarify them and to show their consequence on the equipment, the vehicles but also on the operational commitment.

## 5. Remarks and conclusions

The pilot training course has been the best occasion to test all the results obtained during MEFISTO implementation. Thanks to the strong efforts made by all partners, and thank to the success in organization, the outcome of the event has been very positive. A strong link between the different organizations involved, and the positive climate where the activities have been carried out, allowed both trainers and trainees to take maximum advantage from the course. The good relationships established between all the participants will be very important in the next activities, and in the real application on real fires and events of collaboration between countries. Looking after MEFISTO, these activities will be the basis for increasing and improving the standardization of procedures and techniques, taking advantages from the best practices of each country. The role of the EUFOs will be crucial during operational commitments involving foreign reinforcements (cross-border or not), 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. 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, also by means of increased anticipation capacity.

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.

## **Annex I – pdf files of the lecture’s presentation given**

## Annex II – Evaluation scoresheets